Madison, Wisconsin

CITY OF MADISON
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
PLAN OF PROPOSED IMPROVEMENT
LOWER BADGER MILL CREEK FLOOD MITIGATION

PUBLIC IMPROVEMENT PROJECT APPROVED

APPROVED DATE

BY THE COMMON COUNCIL OF MADISON, WISCONSIN

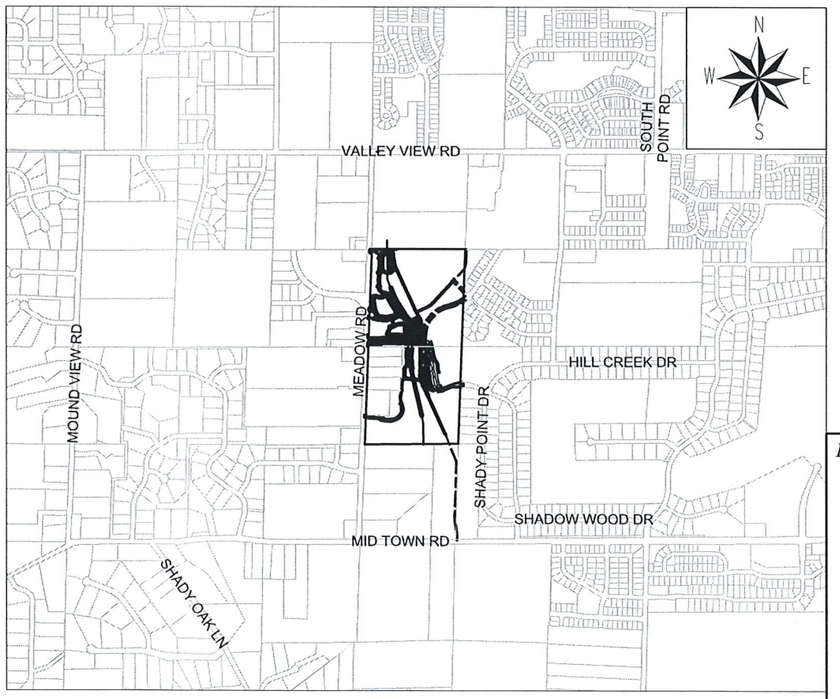
PUBLIC IMPROVEMENT DESIGN APPROVED BY:

FOR City Engineer — Date 2/10/23

INDEX OF SHEETS

CITY PROJECT NO. 11063

CONTRACT NO. 8875



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STORMWATER DESIGN BY:

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WI
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2-3-23

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2/9/23

PLOT SCALE: 1" = 1'
PLOT NAME: ----
REV. DATE: 2/3/2023 2:35 PM
ORIGINATOR: CITY_OF_MADISON

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DATE:

GENERAL NOTES

1. CONTRACTOR SHALL CHECK BETWEEN ALL BENCHMARKS AND CONTROL POINTS TO CONFIRM ELEVATIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL PROTECT ALL CONTROL POINTS NOT DIRECTLY IN THE CONSTRUCTION AREA.
3. CONTRACTOR SHALL ESTABLISH ADDITIONAL BENCHMARKS AND CONTROL POINTS AS NECESSARY TO COMPLETE THE WORK. CONTRACTOR IS ENCOURAGED TO CHECK BENCHMARKS.
4. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
5. EXISTING UTILITIES SHOWN ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS AND FIELD MEASUREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND ELEVATION OF ALL UTILITIES IN THE FIELD.
6. CONTRACTOR SHALL PROTECT ALL PROPERTY IRONS.
7. CONTRACTOR SHALL DRAIN/DEWATER EXISTING OPEN-WATER WETLAND BEFORE DREDGING OPERATIONS BEGIN AND APPROPRIATELY RELOCATE ANY WILDLIFE PRIOR TO CONSTRUCTION.
8. ON A DAILY BASIS, PRIOR TO ENTERING THE PROJECT SITE, AND PRIOR TO ENTRANCE IF A VEHICLE ENTERS AFTER VISITING ANOTHER SITE, ALL EQUIPMENT USED AT THE PROJECT SHALL BE SPRAYED CLEAN OF ALL DIRT, SOD, OR FOREIGN MATTER WITH HIGH-PRESSURE WATER IN AN UPLAND LOCATION OUTSIDE OF THE PROJECT SITE THAT DOES NOT DRAIN TO THE SITE OR IN CONTRACTORS SHOP. EQUIPMENT CLEANED SHALL INCLUDE, BUT IS NOT LIMITED TO, ALL DOZERS, SCRAPERS, BACKHOES, DUMP TRUCKS, TRUCKS, SHOVELS, PICKS, AND HAND TOOLS THAT ENTER THE PROJECT SITE. SPECIAL CARE SHALL BE TAKEN TO CLEANSE THE UNDERBODY, SUSPENSION, TRACKS, WHEELS, TIRES, AND WHEEL WELLS OF ALL MOTORIZED EQUIPMENT. IF NECESSARY, HAND TOOLS, BRUSHES, OR SCRAPERS MAY BE REQUIRED TO REMOVE HEAVY ACCUMULATIONS OF DEBRIS FROM ANY ITEM.
9. DISTURBANCE LIMITS ARE RESTRICTED TO AREA AS SHOWN ON PLANS.
10. ALLOWABLE STAGING AREAS FOR EQUIPMENT AND MATERIALS ARE ONLY ALLOWED ON CITY-OWNED PARCELS OF THE PROJECT AND AREAS SHOULD BE AGREED UPON BETWEEN CONTRACTOR AND THE CITY PRIOR TO CONSTRUCTION.
11. CONTRACTOR SHALL USE PROPOSED MAINTENANCE PATH AND BLUE HARVEST LANE ALIGNMENTS FOR ACCESS THROUGHOUT THE SITE DURING CONSTRUCTION.
12. DURING CONSTRUCTION OF THE MAINTENANCE PATH BERMS NORTH OF BLUE HARVEST LANE, CONTRACTOR SHALL COORDINATE WITH THE CITY AND THE CITY'S GEOTECHNICAL ENGINEER TO DETERMINE IF NATIVE SOILS AT THE EMBANKMENT LOCATIONS MEET THE EARTHEN EMBANKMENT MATERIAL SPECIFICATIONS.

TRAFFIC CONTROL NOTES:

1. USE WISDOT STANDARD DETAIL SDD 15D29 "TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD" ON MEADOW ROAD AT CONNECTIONS TO MEADOW ROAD. SEE SHEET 5 FOR SDD 15C29. PLACE TRAFFIC CONTROL AT BOTH NORTH AND SOUTH PROJECT LIMITS ON MEADOW ROAD.
2. DURING NON-CONSTRUCTION HOURS, PLACE TYPE III BARRICADES ACROSS CONSTRUCTION AND MAINTENANCE PATH ENTRANCES.
3. THE CONTRACTOR SHALL MAKE ALL CHANGES IN THE SIGNING THAT ARE DEEMED NECESSARY BY THE CITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL BARRICADES, SIGNS, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES INSTALLED BY THE CONTRACTOR, THAT ARE IN PLACE AND OPERATION 24 HOURS A DAY, 7 DAYS A WEEK FOR THE DURATION OF THE PROJECT.
5. BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

STRUCTURE TABLE

STRUCT NO.	TYPE	NORTHING	EASTING	DISCHARGE STRUCTURE	DISCHARGE PIPE				
					SIZE (IN)	INVERT ELEV.	DISCHARGE ELEV.	LENGTH (FT)	SLOPE (%)
OUTLET 1	OUTLET CONTROL	469965.141	772920.098	AEW 1.2	18	1031.78	1031.50	32	0.87
AEW 1.1	END WALL	469950.470	772928.893	OUTLET 1	18	1032.00	1031.78	17	1.29
AEW 1.2	END WALL	469977.942	772890.933	NORTHEAST CHANNEL	18	1031.50	-	-	-
AEW 2.1	END WALL	469622.708	772788.627	AEW 2.2	18	1033.93	1033.68	50	0.50
AEW 2.2	END WALL	469620.920	772838.715	MAIN LINE CHANNEL	18	1033.68	-	-	-
AEW 3.1	END WALL	469855.272	772788.921	AEW 3.2	18	1032.00	1031.00	59	1.69
AEW 3.2	END WALL	469854.928	772847.627	MAIN LINE CHANNEL	18	1031.00	-	-	-
AEW 4.1	END WALL	469925.388	772618.366	AEW 4.2	18	1031.50	1031.50	110	0.00
AEW 4.2	END WALL	470026.375	772575.981	AEW 4.1	18	1031.50	1031.50	110	0.00
AEW 5.1	END WALL	470252.690	772574.543	AEW 5.2	18	1032.00	1031.00	60	1.67
AEW 5.2	END WALL	470281.078	772627.210	MAIN LINE CHANNEL	18	1031.00	-	-	-
AEW 6.1	END WALL	470445.967	772394.917	AEW 6.2	12	1033.00	1033.00	36	0.00
AEW 6.2	END WALL	470445.444	772430.408	AEW 6.1	12	1033.00	1033.00	36	0.00
AEW 7.1	END WALL	470633.213	772400.685	AEW 7.2	12	1033.00	1033.00	36	0.00
AEW 7.2	END WALL	470631.248	772436.265	AEW 7.1	12	1033.00	1033.00	36	0.00
AEW 8.1	END WALL	470831.447	772411.462	AEW 8.2	12	1033.00	1033.00	33	0.00
AEW 8.2	END WALL	470830.005	772443.878	AEW 8.1	12	1033.00	1033.00	33	0.00
AEW 9.1	END WALL	470940.814	772297.084	AEW 9.2	18	1035.74	1035.55	32	0.59
AEW. 9.2	END WALL	470909.167	772298.267	-	18	1035.55	-	-	-

LEGEND

EXISTING		PROPOSED	
	EXISTING RIGHT OF WAY	G	PROPOSED GAS LINE
PL	EXISTING PROPERTY LINE	SAN	PROPOSED SANITARY SEWER
G	EXISTING GAS LINE	W	PROPOSED WATER MAIN
SAN	EXISTING SANITARY SEWER	W	PROPOSED WATER MAIN W/ CASING
W	EXISTING WATER MAIN	ST	PROPOSED STORM SEWER
ST	EXISTING STORM SEWER	T	PROPOSED TELEPHONE LINE
T	EXISTING TELEPHONE LINE	E	PROPOSED UNDERGROUND ELECTRIC LINE
E	EXISTING UNDERGROUND ELECTRIC LINE	FO	PROPOSED FIBER OPTIC LINE
OH	EXISTING OVERHEAD ELECTRIC LINE	X X	PROPOSED FENCE
FO	EXISTING FIBER OPTIC LINE		PROPOSED SILT FENCE
X X	EXISTING FENCE		PROPOSED SHEET PILING
	CONTROL POINT		PROPOSED INLET PROTECTION
	EXISTING BENCHMARK		PROPOSED END CAP
XX	SOIL BORING	WV	PROPOSED WATER VALVE
	EXISTING DECIDUOUS/CONIFEROUS TREE		PROPOSED FIRE HYDRANT
	EXISTING TREE STUMP	S	PROPOSED SANITARY SEWER MANHOLE
	EXISTING MANHOLE	ST	PROPOSED STORM SEWER MANHOLE
	EXISTING INLET		PROPOSED INLET
	EXISTING CATCH BASIN		FUTURE PROJECT BY OTHERS
	EXISTING POWER POLE	XXX	MAJOR CONTOUR
	EXISTING LIGHT POLE	XXX	MINOR CONTOUR
GV	EXISTING GAS VALVE	ST	PROPOSED STORM SEWER
	EXISTING SIGN		TREE TO BE REMOVED
WV	EXISTING WATER VALVE		
WM	EXISTING WATER MANHOLE		
	EXISTING FIRE HYDRANT		
	WETLAND DELINEATION		
	WETLAND BUFFER		
	EXISTING APRON END WALL		
IP	IRON PIPE		
PL	PROPERTY LINE		
	MAINTENANCE PATH		
	FUTURE MUTLI-USE PATH		
	EXISTING SAND BAGS		

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CITY OF MADISON 9030

CONTRACT NO: 1020.129

GENERAL NOTES & LEGEND

LOWER BADGER MILL CREEK FLOOD MITIGATION

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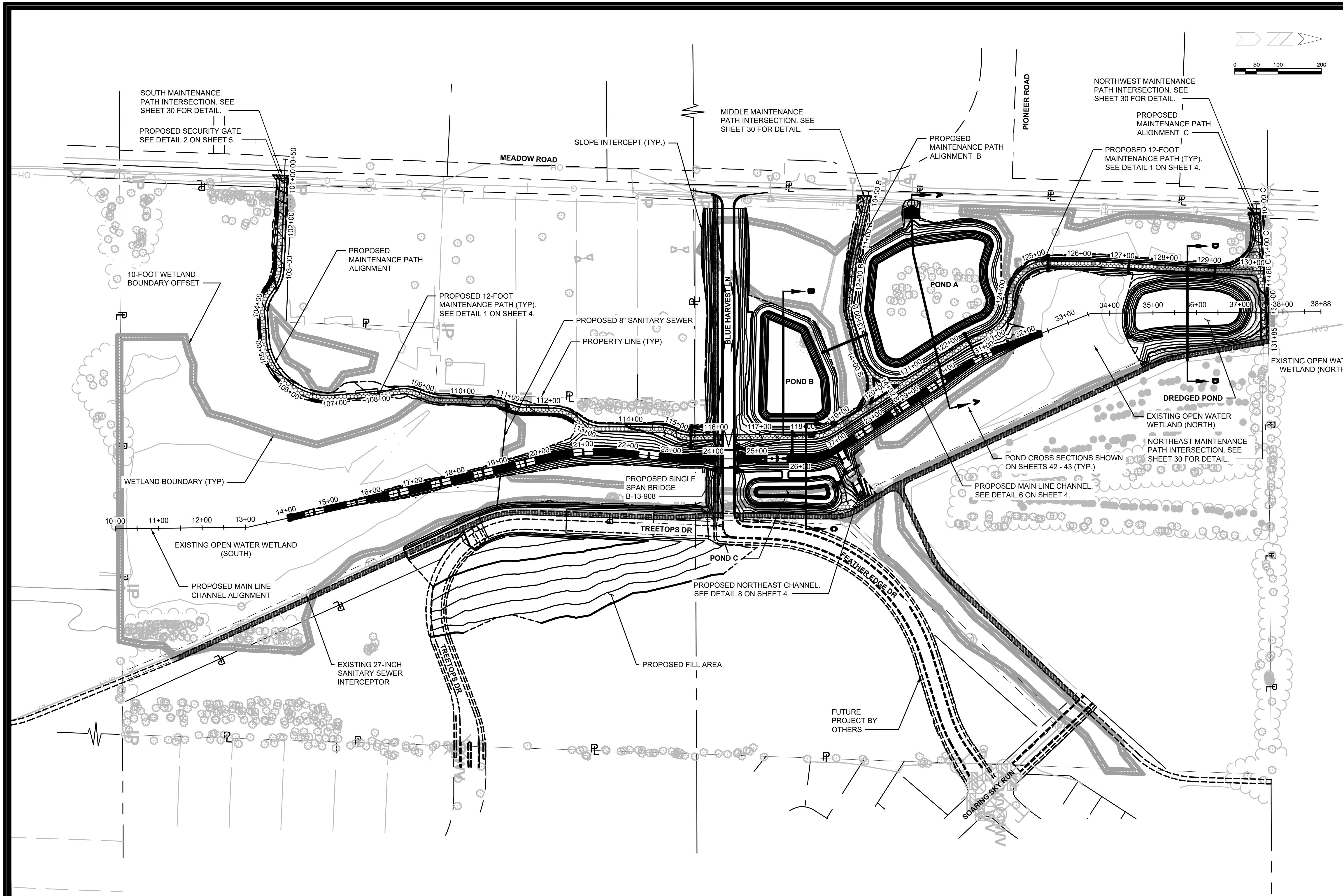

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CITY OF MADISON
CONTRACT NO: 9030

PROJECT OVERVIEW
LOWER BADGER MILL CREEK FLOOD MITIGATION
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CITY OF MADISON WISCONSIN

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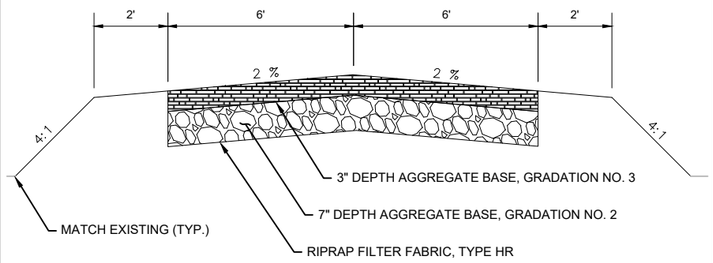

1/4 TYPICAL MAINTENANCE PATH DETAIL
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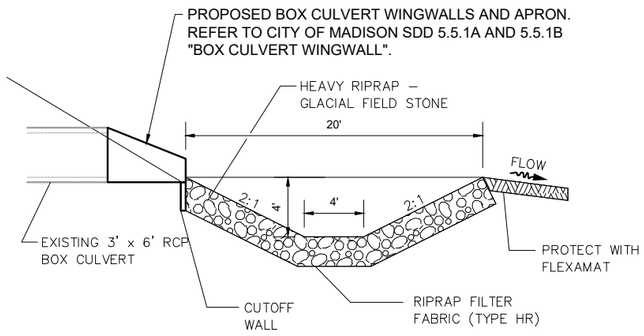

2/4 INLET PLUNGE POOL
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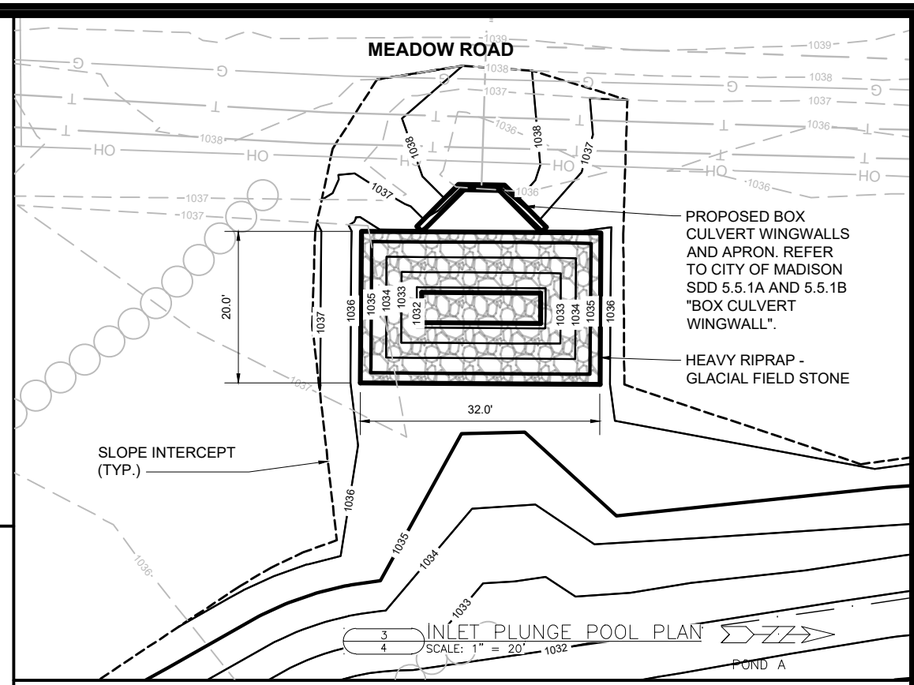
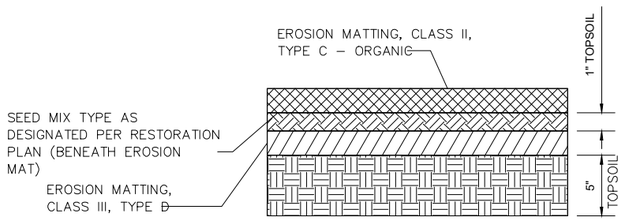
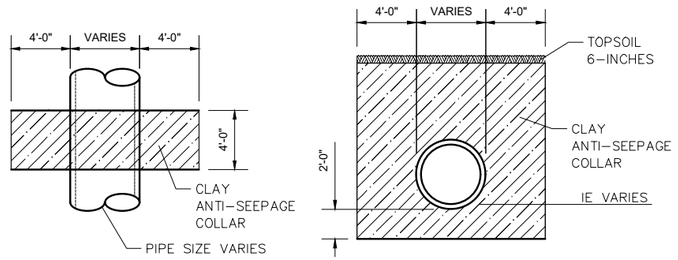


3/4 INLET PLUNGE POOL PLAN
SCALE: 1" = 20'



NOTE:
1. TOPSOIL CAN BE EXISTING TOPSOIL PARTIALLY HAULED–IN AND PARTIALLY EXISTING.
2. SEE EROSION CONTROL AND RESTORATION PLAN FOR LOCATIONS AND USE.
3. ALL MATTING SHALL BE INSTALLED PER THE MANUFACTURERS RECOMMENDATIONS.

4/4 TURF REINFORCEMENT MAT (TRM) SYSTEM
NO SCALE



5/4 CLAY ANTI–SEEPAGE COLLAR
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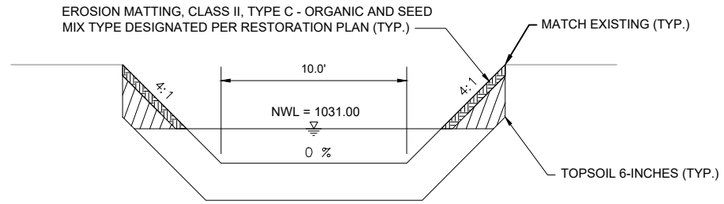
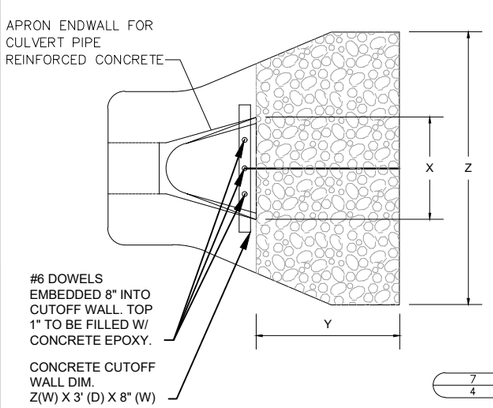


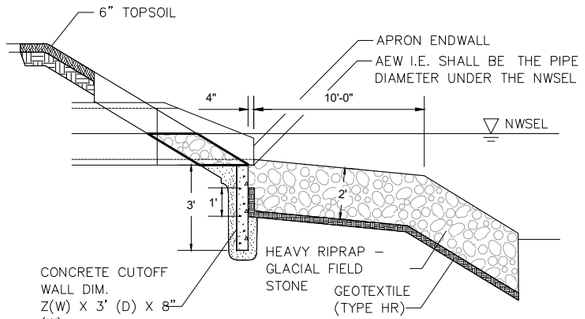
NOTE: CONTRACTOR SHALL RESTORE CHANNEL TO THE WATER LEVEL AT TIME OF RESTORATION IF BELOW ELEVATION 1031.00

6/4 TYPICAL MAIN LINE CHANNEL DETAIL
NO SCALE

DIA. (IN)	X (IN)	Y (IN)	Z (IN)	APPROX. WT. (TONS)
12	24	48	48	1.78
15	30	60	60	2.64
18	36	60	60	2.78

RIPRAP PLACEMENT & THICKNESS IN ACCORDANCE WITH ARTICLE 212.3





NOTES:
1) CITY OF MADISON STANDARD SPECIFICATIONS SHALL APPLY TO ALL INSTALLATIONS.
2) PIPES SHALL HAVE JOINT TIES PER STANDARD DETAIL DRAWINGS 5.4.6 & SECTION 504.2 (L).
3) WHERE RIPRAP IS CALLED FOR, PIPES 36" OR GREATER SHALL HAVE 50% OF THE RIPRAP PAD PACED WITH A SLURRY GROUT MIX ON AN UNEVEN RIPRAP SURFACE. SLURRY GROUT SHALL BE TYPE B SLURRY PER SECTION 300 OF THE STANDARD SPECIFICATIONS.
4) TWIN APRON INSTALLATION SHALL BE GOVERNED BY THE OUTSIDE DIMENSIONS OF A SINGLE PIPE.
5) CONCRETE CUTOFF FOR RCP REQUIRED ONLY WHEN CALLED FOR ON PLANS. WHERE CONCRETE CUTOFF WALL IF CALLED FOR IT SHALL BE INCLUDED IN THE ENDWALL COST.

7/4 CONCRETE APRON ENDWALL & HEAVY RIPRAP – GLACIAL FIELD STONE
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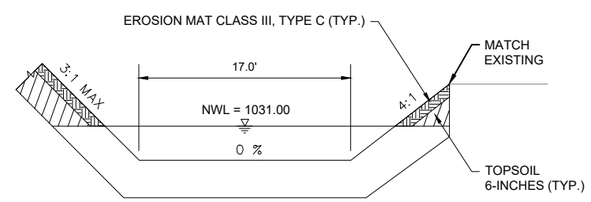

NOTE: CONTRACTOR SHALL RESTORE CHANNEL TO THE WATER LEVEL AT TIME OF RESTORATION IF BELOW ELEVATION 1031.00

8/4 TYPICAL NORTHEAST CHANNEL DETAIL
NO SCALE

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CONSTRUCTION DETAILS

CITY OF MADISON

CONTRACT NO: 9030

LOWER BADGER MILL CREEK FLOOD MITIGATION

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SDD 15D29 Traffic Control, Vehicle Entrance/Exit or Haul Road

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"W0" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

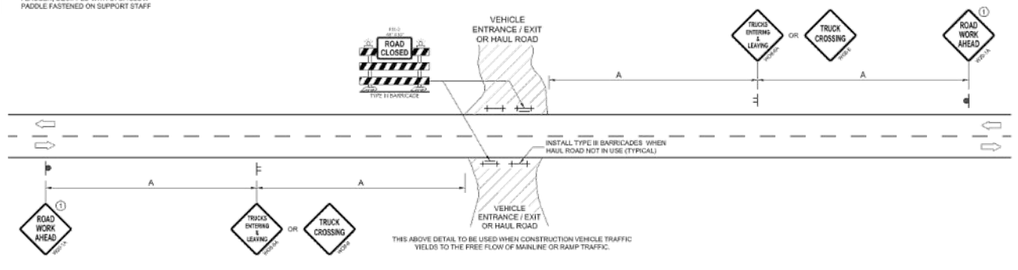
WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

① THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.



TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2006
DATE
/S/ Andrew Heldstab
WORK ZONE ENGINEER

SDD 15D29 - 06

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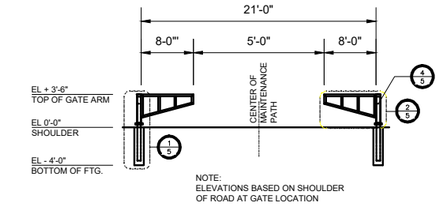
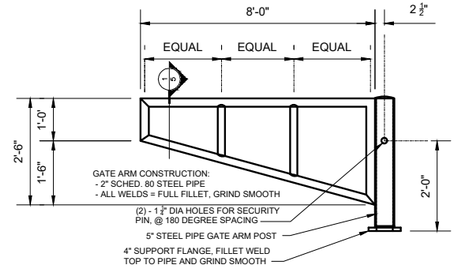
1/5 TRAFFIC CONTROL DETAIL
NO SCALE



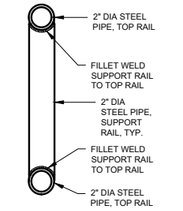
GATE ELEVATION

SPECIFICATIONS AND NOTES:

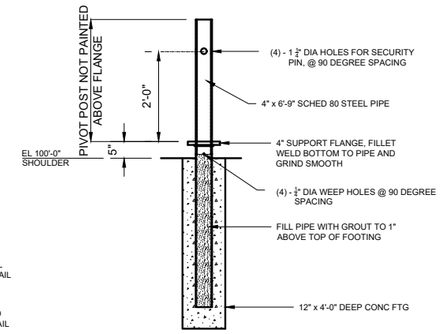
1. ALL STEEL PIPE TO BE SCHEDULE 80.
2. ALL WELDS TO BE FILLET TYPE, GROUND SMOOTH.
3. ALL HOLES TO BE SHOP DRILLED.
4. ALL EXPOSED METAL TO BE PRIMED AND PAINTED. FINAL COAT TO BE ENAMEL, COLOR CHOICE TO BE PROVIDED.
5. TRAFFIC SIGN BY OTHERS, MOUNTED BY OTHERS.
6. PADLOCK BY OTHERS.



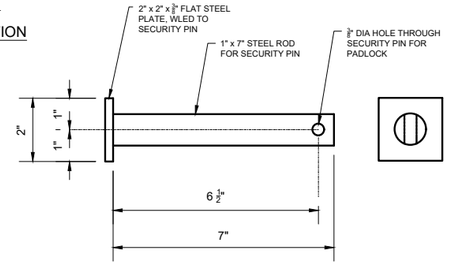
2. GATE ARM DETAIL



3. GATE ARM SECTION



1. GATE PIVOT POST DETAIL



4. SECURITY PIN DETAIL

2/5 BIKE GATE DETAIL
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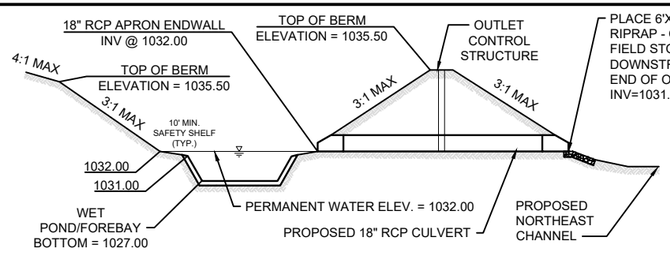

3/5 PROPOSED POND C DETAIL – PROFILE VIEW
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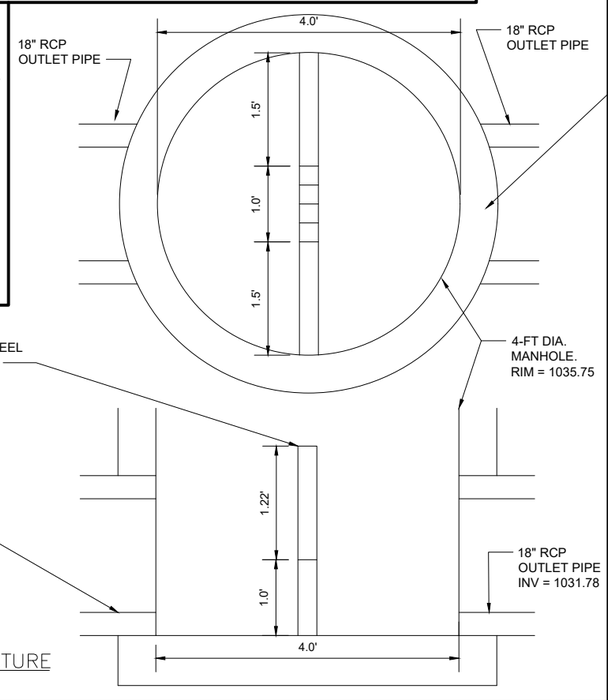

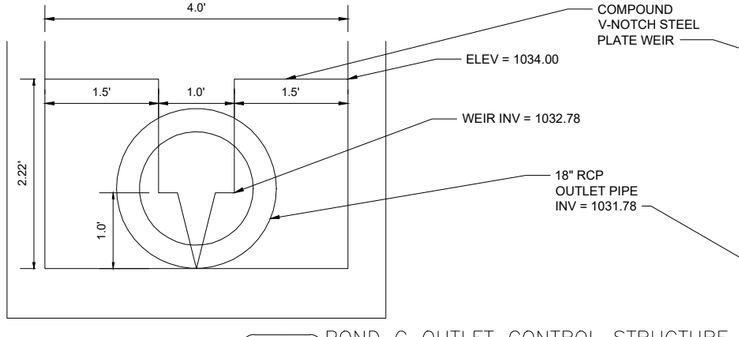

4/5 POND C OUTLET CONTROL STRUCTURE
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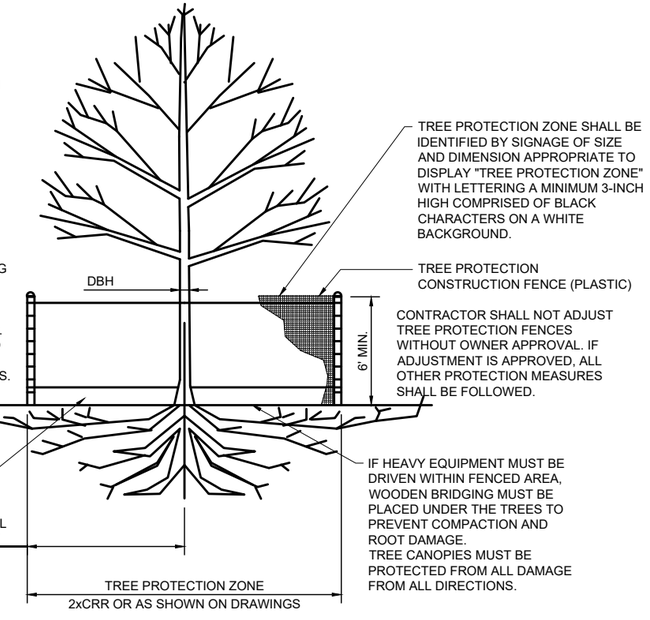
REFERENCE SDD 5.7.5 AND 5.7.6 FOR PRECAST STORM ACCESS STRUCTURES REINFORCEMENT.



PROHIBITED WITHIN TREE PROTECTION ZONE:

1. NO CONSTRUCTION STAGING OR MATERIALS STORAGE.
2. NO DISPOSAL OF CONSTRUCTION MATERIALS, BYPRODUCTS, OR SOLUTIONS.
3. GRADING EXCAVATION, AND TRENCHING ONLY AS DESCRIBED IN SPECIFICATIONS.

WEED CONTROL MUST OCCUR WITHIN THE TREE PROTECT ZONES THROUGHOUT THE ENTIRE PROJECT.

1.5 DBH IN INCHES = CRITICAL ROOT RADIUS (CRR) IN FEET

IN NO CASE SHALL FENCE BE CLOSER THAN 5' FROM THE TRUNK OF ANY TREE

5/5 TREE PROTECTION DETAIL
NO SCALE

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CONSTRUCTION DETAILS - 2

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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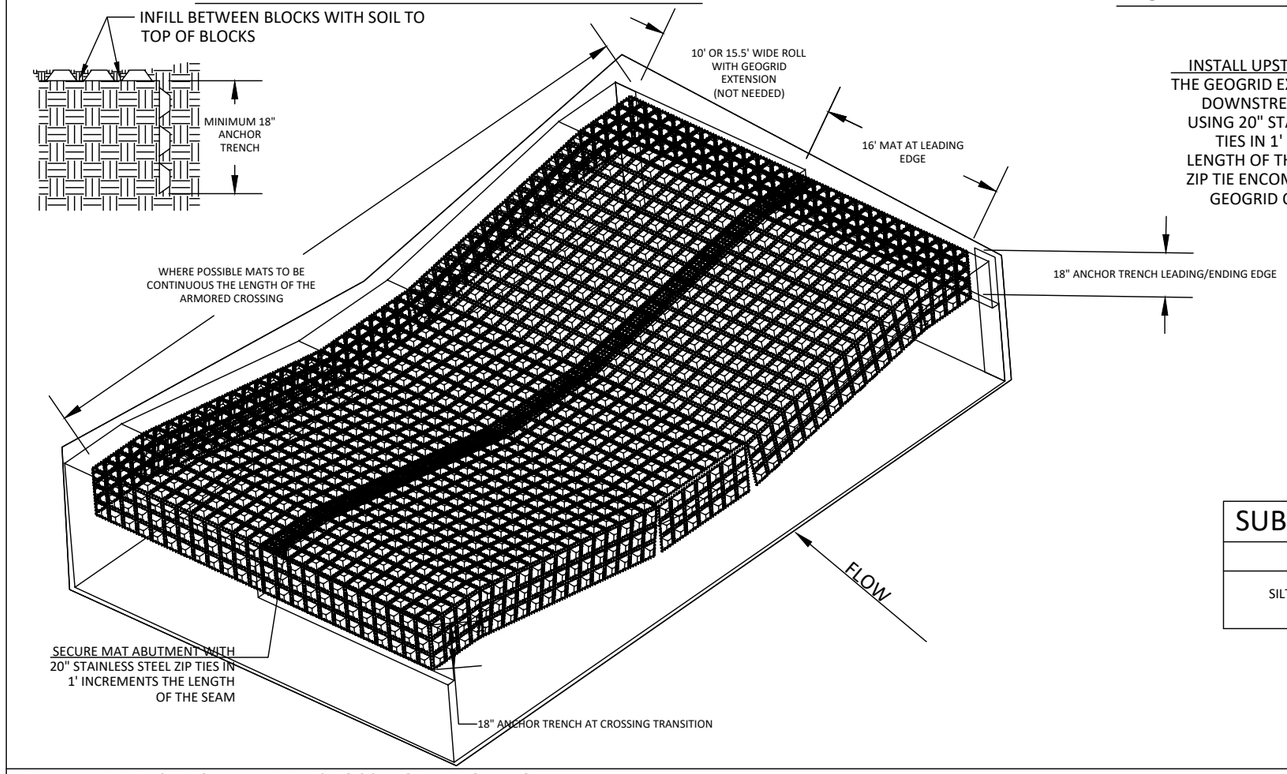
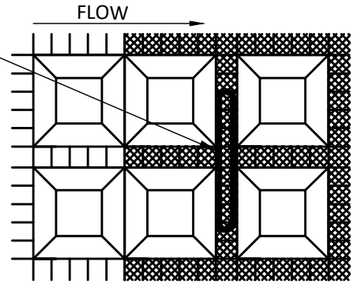
METHOD FOR TREATING EDGES EXPOSED TO FLOW

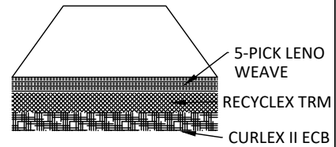


ABUTMENT METHOD FOR SEAMS PERPENDICULAR WITH FLOW

INSTALL UPSTREAM MAT OVER THE GEOGRID EXTENSION OF THE DOWNSTREAM MAT. SECURE USING 20" STAINLESS STEEL ZIP TIES IN 1' INCREMENTS THE LENGTH OF THE SEAM. ENSURE ZIP TIE ENCOMPASSES 3 CORDS GEOGRID OF EACH BLOCK IT SECURES.



FLEXAMAT PLUS UNDERLAYMENT



SUBGRADE THICKNESS OF CRUSHED STONE

SITE SOIL TYPE	BASE
SILTY SOILS, FINE GRAIN SOILS, POOR DRAINAGE	TOP: 3" DEPTH GRADATION NO. 3 BOTTOM: 7" DEPTH GRADATION NO. 2

FLEXAMAT PLUS - LOW WATER CROSSING ARMORING

CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURES REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. FLEXAMAT ROLLS ARE AVAILABLE IN STANDARD WIDTHS OF 16' FOR LOW WATER CROSSINGS. FOR CROSSINGS WIDER THAN THE 16' INCLUDING ANCHOR TRENCHES, INSTALL A 10' OR A 15.5' WIDE MAT WITH A GEOGRID EXTENSION AND UNDERLAYMENT EXTENSION. COMPLETE THE REMAINDER OF THE CHANNEL WIDTH WITH AN 8', 10', 12' OR 16' MAT. IT IS THE MANUFACTURERS RECOMMENDATION TO UTILIZE THE WIDEST MATS POSSIBLE. THE PARALLEL ABUTMENT SEAM SHALL BE IN THE CENTER OF THE CROSSING TO MINIMIZE DRIVING ON ABUTMENT SEAM.
4. FLEXAMAT ROLLS SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE CROSSING.
   - 4.1. WHEN CROSSING EXCEEDS 100' IN WIDTH OR WHEN SITE CONDITIONS PREVENT THE USE OF A CONTINUOUS MAT, INSTALL SHORTER ROLLS AND ABUT PARALLEL ABUTMENT SEAMS TIGHTLY. SECURE PARALLEL ABUTMENT SEAMS WITH STAINLESS STEEL ZIP TIES IN 1' INCREMENTS WITH STAINLESS STEEL ZIP TIES. ZIP TIES SHALL ENCOMPASS 3 CORDS OF GEOGRID ON EACH MAT.
   - 4.2. WHEN INSTALLING SHORTER ROLLS, THE PARALLEL ABUTMENT SEAMS SHOULD NOT BE IN THE CHANNEL BOTTOM. WHENEVER POSSIBLE PARALLEL SEAMS SHALL BE ABOVE THE THE NORMAL LOW WATER ELEVATION.
5. AT LEADING AND ENDING EDGES PERPENDICULAR TO THE CHANNEL EMBED THE FLEXAMAT INTO A 18" VERTICAL ANCHOR TRENCH.
   - 5.1. AT THE CROSSING TRANSITION TO THE ACCESS DRIVE, TRANSITION THE FLEXAMAT TO THE EXISTING GRADE. IF CONCENTRATED FLOW IS ANTICIPATED EMBED FLEXAMAT INTO A 18" VERTICAL ANCHOR TRENCH.
6. FOR CROSSINGS WIDER THAN 16' INSTALL THE DOWNSTREAM MAT WITH THE GEOGRID AND UNDERLAYMENT EXTENSIONS FIRST. ENSURE EXTENSIONS ARE LAYING FLAT PRIOR TO PLACEMENT OF THE UPSTREAM MAT.
   - 6.1. INSTALL THE UPSTREAM MAT OVER THE DOWNSTREAM MAT EXTENSIONS. INSTALL STAINLESS STEEL ZIP TIES IN 1' INCREMENTS THE LENGTH OF THE LONGITUDINAL SEAM. ZIP TIES SHALL ENCOMPASS 3 CORDS OF GEOGRID ON EACH MAT.

MOTZ ENTERPRISES, INC.

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REV - 2

1/6 OVERFLOW ARMORING DETAIL
NO SCALE

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CITY OF MADISON 9030

CONTRACT NO:

CONSTRUCTION DETAILS - 3

LOWER BADGER MILL CREEK FLOOD MITIGATION

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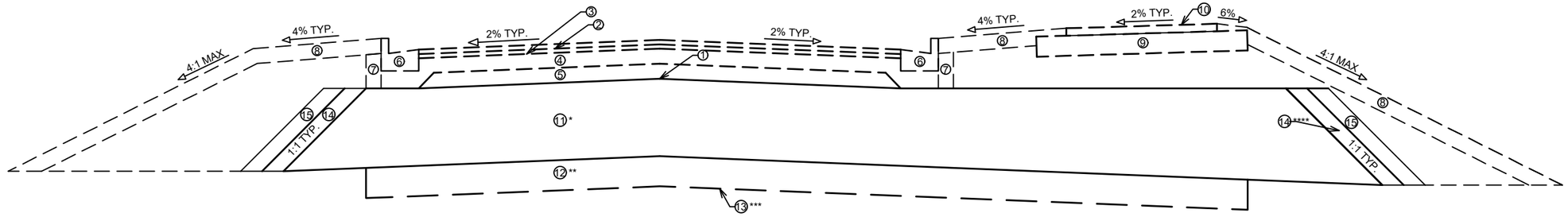

SPECIAL NOTES:

- TYPICAL SECTION NOT TO SCALE

- CONSTRUCT BLUE HARVEST LANE TO SUBGRADE BETWEEN STA 100+13 TO STA 107+25. BASE COURSE, CURB & GUTTER, AND PAVEMENT TO BE CONSTRUCTED BY OTHERS

- IF LOOSE SANDS ARE DISCOVERED BENEATH THE TOPSOIL, VIBRATORY COMPACTIVE EFFORT/DENSIFICATION AND SUBSEQUENT EVALUATION SHALL BE REQUIRED FOR STABILITY PRIOR TO PLACING SELECT FILL.

*SELECT FILL SHALL BE COMPLETED PER ARTICLE 202(c). REPRESENTATIVE SAMPLES OF PROPOSED FILL SHALL BE SUBMITTED TO THE CITY'S GEOTECH CONSULTANT FOR OPTIMUM MOISTURE-MAXIMUM DENSITY DETERMINATION (ASTM D1557) PRIOR TO THE START OF FILL PLACEMENT. THE SAMPLE SIZE SHALL BE APPROXIMATELY 50 LB. THE CITY'S GEOTECH CONSULTANT SHALL BE RETAINED TO PERFORM FIELD DENSITY TEST TO DETERMINE THE LEVEL OF COMPACTION BEING ACHIEVED IN THE FILL. THE TESTS SHALL GENERALLY BE CONDUCTED ON EACH LIFT AT THE BEGINNING OF FILL PLACEMENT AND AT A FREQUENCY MUTUALLY AGREED UPON BY THE PROJECT TEAM FOR THE REMAINDER OF THE PROJECT.

**TEST ROLLING SHALL BE COMPLETED PER ARTICLE 201.29(c) OF THE STANDARD SPECIFICATIONS.

***GEOSYNTHETIC REINFORCEMENT FABRIC SHALL BE MIRIAFI RS580i OR AN APPROVED EQUAL. THE BREAKER RUN SHALL BE PLACED DIRECTLY OVER THE FABRIC.

**** INSTALL CLAY LINER FOR OVERFLOW BETWEEN STA 106+50 RT TO STA 107+25 RT.

TYPICAL SECTION
BLUE HARVEST LANE
STA 100+13 TO STA 107+25

① POINT REFERRED ON BLUE HARVEST LANE CROSS SECTIONS
② 1.75" HMA PAVEMENT, TYPE 4 LT 58-28 S (UPPER LAYER) - BY OTHERS
③ 1.75" HMA PAVEMENT, TYPE 4 LT 58-28 S (LOWER LAYER) - BY OTHERS
④ 6" GRADATION 2 CRUSHED AGGREGATE BASE COURSE (UPPER LAYER) - BY OTHERS
⑤ 6" GRADATION 1 CRUSHED AGGREGATE BASE COURSE (LOWER LAYER) - BY OTHERS
⑥ CONCRETE CURB AND GUTTER TYPE 'A', SEE P-SHEETS FOR LOCATIONS - BY OTHERS
⑦ FILL INCIDENTAL TO CURB AND GUTTER INSTALLATION - BY OTHERS
⑧ RESTORE DISTURBED AREAS W/ 6" TOPSOIL, SEED, AND EROSION MATTING - BY OTHERS
⑨ 6" GRADATION 2 CRUSHED AGGREGATE BASE COURSE (UPPER LAYER) - BY OTHERS
⑩ 3.00" HMA PAVEMENT, TYPE 4 LT 58-28 S - BY OTHERS
⑪ *SELECT FILL, DEPTH VARIES
⑫ **12" BREAKER RUN AS NEEDED
⑬ ***GEOSYNTHETIC REINFORCEMENT FABRIC AS NEEDED
⑭ ****6" CLAY LINER
⑮ 6" TOPSOIL

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CONSTRUCTION DETAILS - 4

LOWER BADGER MILL CREEK FLOOD MITIGATION

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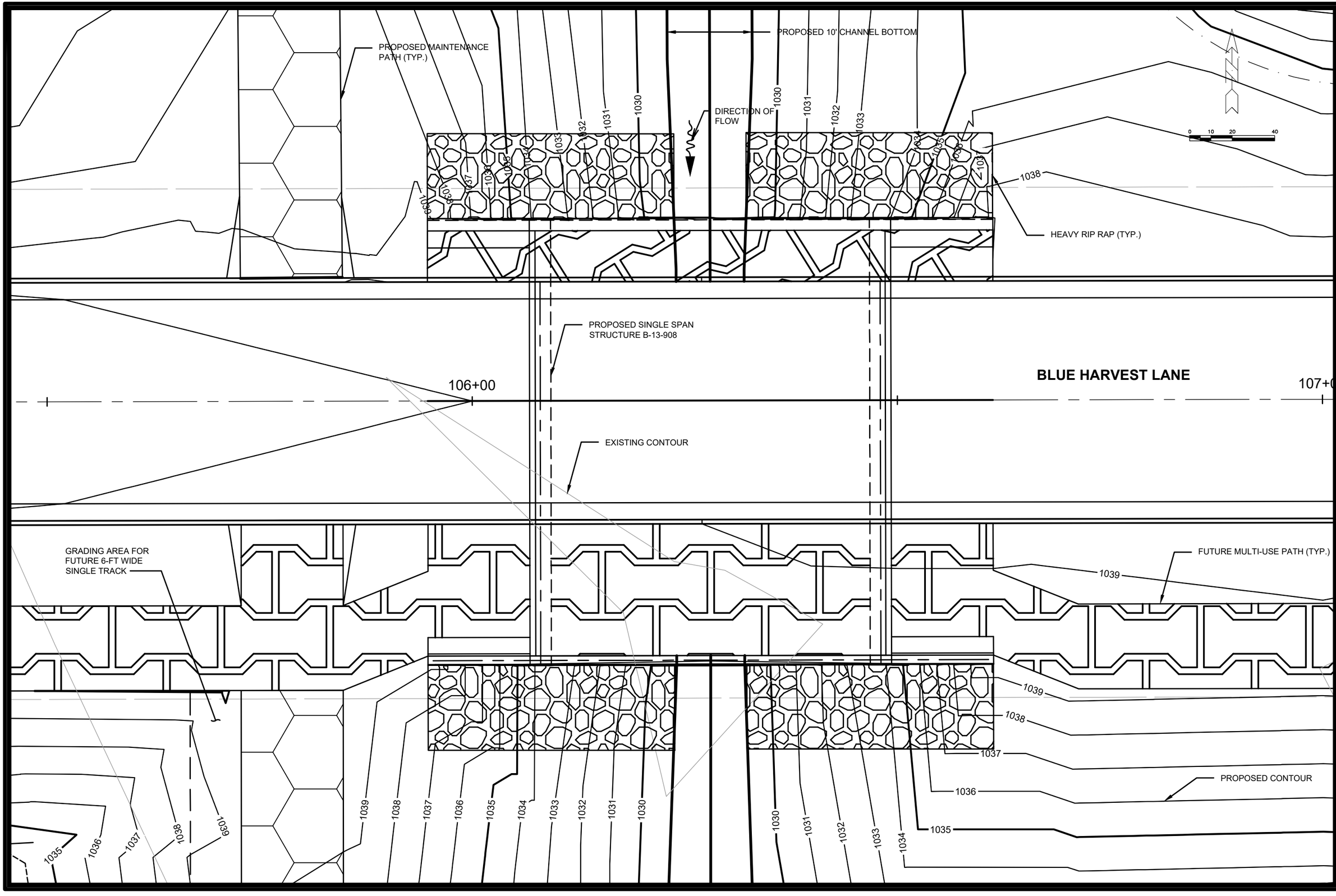

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CITY OF MADISON 9030

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B-13-908 STRUCTURE OVERVIEW

LOWER BADGER MILL CREEK FLOOD MITIGATION

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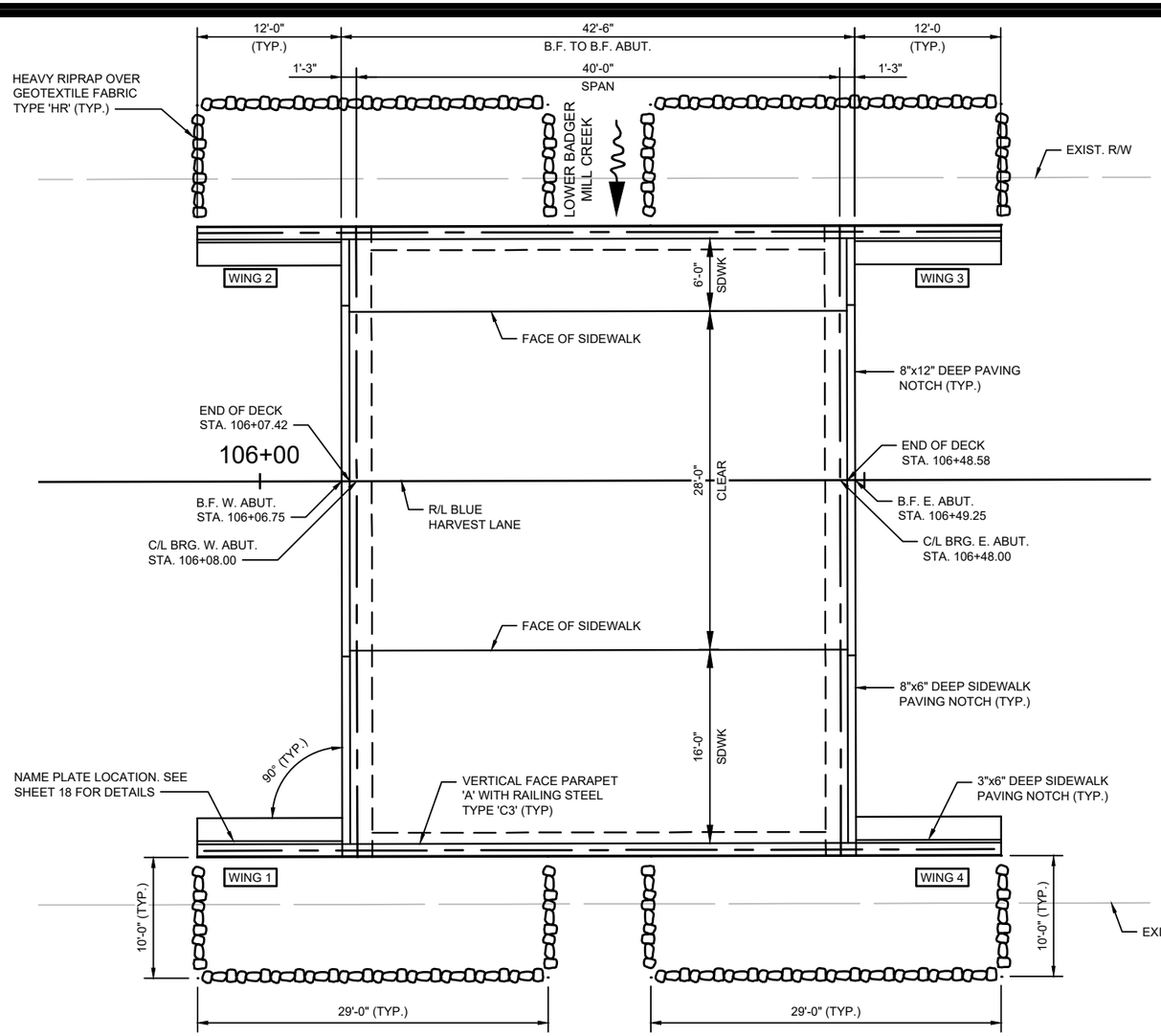
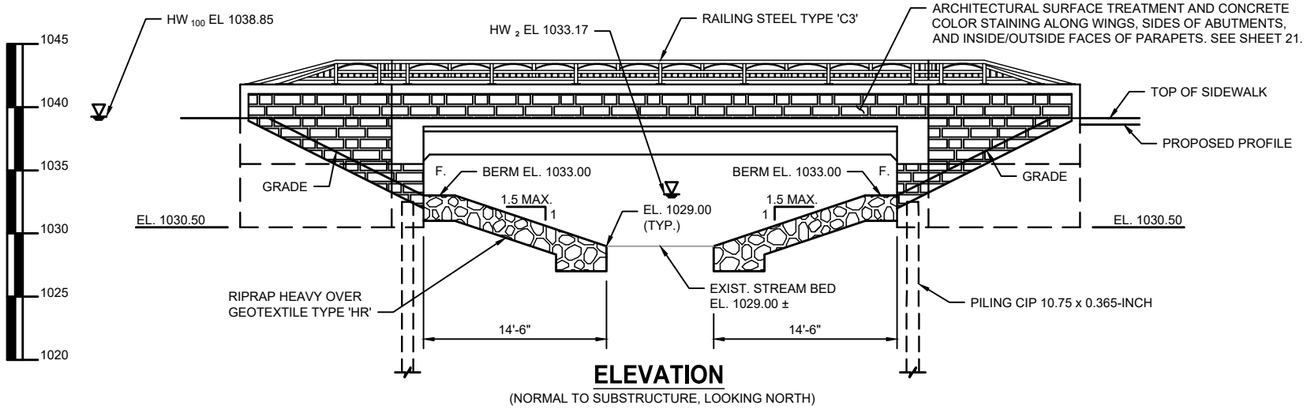


PLAN
(SINGLE SPAN CONCRETE FLAT SLAB)



ELEVATION
(NORMAL TO SUBSTRUCTURE, LOOKING NORTH)

DESIGN DATA

STRUCTURE DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF.

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF = 1.07
OPERATING RATING FACTOR	RF = 1.38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE SUPERSTRUCTURE	f'c = 4,000 PSI
CONCRETE SUBSTRUCTURE	f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 PSI

TRAFFIC DATA

A.D.T. (2023):
A.D.T. (2043):
DESIGN SPEED: 30 MPH

FOUNDATION DATA

ABUTMENT TO BE SUPPORTED ON PILING CIP 10.75 x 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. CONICAL PILE POINTS ARE REQUIRED.

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

ESTIMATED PILE LENGTHS:

WEST ABUTMENT	60 FEET EACH
EAST ABUTMENT	65 FEET EACH

LIST OF DRAWINGS

STRUCTURE DESIGN CONTACTS

DESIGN CONSULTANT CONTACT:
KEITH BEHREND (608) 251-4843

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CITY OF MADISON
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B-13-908 BRIDGE GENERAL PLAN
LOWER BADGER MILL CREEK FLOOD MITIGATION
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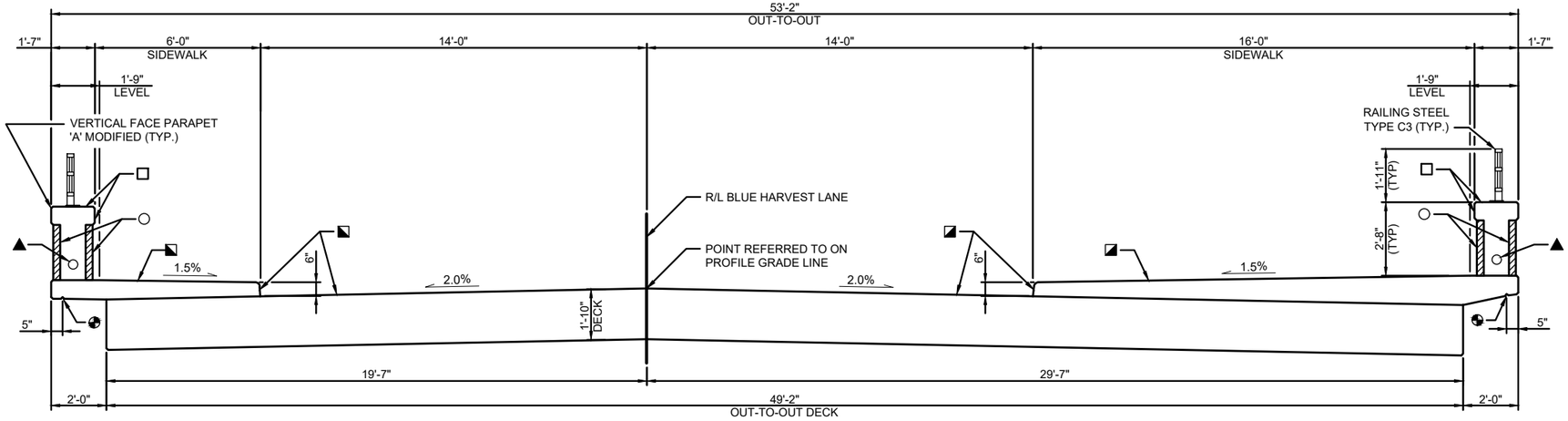
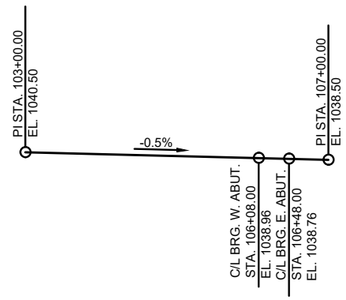
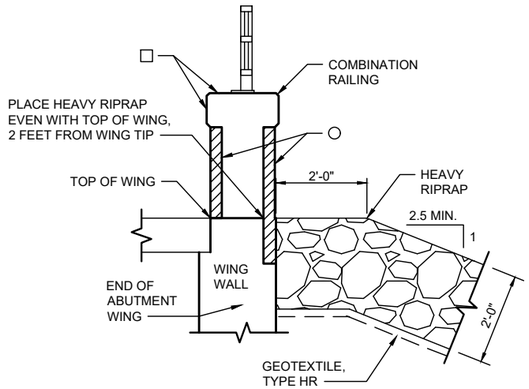


CROSS SECTION THRU SUPERSTRUCTURE

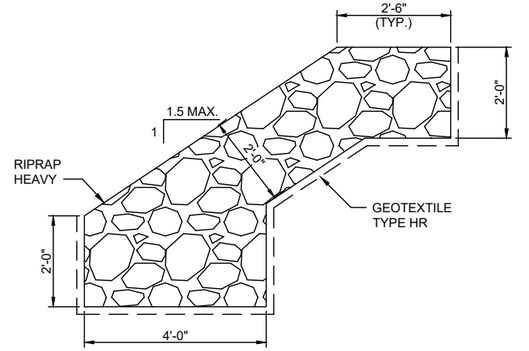
(LOOKING EAST)



PROFILE GRADE LINE - BLUE HARVEST LANE



TYPICAL FILL SECTION AT WING TIPS



RIPRAP HEAVY DETAIL

TOTAL ESTIMATED QUANTITIES

REFERENCE WISDOT BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT.	EAST ABUT.	SUPERS.	TOTAL
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-13-908	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	216	206	---	422
502.0100	CONCRETE MASONRY BRIDGES	CY	52.3	50.6	190.4	293
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	234	234
502.3210	PIGMENTED SURFACE SEALER	SY	7	7	21	35
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3,220	3,190	---	6,410
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,800	1,770	34,770	38,340
513.7016	RAILING STEEL TYPE C3	LF	---	---	131	131
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13	13	---	26
	CONCRETE STAINING B-13-908	SF	182	177	340	699
	ARCHITECTURAL SURFACE TREATMENT B-13-908	SF	182	177	340	699
550.0500	PILE POINTS	EACH	8	8	---	16
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	480	520	---	1,000
606.0300	RIPRAP HEAVY	CY	131	131	---	262
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	117	117	---	234
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	44	44	---	88
645.0120	GEOTEXTILE TYPE HR	SY	232	232	---	464
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	35	35	85	155
	NON-BID ITEMS					
	FILLER	SIZE				1/2" & 3/4"

GENERAL NOTES

SEE ROADWAY PLANS FOR BENCH MARK INFORMATION.

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR DIMENSIONS FOR BENDING ARE OUT-TO-OUT OF BARS.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-13-908" SHALL BE THE EXISTING GROUND LINE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 8 AND IN THE ABUTMENT DETAILS.

AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH "BACKFILL STRUCTURE TYPE A".

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. "GEOTEXTILE TYPE DF SCHEDULE A" SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

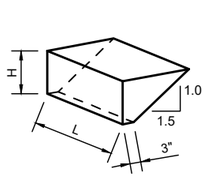
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ALL DETAILS, MATERIALS, AND FABRICATION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION FOR THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION, CURRENT EDITION. A NAME PLATE CONFORMING TO SECTION 506.2.4 OF THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWING 12A3 OF THE WISCONSIN FACILITIES DEVELOPMENT MANUAL SHALL BE INSTALLED. NAME PLATE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

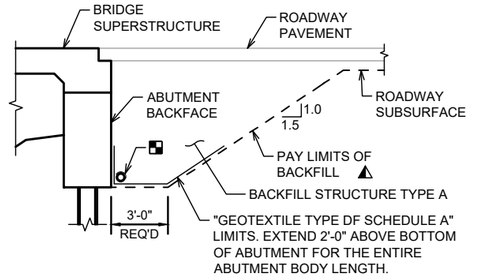
LEGEND

- ¾" V-GROOVE REQ'D EXTEND. TO 6" FROM F.F. OF ABUTMENT DIAPHRAGMS.
- PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK, TOP OF SIDEWALK, AND VERTICAL FACE OF SIDEWALK.
- PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE, ENDS, AND TOP FACES OF THE PARAPETS THAT DON'T RECEIVE ARCHITECTURAL SURFACE TREATMENT..
- BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL ON "B-13-908 WEST ABUTMENT" SHEET.
- ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING. SEE AESTHETIC DETAILS ON SHEET 18.
- 2-INCH DIA. CONDUIT.



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)



TYPICAL SECTION THRU ABUTMENT

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B-13-908 CROSS SECTION, QUANTITIES, NOTES & DETAILS
LOWER BADGER MILL CREEK FLOOD MITIGATION
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CITY OF MADISON
CONTRACT NO: 9030

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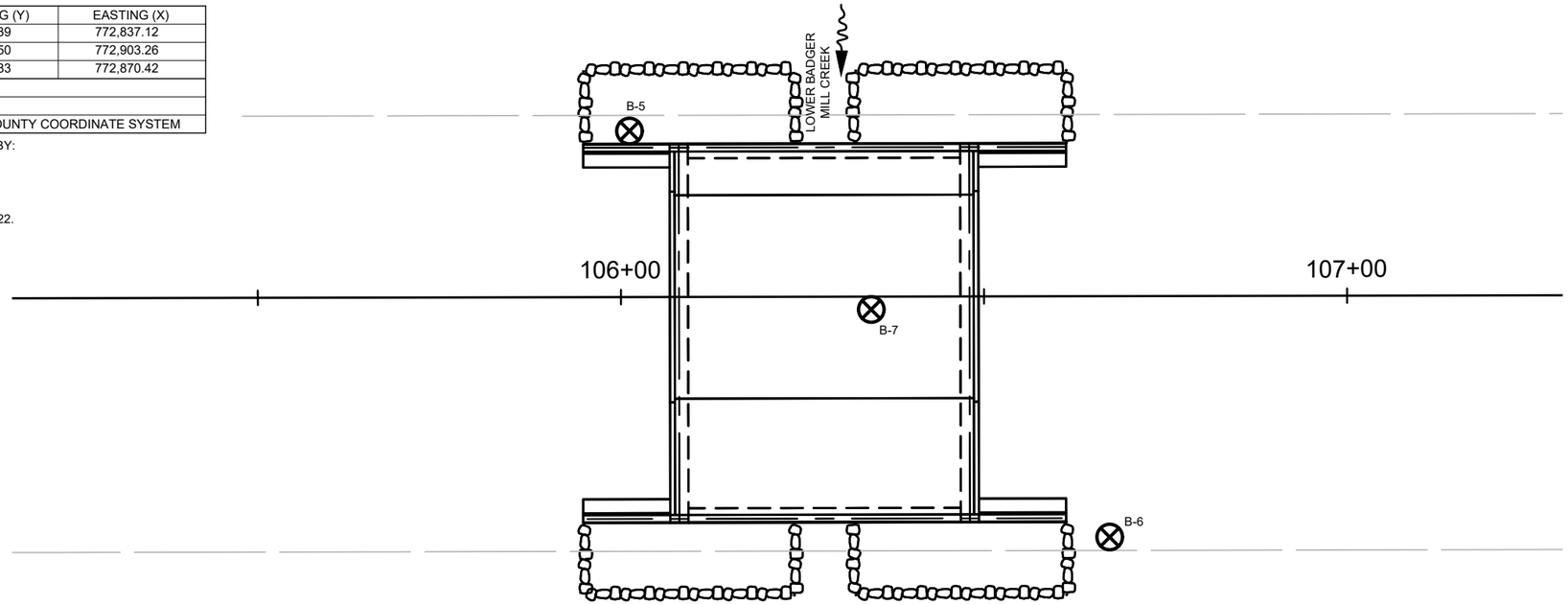
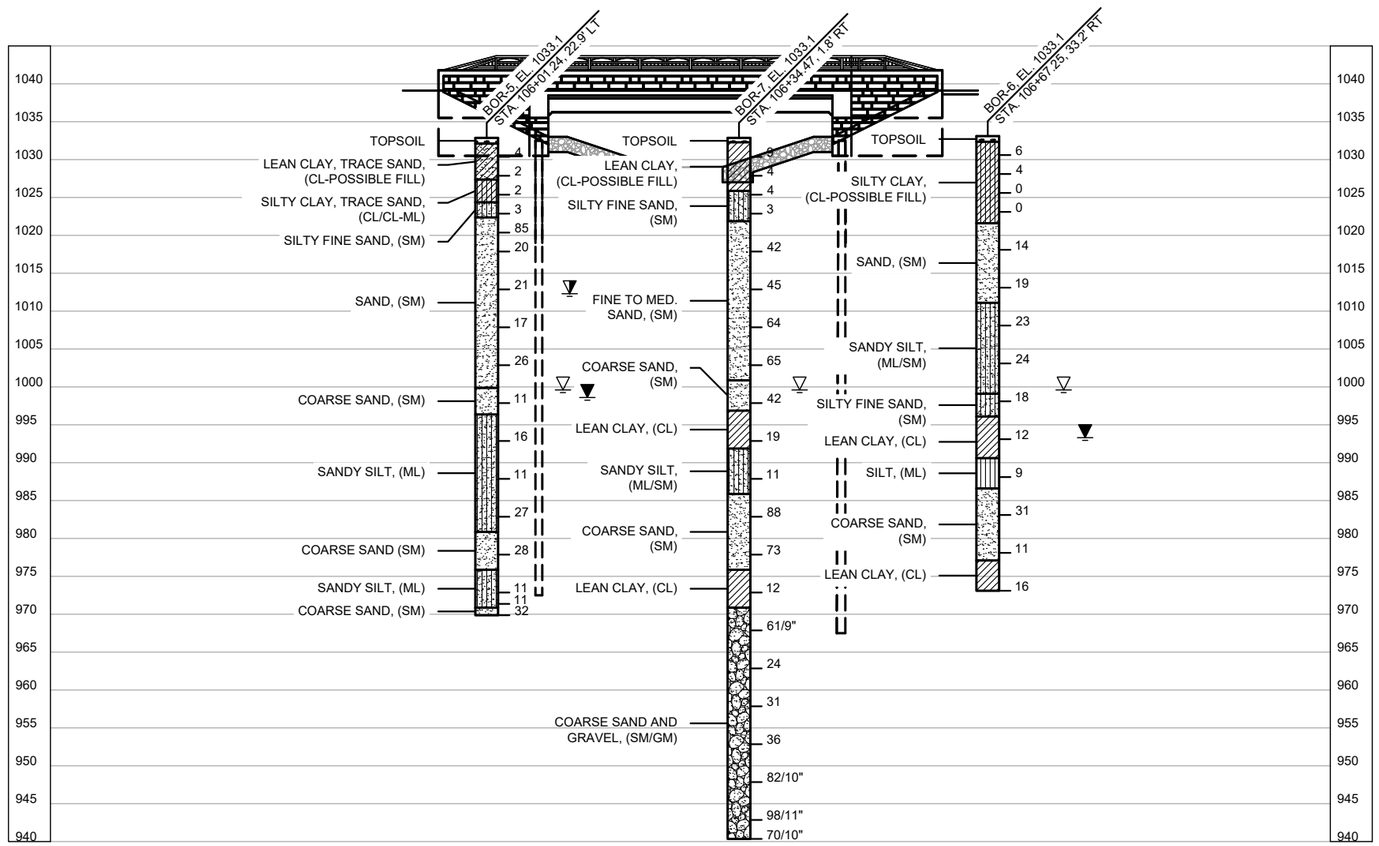
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
5	8-22-2022	469,731.39	772,837.12
6	8-22-2022	469,675.50	772,903.26
7	9-08-2022	469,706.83	772,870.42
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO DANE COUNTY COORDINATE SYSTEM			

BORINGS PERFORMED AND REPORT COMPLETE BY:
CGC, INC.
2921 PERRY STREET,
MADISON, WI 53713

BORINGS WERE PERFORMED ON 8/22/22 AND 9/8/22.

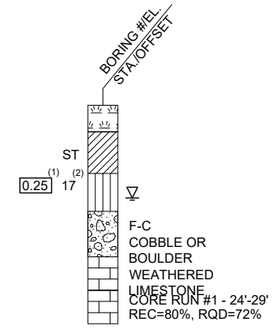




MATERIAL SYMBOLS

ASPHALT · TOPSOIL · PEAT
CONCRETE · FILL · GRAVEL
SAND · CLAY · SILT
BOULDERS OR COBBLES · LIMESTONE · BEDROCK (UNKNOWN)
SHALE · SANDSTONE · IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE · M-MEDIUM · C-COARSE · ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 SUBSURFACE EXPLORATION

LOWER BADGER MILL CREEK FLOOD MITIGATION

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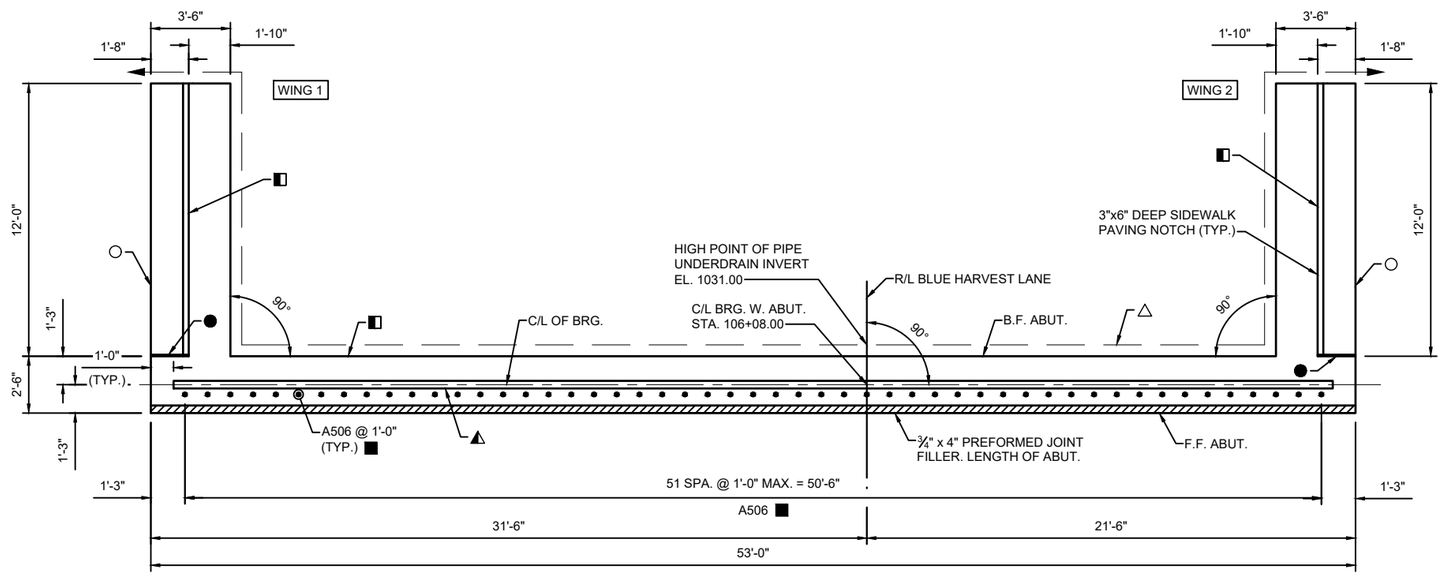
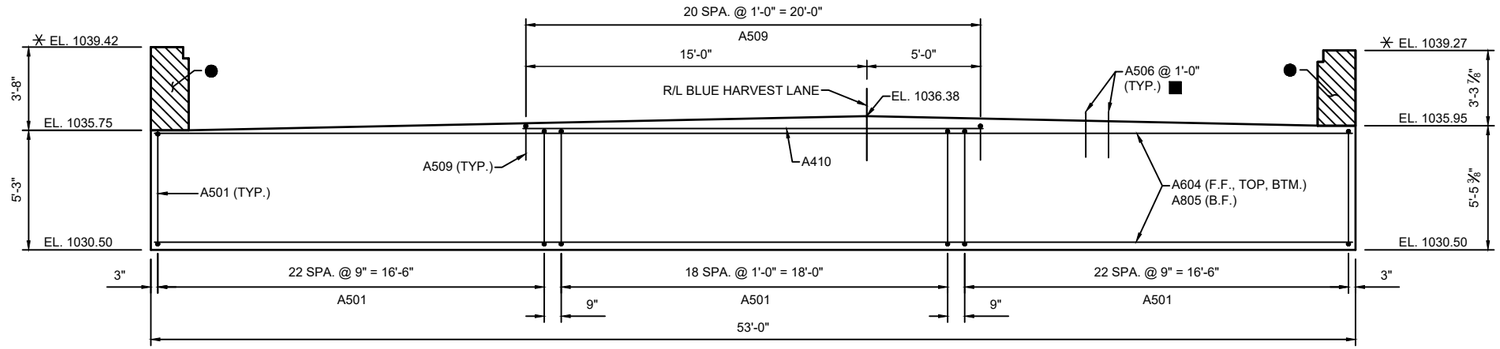
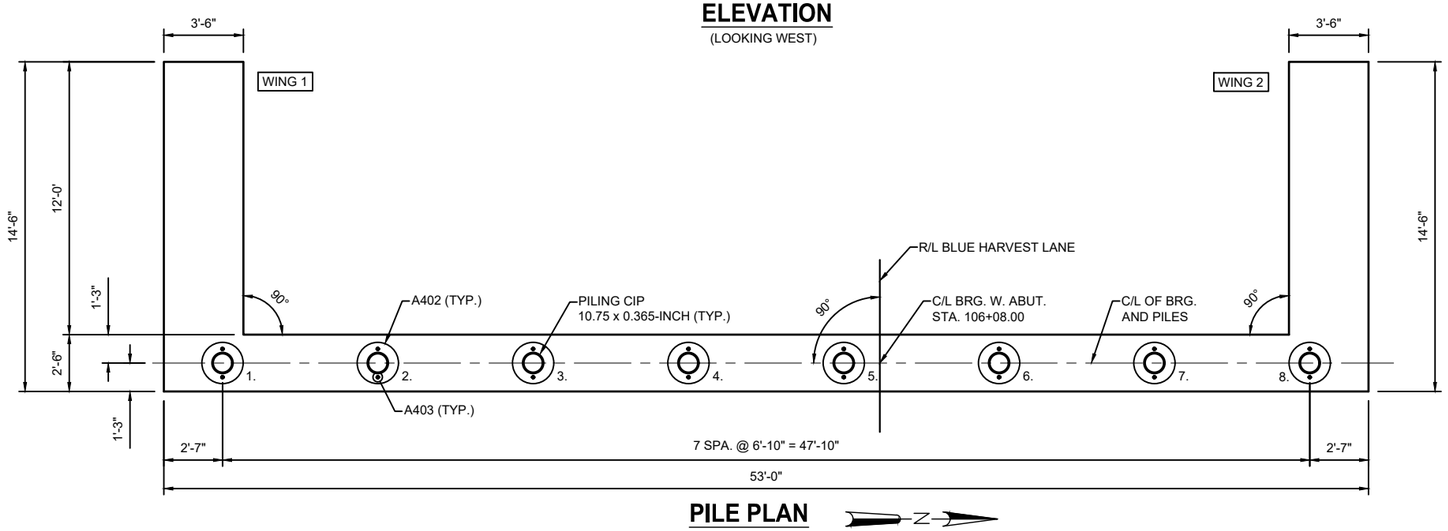


PLAN



ELEVATION

(LOOKING WEST)



PILE PLAN

NOTES

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER 1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INSIDE FACE.

ADJUST A501 BARS INTERFERING WITH PILINGS.

SEE SHEET 13 FOR PILE SPLICE DETAILS.

SEE SHEET 12 FOR REINFORCING DETAILS.

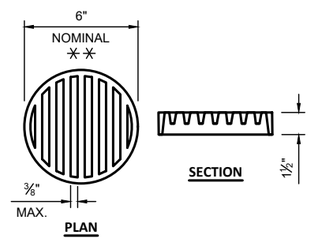
WEST ABUTMENT TO BE SUPPORTED ON PILING CIP 10.75 x 0.365-INCH WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. ESTIMATED 60 FEET LONG EACH. CONICAL PILE POINTS REQUIRED.

SEE SHEET 9 FOR TYPICAL FILL SECTION AT WING TIPS.

SEE SHEET 21 FOR AESTHETIC DETAILS.

LEGEND

- ● ½" FILLER, EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE WING. FILLER INCLUDED IN WING LENGTH.
- ◧ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ✳ ELEVATION GIVEN AT B.F. ABUTMENT.
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 1031.00 AT R/L. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE DETAIL THIS SHEET.
- ■ THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- ◭ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".
- ○ ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING AS NEEDED. SEE SHEET 21 FOR EXTENTS.



RODENT SHIELD DETAIL

✳✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 WEST ABUTMENT

LOWER BADGER MILL CREEK FLOOD MITIGATION

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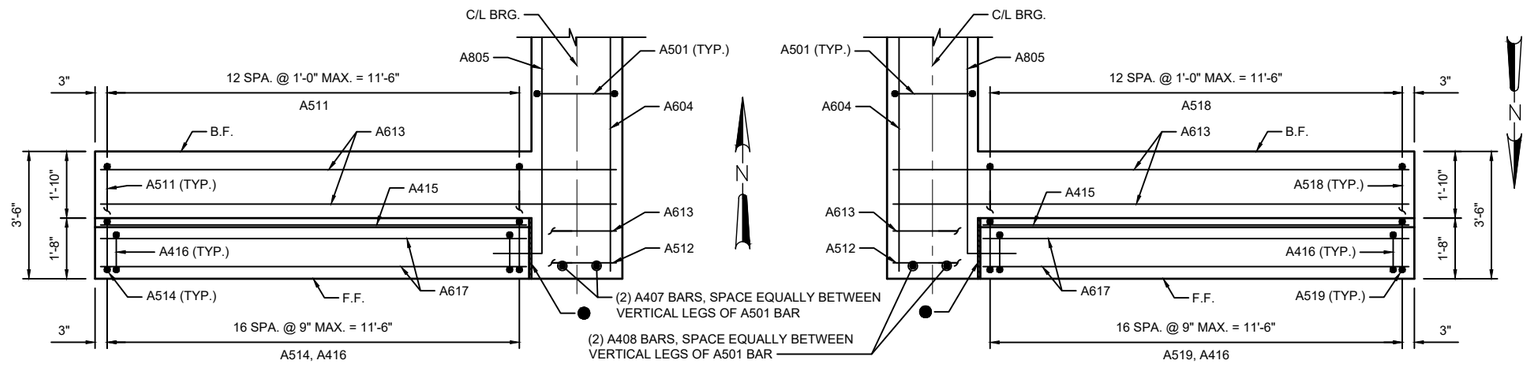
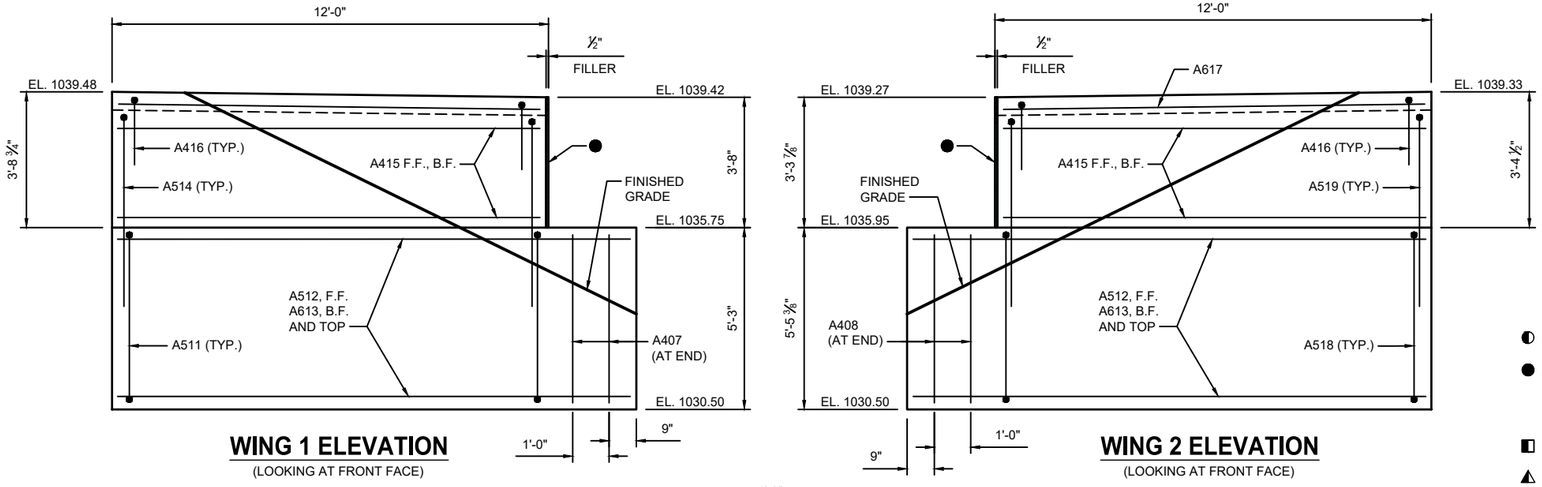


WING 1 PLAN

WING 2 PLAN

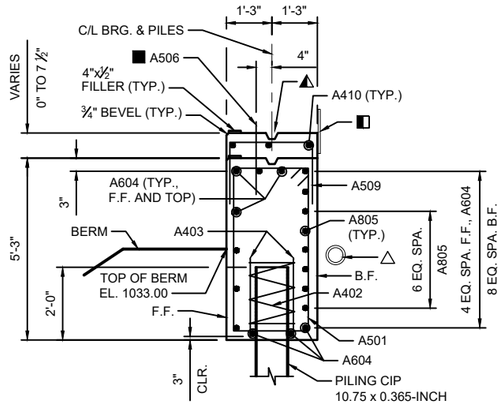


WING 1 ELEVATION

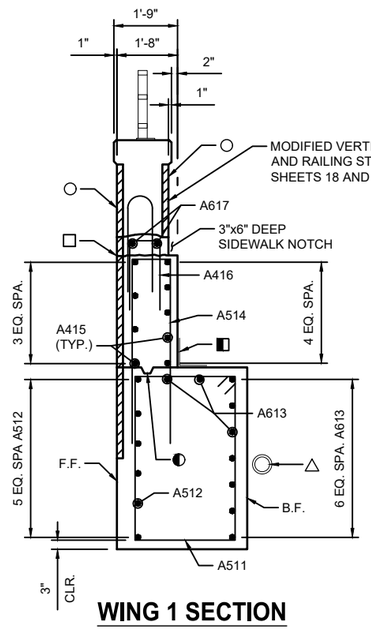
(LOOKING AT FRONT FACE)

WING 2 ELEVATION

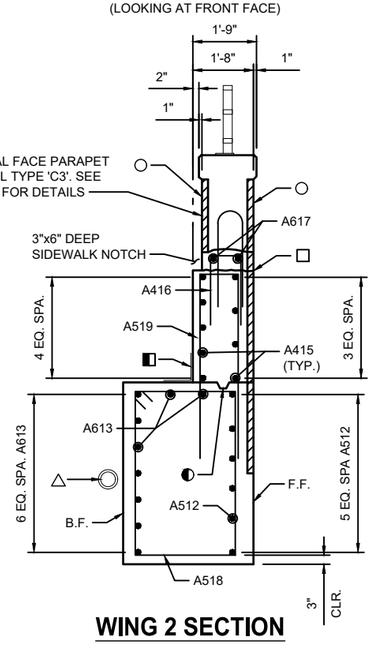
(LOOKING AT FRONT FACE)



TYPICAL BODY SECTION



WING 1 SECTION



WING 2 SECTION

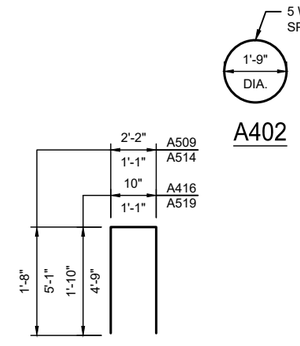
WEST ABUTMENT BILL OF BARS

UNCOATED: 3,220 LBS
COATED: 1,800 LBS

BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
A501	65	14'-6"	X		LOWER BODY - VERT.
A402	8	28'-0"	X		LOWER BODY - PILES - SPIRAL
A403	16	2'-3"			LOWER BODY - PILES - VERT.
A604	11	52'-8"			LOWER BODY - TOP, BOT., & F.F. - HORIZ.
A805	7	54'-11"	X		LOWER BODY - B.F. - HORIZ.
A506	52	2'-0"		X	LOWER BODY - TOP - VERT.
A407	2	4'-10"			LOWER BODY - VERT. - SOUTH END
A408	2	5'-0"			LOWER BODY - VERT. - NORTH END
A509	21	5'-3"	X		LOWER BODY - VERT. - TOP
A410	3	20'-0"			LOWER BODY - HORIZ. - TOP
A511	13	16'-2"	X	X	LOWER WING - VERT. - WING 1
A512	12	14'-2"		X	LOWER WING - F.F. - HORIZ. - WINGS 1 & 2
A613	18	14'-2"		X	LOWER WING - B.F., TOP - HORIZ. - WINGS 1 & 2
A514	17	11'-0"	X	X	UPPER WING - VERT. - WING 1
A415	18	11'-7"		X	UPPER WINGS - F.F., B.F. - HORIZ. - WINGS 1 & 2
A416	34	4'-4"	X	X	UPPER WINGS - VERT. - WINGS 1 & 2
A617	4	11'-7"		X	UPPER WINGS - HORIZ. - WINGS 1 & 2
A518	13	16'-6"	X	X	LOWER WING - VERT. - WING 2
A519	17	10'-4"	X	X	UPPER WING - VERT. - WING 2

LEGEND

- ◐ OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY WITH MEMBRANE ON BACKFACE.
- ● ½" FILLER TO EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW TOP OF WING AT INSIDE FACE.
- ◧ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ◭ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 11.
- ■ THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- □ OPTIONAL CONSTRUCTION JOINT, LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE. IF JOINT IS USED, UTILIZE RUBBERIZED MEMBRANE WATERPROOFING (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- ○ ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING. SEE AESTHETIC DETAILS ON SHEET 21.



A509, A514, A416, A519

A501, A511, A518

A805

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 WEST ABUTMENT DETAILS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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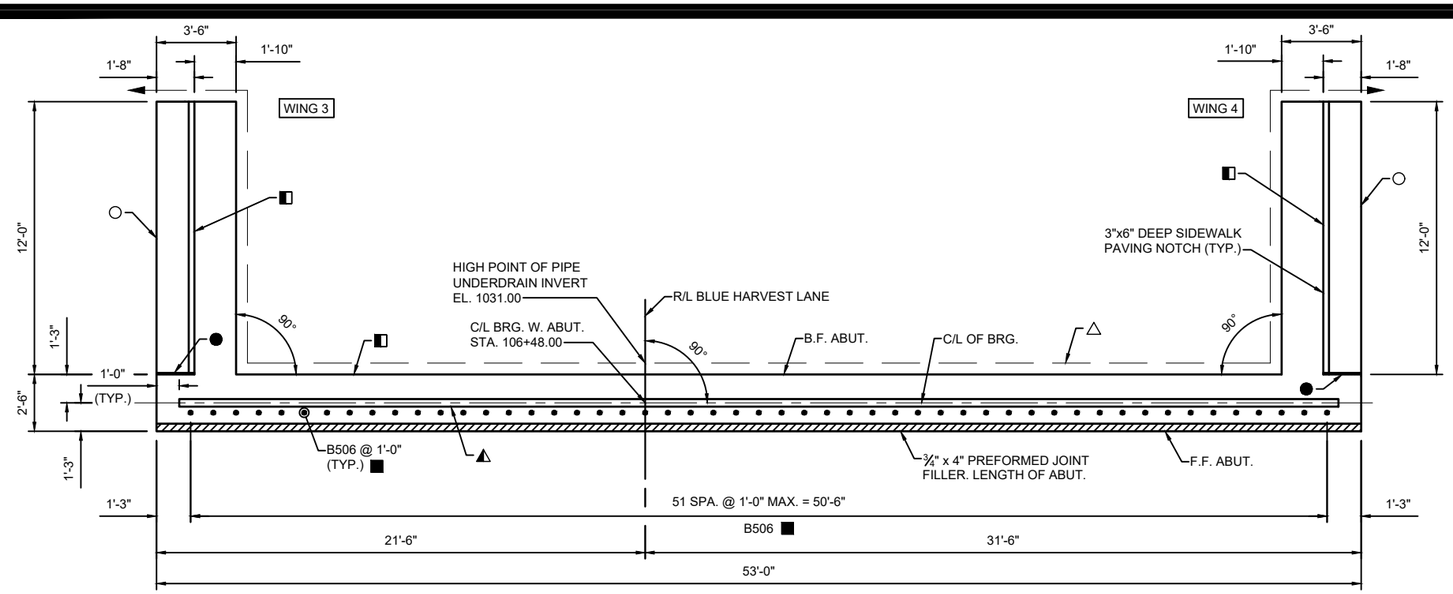
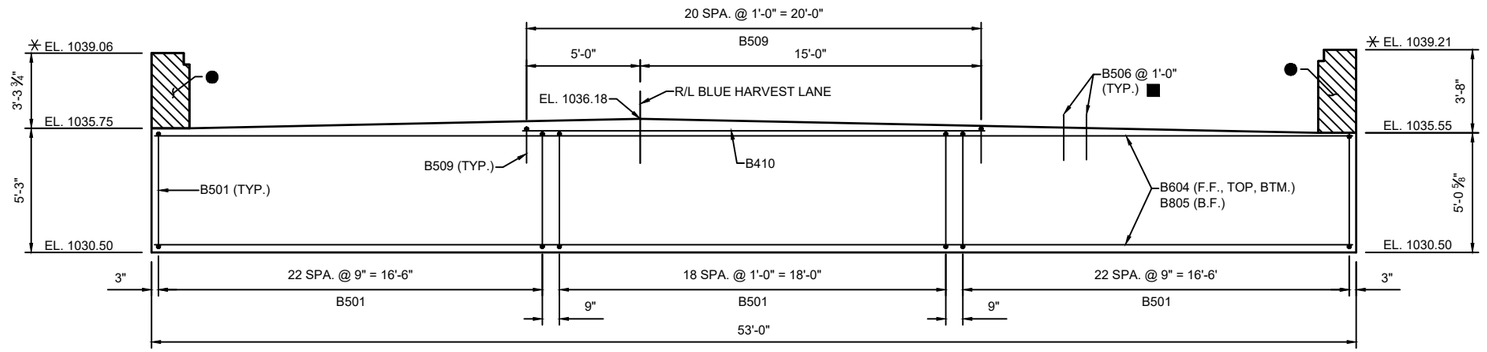


PLAN



ELEVATION

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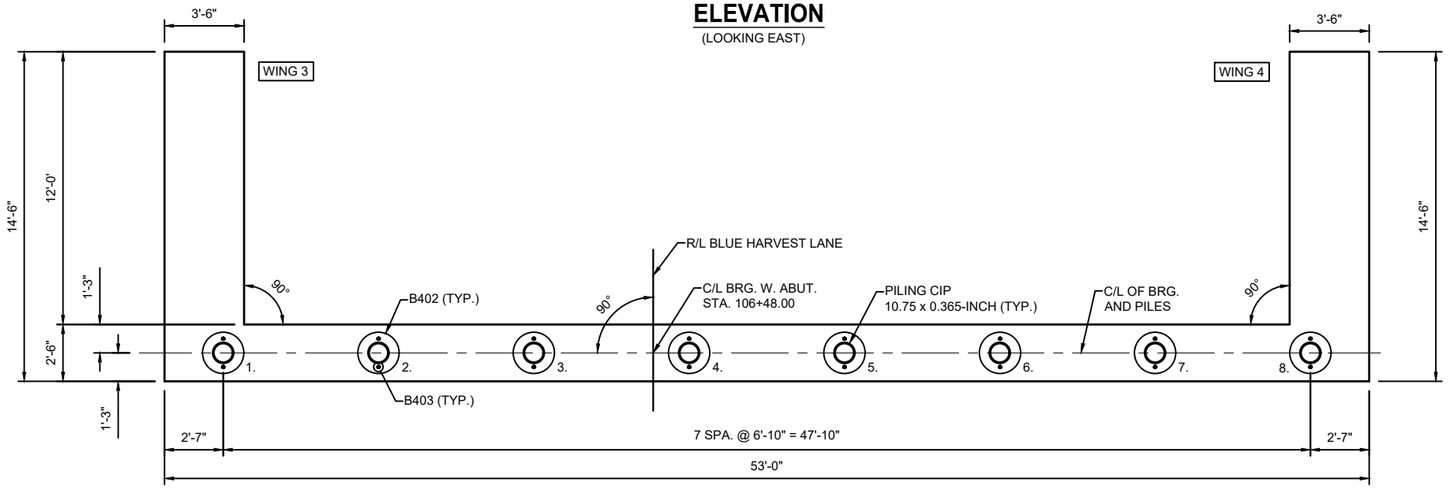

PILE PLAN

NOTES

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER 1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW FINISHED ROADWAY SURFACE AT INSIDE FACE.

ADJUST B501 BARS INTERFERING WITH PILINGS.

SEE THIS SHEET FOR PILE SPLICE DETAILS.

SEE SHEET 14 FOR REINFORCING DETAILS.

EAST ABUTMENT TO BE SUPPORTED ON PILING CIP 10.75 x 0.365-INCH WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. ESTIMATED 65 FEET LONG EACH. CONICAL PILE POINTS REQUIRED.

SEE SHEET 9 FOR TYPICAL FILL SECTION AT WING TIPS.

SEE SHEET 21 FOR AESTHETIC DETAILS.

LEGEND

- ● ½" FILLER, EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE WING. FILLER INCLUDED IN WING LENGTH.
- ◧ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ✳ ELEVATION GIVEN AT B.F. ABUTMENT.
- △ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. HIGH POINT EL. 1031.00 AT R/L. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE SHEET 11 FOR DETAIL.
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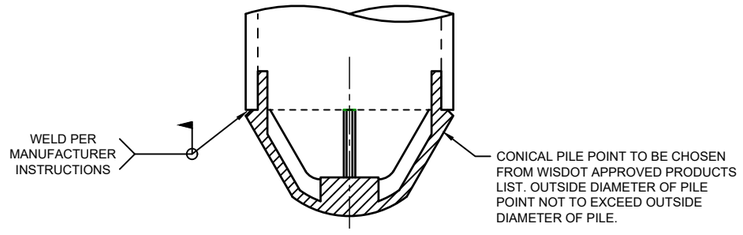
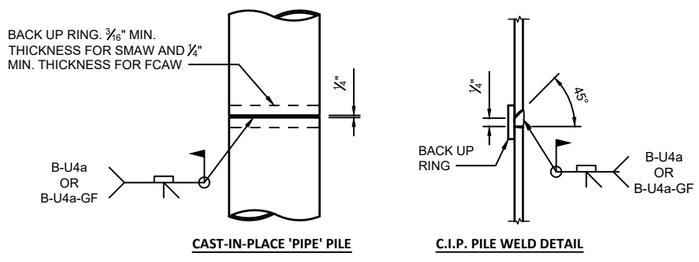


CONICAL PILE POINT DETAIL



CAST-IN-PLACE 'PIPE' PILE

C.I.P. PILE WELD DETAIL

CIP PILE DETAILS

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 EAST ABUTMENT

LOWER BADGER MILL CREEK FLOOD MITIGATION

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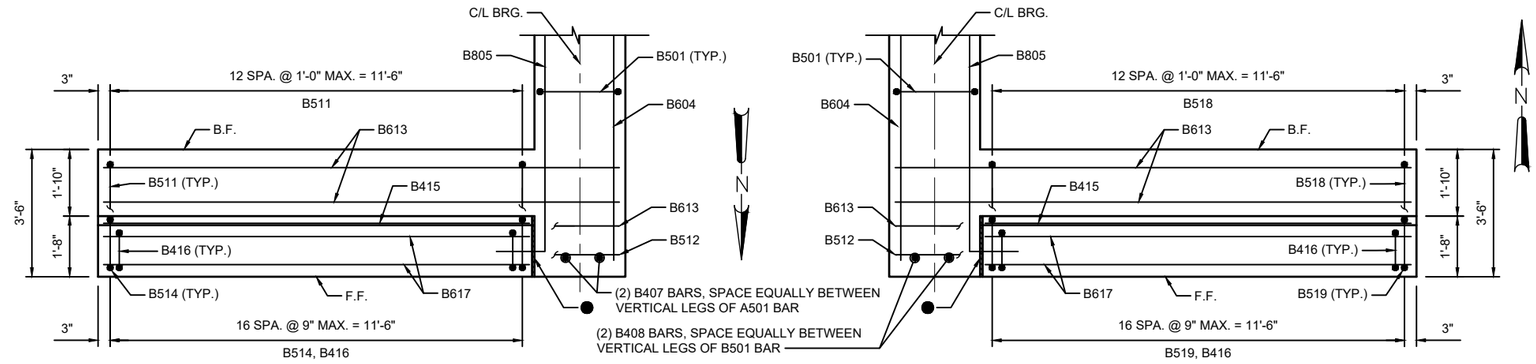
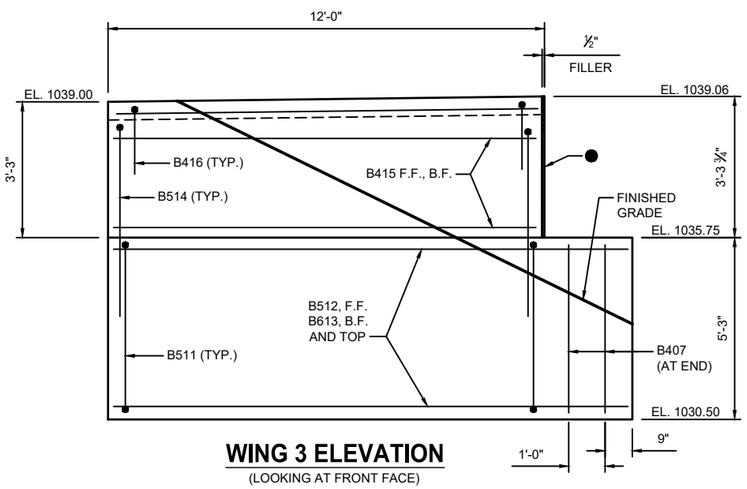


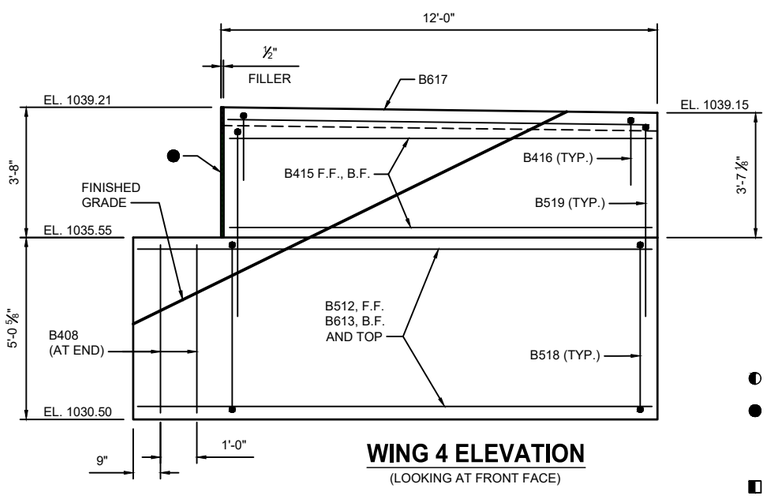
WING 3 PLAN

WING 4 PLAN



WING 3 ELEVATION

(LOOKING AT FRONT FACE)



WING 4 ELEVATION

(LOOKING AT FRONT FACE)

EAST ABUTMENT BILL OF BARS

UNCOATED: 3,190 LBS
COATED: 1,770 LBS

BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
B501	65	14'-0"	X		LOWER BODY - VERT.
B402	8	28'-0"	X		LOWER BODY - PILES - SPIRAL
B403	16	2'-3"			LOWER BODY - PILES - VERT.
B604	11	52'-8"			LOWER BODY - TOP, BOT., & F.F. - HORIZ.
B805	7	54'-11"	X		LOWER BODY - B.F. - HORIZ.
B506	52	2'-0"		X	LOWER BODY - TOP - VERT.
B407	2	4'-10"			LOWER BODY - VERT. - NORTH END
B408	2	4'-7"			LOWER BODY - VERT. - SOUTH END
B509	21	5'-3"	X		LOWER BODY - VERT. - TOP
B410	3	20'-0"			LOWER BODY - HORIZ. - TOP
B511	13	16'-2"	X	X	LOWER WING - VERT. - WING 3
B512	12	14'-2"		X	LOWER WING - F.F. - HORIZ. - WINGS 3 & 4
B613	18	14'-2"		X	LOWER WING - B.F., TOP - HORIZ. - WINGS 3 & 4
B514	17	10'-0"	X	X	UPPER WING - VERT. - WING 3
B415	18	11'-7"		X	UPPER WINGS - F.F., B.F. - HORIZ. - WINGS 3 & 4
B416	34	4'-4"	X	X	UPPER WINGS - VERT. - WINGS 3 & 4
B617	4	11'-7"		X	UPPER WINGS - HORIZ. - WINGS 3 & 4
B518	13	15'-8"	X	X	LOWER WING - VERT. - WING 4
B519	17	10'-8"	X	X	UPPER WING - VERT. - WING 4

LEGEND

- ◐ OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY WITH MEMBRANE ON BACKFACE.
- ● ½" FILLER TO EXTEND FROM ABUT. SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW TOP OF WING AT INSIDE FACE.
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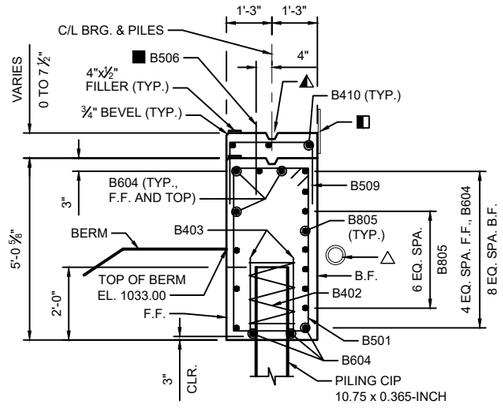
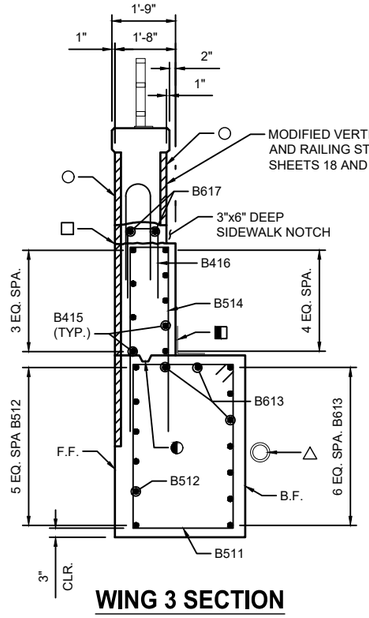
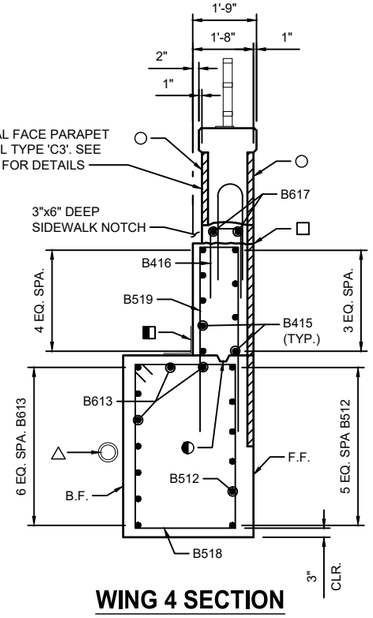
- ○ ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING. SEE AESTHETIC DETAILS ON SHEET 21.



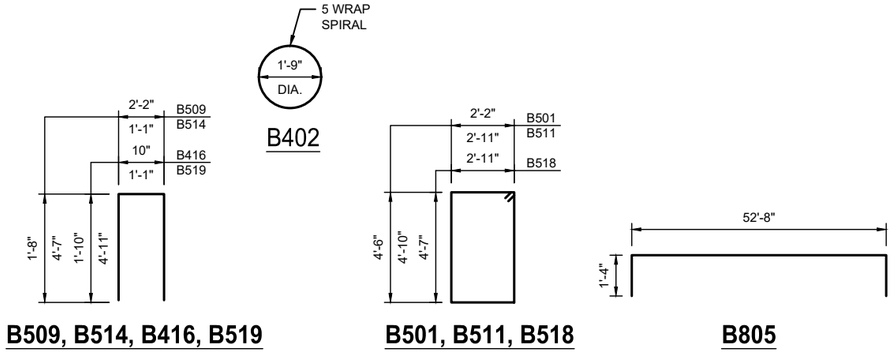
TYPICAL BODY SECTION



WING 3 SECTION



WING 4 SECTION



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B-13-908 EAST ABUTMENT DETAILS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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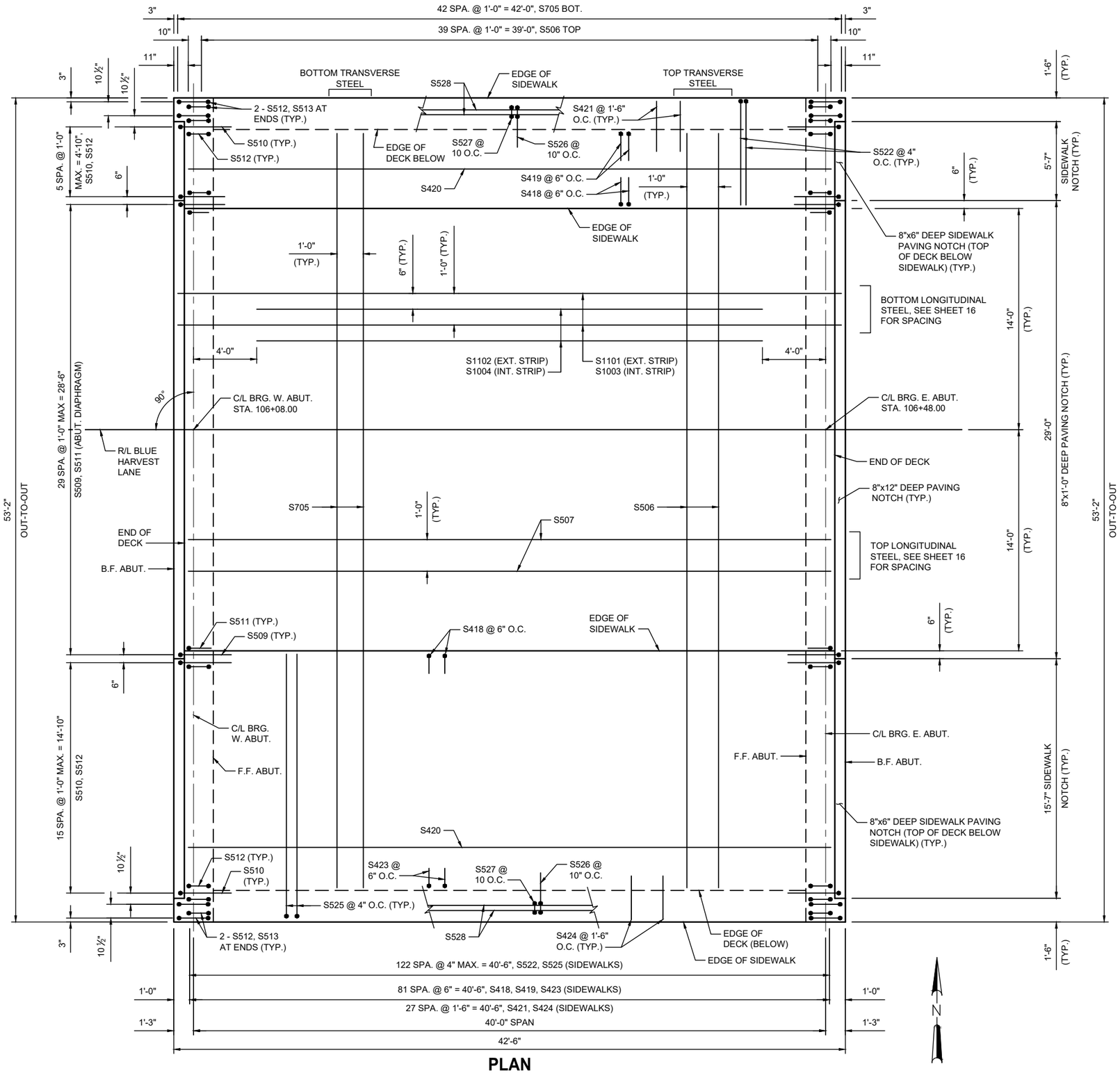

PLAN

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 SUPERSTRUCTURE PLAN

LOWER BADGER MILL CREEK FLOOD MITIGATION

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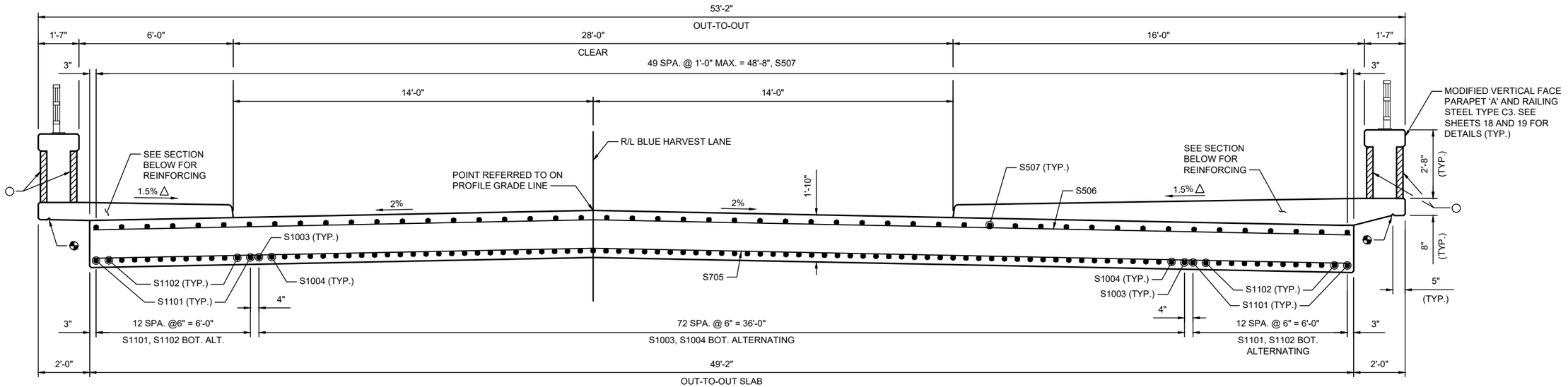
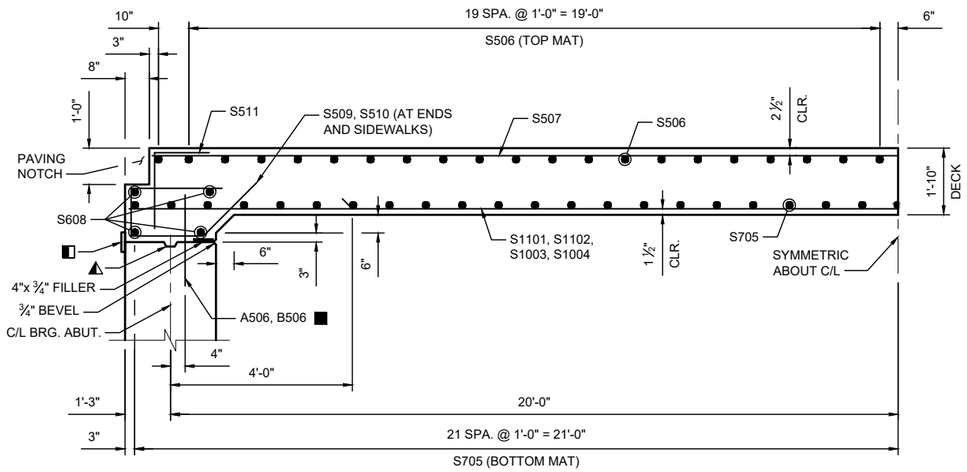
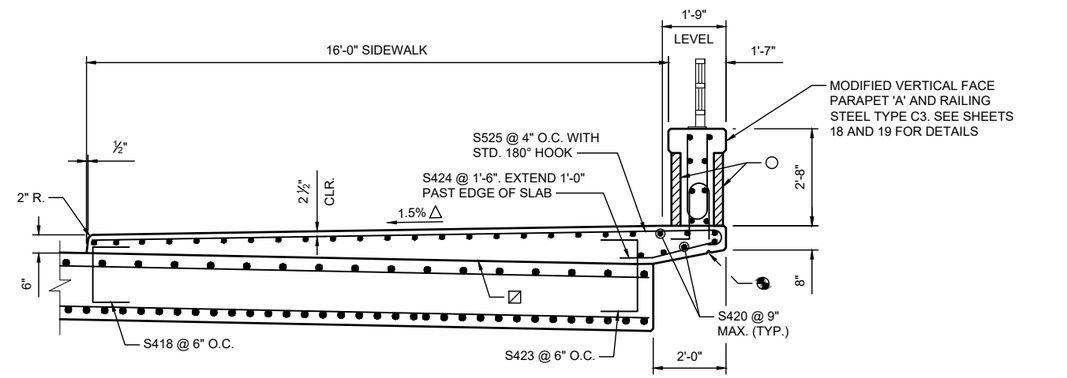


CROSS SECTION THRU SUPERSTRUCTURE

(LOOKING EAST)

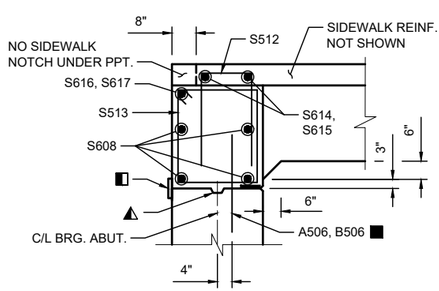


HALF LONGITUDINAL SECTION

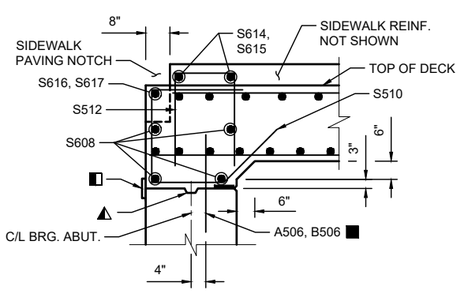


SECTION THRU SIDEWALK

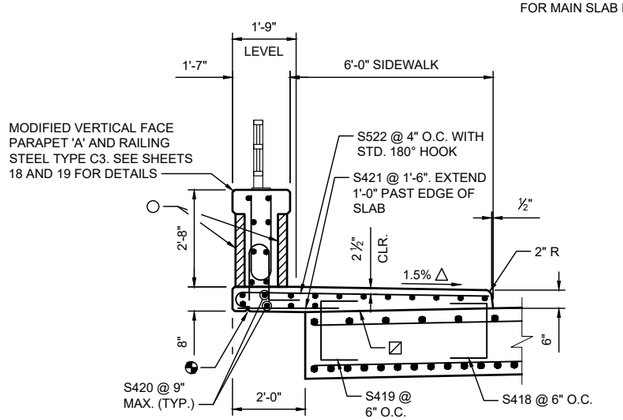
(SEE "CROSS SECTION THRU SUPERSTRUCTURE" FOR MAIN SLAB REINFORCING DETAILS)



SECTION AT ABUT. DIAPHRAGM AT ENDS



SECTION AT ABUT. DIAPHRAGM WITH SIDEWALK



SECTION THRU SIDEWALK

(SEE "CROSS SECTION THRU SUPERSTRUCTURE" FOR MAIN SLAB REINFORCING DETAILS)

LEGEND

- ◧ 18" RUBBERIZED MEMBRANE WATERPROOFING.
- ■ BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- ◭ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".
- ◔ ¾" V-GROOVE REQ'D EXTEND TO 6" FROM F.F. OF ABUT. DIAPHRAGMS.
- △ ± 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM ENGINEER.
- ⊠ CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH. MATCH BRIDGE CROSS SLOPE.
- ○ ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING. SEE AESTHETIC DETAILS ON SHEET 21.

MARK	REVISION	DATE	BY
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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 SUPERSTRUCTURE SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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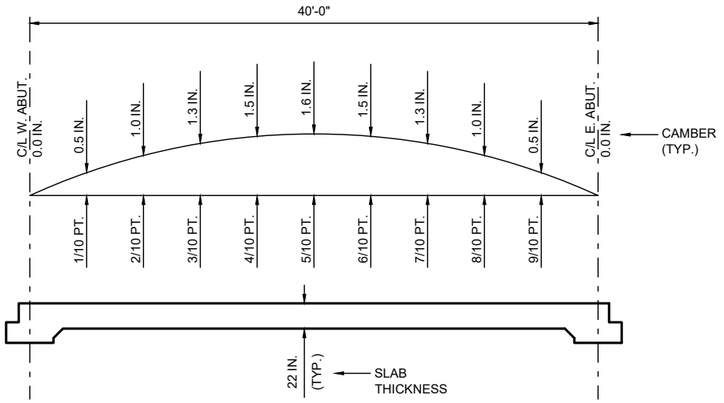


CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

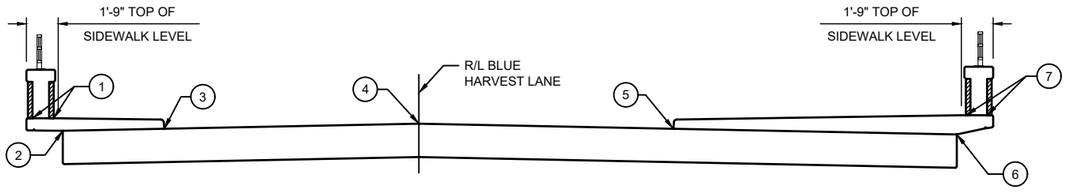
TOP OF SLAB ELEVATION AT FINAL GRADE
LESS ..... SLAB THICKNESS
PLUS ..... CAMBER
PLUS ..... FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS ..... TOP OF SLAB FALSEWORK ELEVATION

TOP OF DECK ELEVATIONS

		CL BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL BRG. E. ABUT.
	STATION	106+08.00	106+12.00	106+16.00	106+20.00	106+24.00	106+28.00	106+32.00	106+36.00	106+40.00	106+44.00	106+48.00
1	NORTH SIDEWALK, 21.58' LT ⚹	1039.27	1039.25	1039.23	1039.21	1039.19	1039.17	1039.15	1039.13	1039.11	1039.09	1039.07
2	NORTH EDGE OF SLAB, 19.58' LT	1038.57	1038.55	1038.53	1038.51	1038.49	1038.47	1038.45	1038.43	1038.41	1038.39	1038.37
3	NORTH GUTTER LINE, 14.00' LT	1038.68	1038.66	1038.64	1038.62	1038.60	1038.58	1038.56	1038.54	1038.52	1038.50	1038.48
4	CROWN AT R/L	1038.96	1038.94	1038.92	1038.90	1038.88	1038.86	1038.84	1038.82	1038.80	1038.78	1038.76
5	SOUTH GUTTER LINE, 14.00' RT	1038.68	1038.66	1038.64	1038.62	1038.60	1038.58	1038.56	1038.54	1038.52	1038.50	1038.48
6	SOUTH EDGE OF SLAB, 29.58' RT	1038.37	1038.35	1038.33	1038.31	1038.29	1038.27	1038.25	1038.23	1038.21	1038.19	1038.17
7	SOUTH SIDEWALK, 31.58' RT ⚹	1039.42	1039.40	1039.38	1039.36	1039.34	1039.32	1039.30	1039.28	1039.26	1039.24	1039.22

ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.

⚹ SIDEWALK ELEVATION IS LEVEL UNDER PARAPET. SEE SHEET 16 FOR DETAILS.



(TOP OF SLAB ELEVATION LOCATIONS, LOOKING EAST)

SURVEY TOP OF SLAB ELEVATIONS

	W. ABUT	5/10 PT.	E. ABUT.
NORTH EDGE OF SLAB			
CROWN ON R/L			
SOUTH EDGE OF SLAB			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG SLAB EDGES AND CROWN OR R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

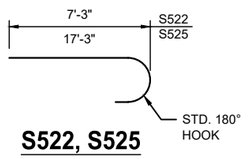
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PARAPETS AND SIDEWALK PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

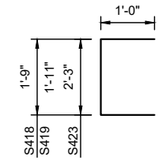
SUPERSTRUCTURE BILL OF BARS

COATED: 34,770 LBS

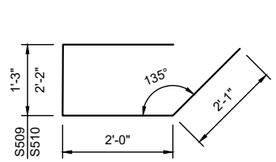
BAR MARK	NO. REQ'D	LENGTH	BENT	COAT	LOCATION
S1101	14	42'-2"		X	SLAB - LONGIT. - BOT. - EXT. STRIP
S1102	12	32'-0"		X	SLAB - LONGIT. - BOT. - EXT. STRIP
S1003	37	42'-2"		X	SLAB - LONGIT. - BOT. - INT. STRIP
S1004	36	32'-0"		X	SLAB - LONGIT. - BOT. - INT. STRIP
S705	43	48'-10"		X	SLAB - TRANS. - BOT.
S506	42	48'-10"		X	SLAB - TRANS. - TOP
S507	50	40'-10"		X	SLAB - LONGIT. - TOP
S608	8	52'-10"		X	ABUT. DIAPHRAGM - HORIZ.
S509	60	7'-1"	X	X	ABUT. DIAPHRAGM - VERT.
S510	44	8'-0"	X	X	ABUT. DIAPHRAGM - VERT. - SIDEWALKS
S511	60	3'-7"	X	X	ABUT. DIAPHRAGM - VERT.
S512	52	5'-9"	X	X	ABUT. DIAPHRAGM - VERT. - SIDEWALKS
S513	8	9'-4"	X	X	ABUT. DIAPHRAGM - VERT. - NORTH & SOUTH END
S614	4	6'-9"		X	ABUT. DIAPHRAGM - HORIZ. - 6' SIDEWALK
S615	4	16'-9"		X	ABUT. DIAPHRAGM - HORIZ. - 16' SIDEWALK
S616	2	6'-9"		X	ABUT. DIAPHRAGM - HORIZ. - 6' SIDEWALK
S617	2	16'-9"		X	ABUT. DIAPHRAGM - HORIZ. - 16' SIDEWALK
S418	164	3'-7"	X	X	SIDEWALK - VERT.
S419	82	3'-9"	X	X	SIDEWALK - VERT.
S420	43	40'-10"		X	SIDEWALK - LONGIT.
S421	28	3'-0"		X	SIDEWALK - TRANS. - BOT.
S522	123	7'-10"	X	X	SIDEWALK - TRANS. - TOP
S423	82	4'-1"	X	X	SIDEWALK - VERT.
S424	28	3'-0"	X	X	SIDEWALK - TRANS. - BOT.
S525	123	17'-10"	X	X	SIDEWALK - TRANS. - TOP
S526	104	4'-4"	X	X	VERT. FACE PARAPET - VERT.
S527	104	4'-9"	X	X	VERT. FACE PARAPET - VERT.
S528	16	42'-2"		X	VERT. FACE PARAPET - HORIZ.



S522, S525



S418, S419, S423



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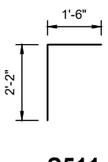

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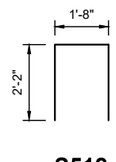

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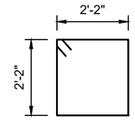

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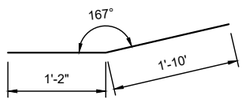

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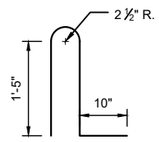

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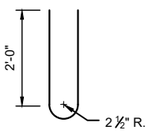

S527

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MARK	REVISION	DATE	BY		

Designed By: JGG
Date: 2/1/2023 1:45 PM
Scale: 1"=40'

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CITY OF MADISON

9030

CONTRACT NO:

B-13-908 SUPERSTRUCTURE DETAILS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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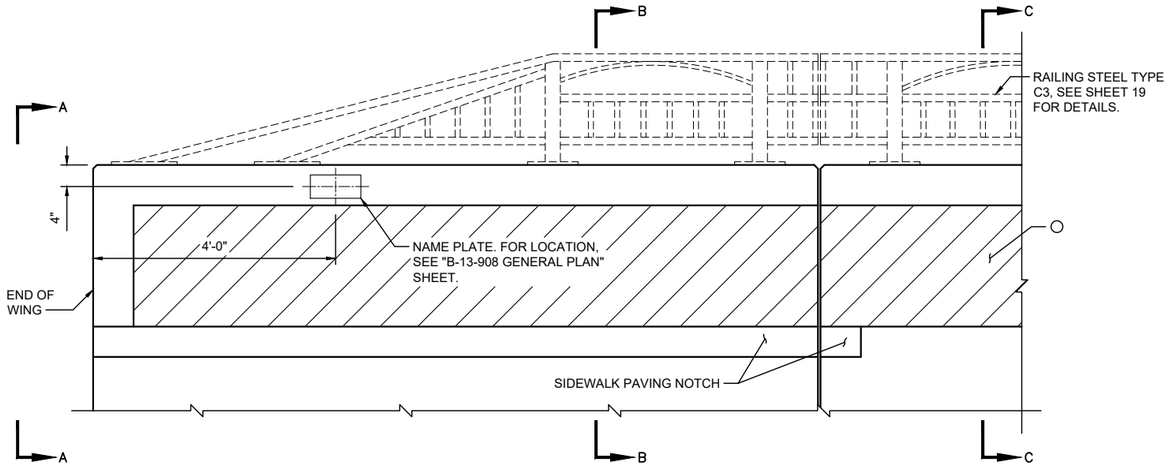
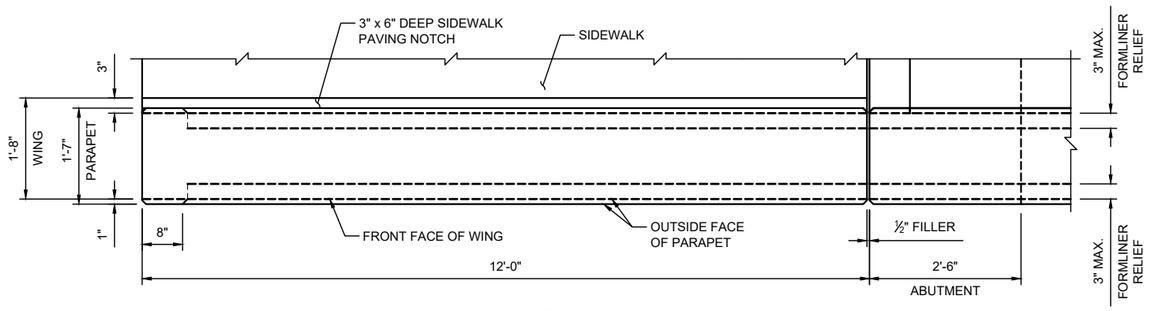


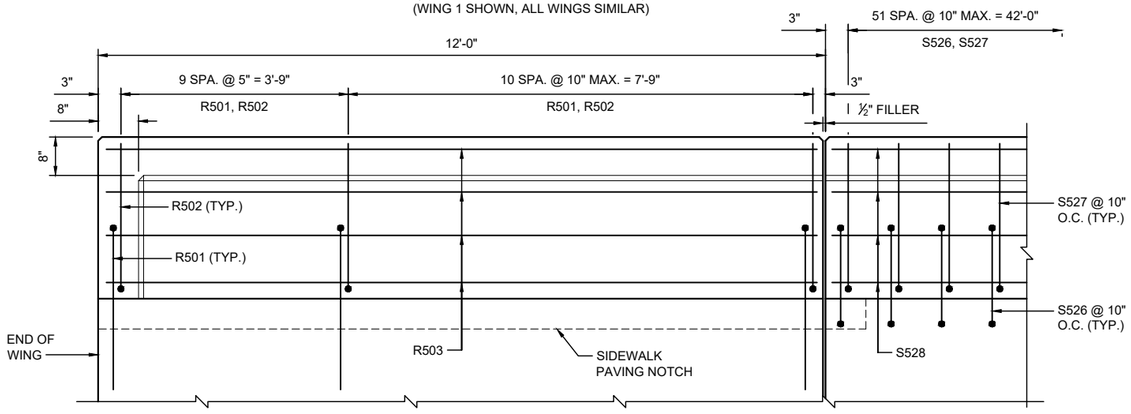
ELEVATION OF PARAPET

(REFLECTED VIEW OF WING 1 SHOWN, ALL WINGS SIMILAR)



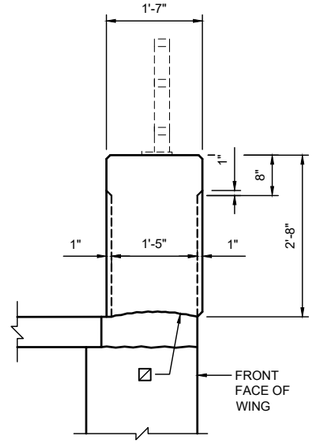
PLAN OF PARAPET

(RAILING NOT SHOWN FOR CLARITY)
(WING 1 SHOWN, ALL WINGS SIMILAR)

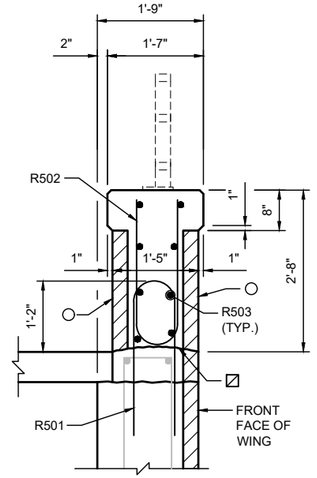


VIEW SHOWING OUTSIDE FACE OF PARAPET AND REINF.

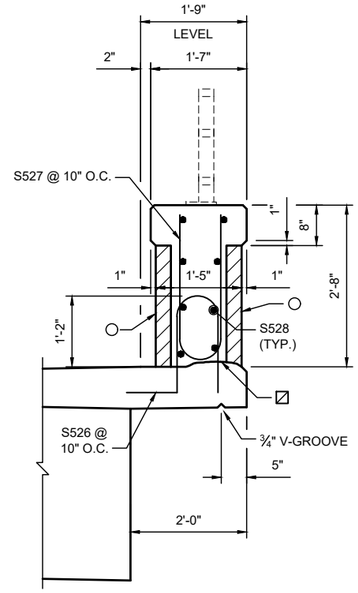
(WING 1 SHOWN, ALL WINGS SIMILAR)



SECTION A-A



SECTION B-B

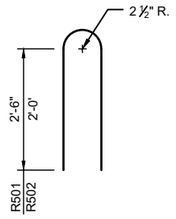


SECTION C-C

VERT. PARAPET 'A'
BILL OF BARS

COATED: 1,260 LBS

BAR MARK	W. ABUT. NO. REQ'D	E. ABUT. NO. REQ'D	LENGTH	BENT	COAT	LOCATION
R501	40	40	5'-9"	X	X	PARAPET - VERT.
R502	40	40	4'-9"	X	X	PARAPET - VERT.
R503	16	16	11'-7"		X	PARAPET - HORIZ.



R501, R502

NOTES

WING LENGTHS INCLUDE ½" FILLER.

SEE SHEET 17 FOR SUPERSTRUCTURE BARS.

LEGEND

☒ HORIZ. CONST. JOINT-STRIKE OFF AS SHOWN AND LEAVE ROUGH.

○ ARCHITECTURAL SURFACE TREATMENT AND CONCRETE STAINING. SEE AESTHETIC DETAILS ON SHEET 21.

MARK	REVISION	DATE	BY
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CITY OF MADISON 9030

CONTRACT NO: 1020.129

B-13-908 VERTICAL FACE PARAPET 'A' MODIFIED

LOWER BADGER MILL CREEK FLOOD MITIGATION

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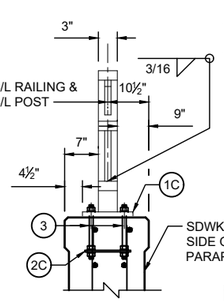
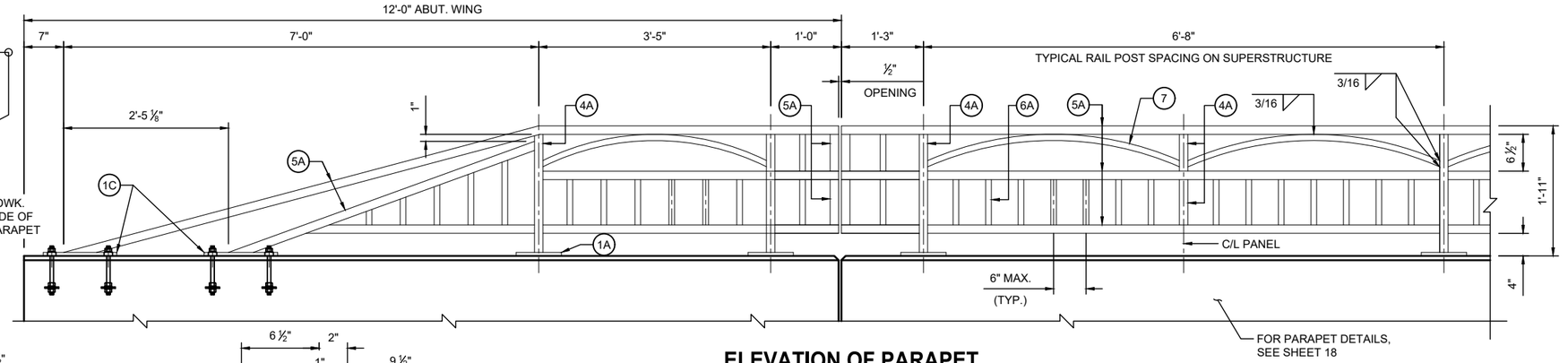
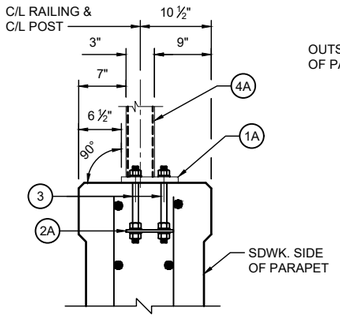


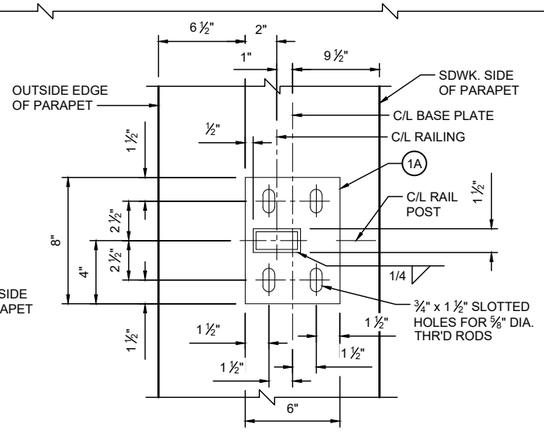
END VIEW



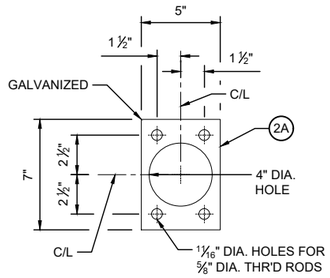
ELEVATION OF PARAPET



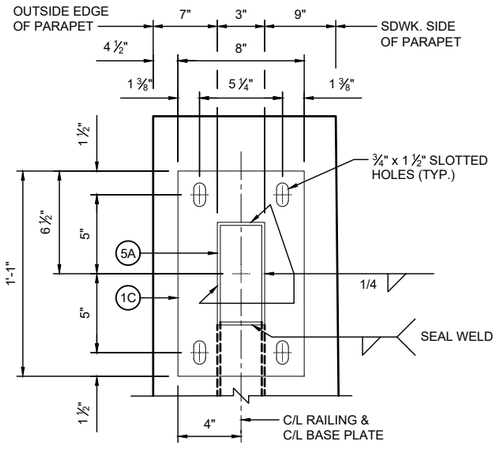
TYPICAL SECTION THRU PARAPET



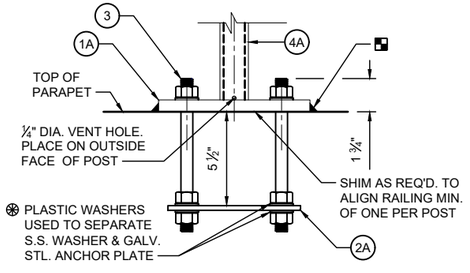
TYPICAL RAIL POST BASE PLATE



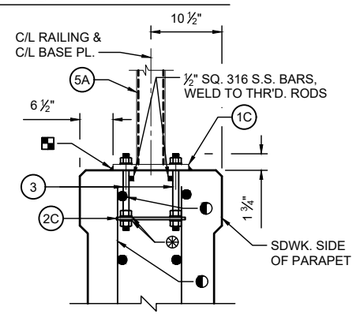
ANCHOR PLATE



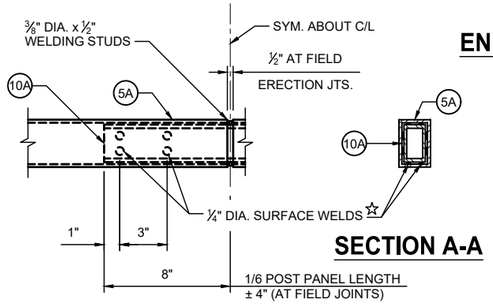
END RAIL BASE PLATE



ANCHORAGE FOR RAIL POSTS



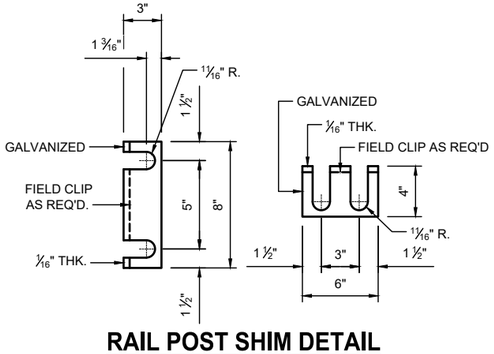
ANCHORAGE FOR END RAIL



SECTION A-A

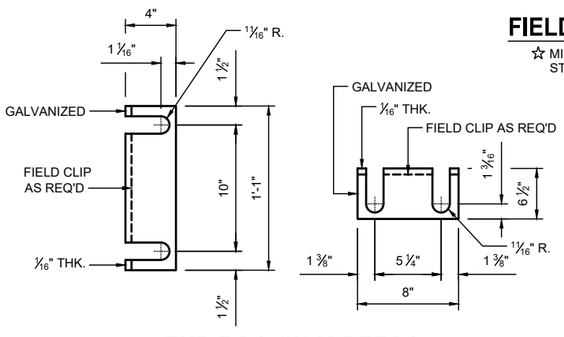
FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



RAIL POST SHIM DETAIL

(2 SETS PER POST)

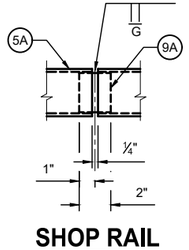


END RAIL SHIM DETAIL

(2 SETS PER POST)

END RAIL ANCHOR PLATE

FOR END RAIL BASE PLATES (1C)
2 REQ'D. PER END RAIL BASE PLATE



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

LEGEND

- (1A) PLATE ⅝" x 6" x 8" WITH ¾" x 1 ½" SLOTTED HOLES.
- (1C) PLATE ⅝" x 8" x 1'-1" WITH ¾" x 1 ½" SLOTTED HOLES.
- (2A) ¼" x 5" x 7" ANCHOR PLATE WITH 1⁄16" DIA. HOLES FOR THR'D RODS NO. 3.
- (2C) ¼" x 2 ½" x 7 ¼" ANCHOR PLATE WITH 1⁄16" DIA. HOLES FOR THR'D RODS NO. 3.
- (3) ⅝" DIA. x 9" LONG. TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATE ANCHORAGE: CONCRETE ADHESIVE ANCHORS 5/8-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.
- (4A) STRUCTURAL TUBING 3" x 1 ½" x 3⁄16". PLACE VERTICAL. WELD TO NO. 1 & NO. 5.
- (5A) STRUCTURAL TUBING 3" x 1 ½" x 3⁄16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BARS 1" x 1" PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX C/L TO C/L SPACING) PLACE VERTICAL.
- (7) BAR 1" x 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FORM 3⁄16" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM 3⁄16" PLATES. (1'-4" @ FIELD ERECTION JTS.)
- ◐ WHEN ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.
- ◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3". WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. 27038, BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 RAILING STEEL TYPE 'C3'

LOWER BADGER MILL CREEK FLOOD MITIGATION

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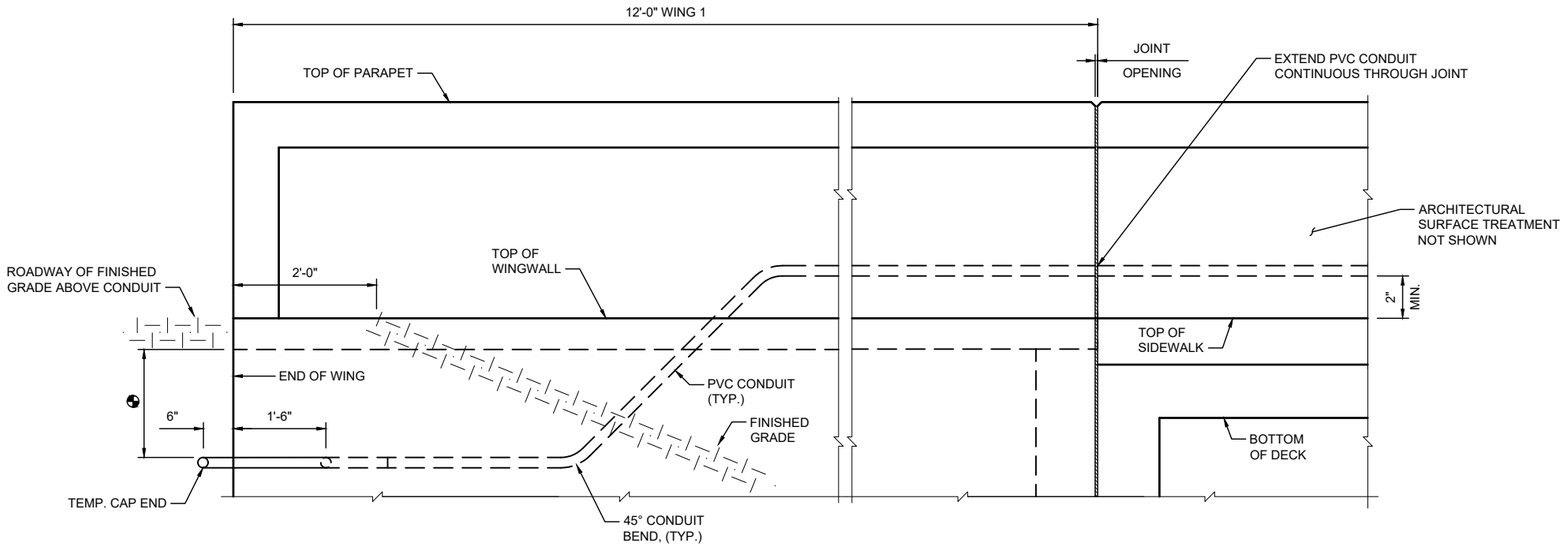
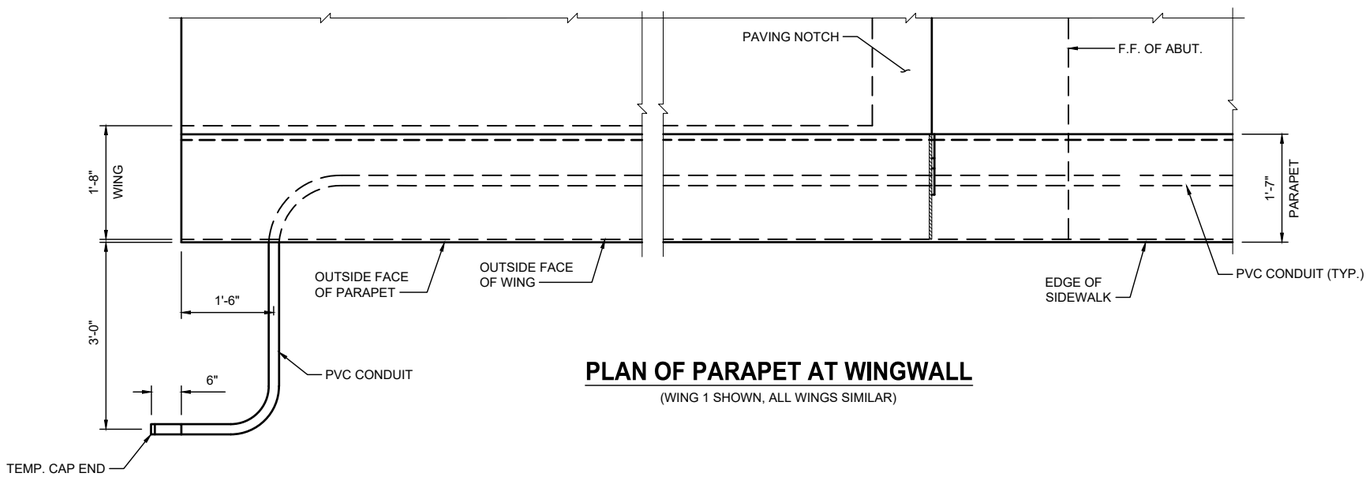


OUTSIDE ELEVATION OF PARAPET AT WINGWALL

(WING 1 SHOWN, ALL WINGS SIMILAR)



PLAN OF PARAPET AT WINGWALL

(WING 1 SHOWN, ALL WINGS SIMILAR)

NOTES

CONDUIT SHALL BE EMBEDED 2" CLEAR.

USE 2" DIA. RIGID NON-METALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

LEGEND

2'-0" MIN. CONDUIT COVER UNDER ROADWAYS, 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 CONDUIT DETAILS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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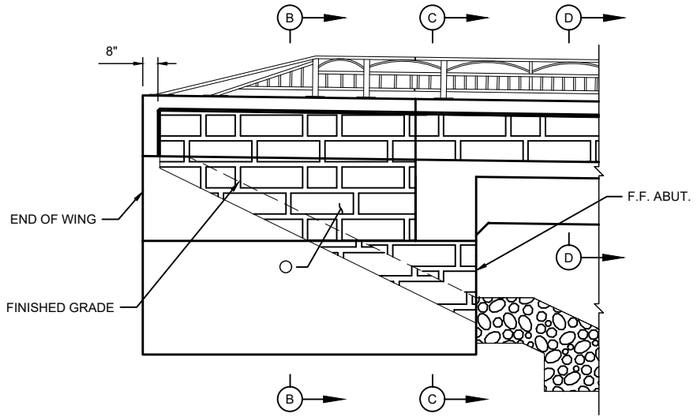
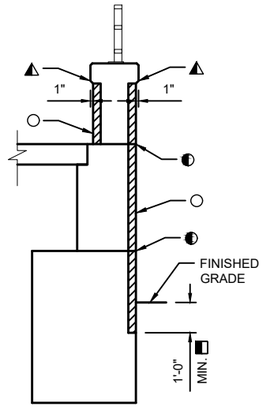
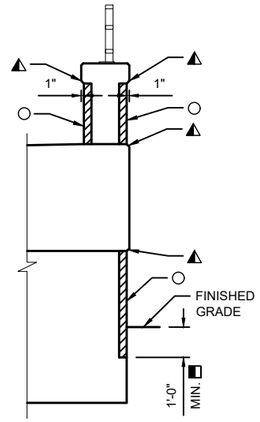


OUTSIDE ELEVATION

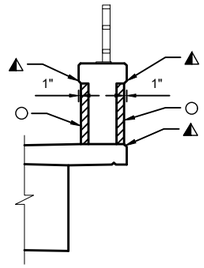
(WINGS 1, 2, 3, & 4)



SECTION B-B



SECTION C-C



SECTION D-D

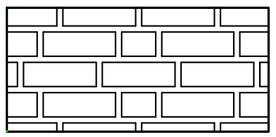
NOTES

FORMLINER COURSING ON ABUTMENTS AND WINGS SHALL BE LEVEL.

FORMLINER COURSING ON PARAPETS SHALL BE PARALLEL TO TOP OF PARAPET.

LEGEND

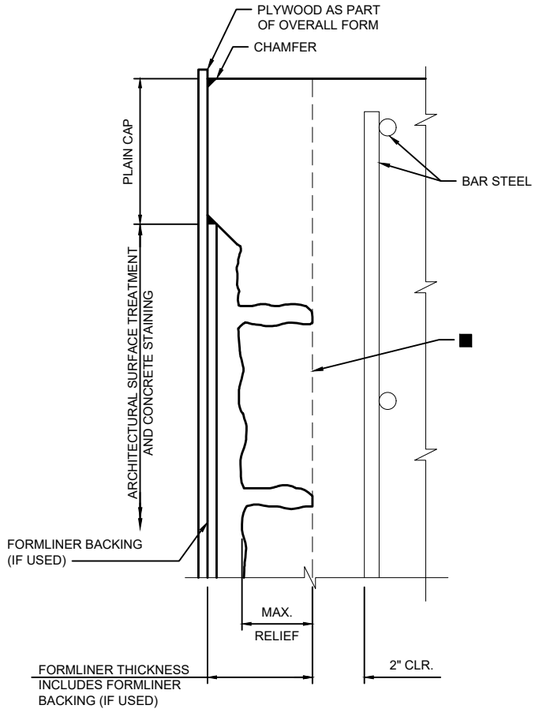
- ○ ARCHITECTURAL SURFACE TREATMENT, RECTANGULAR CUT STONE PATTERN WITH 3" MAXIMUM RELIEF. STAIN ALL SURFACES RECEIVING ARCHITECTURAL SURFACE TREATMENT BROWN NO. 30372.
- ◧ PAY LIMITS FOR "ARCHITECTURAL SURFACE TREATMENT B-13-908" AND "CONCRETE STAINING B-13-908" ARE TO 1'-0" BELOW FINISHED GRADE.
- ◐ THE FORMLINER PATTERN SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS. AFTER FORMS ARE REMOVED, ROUTE OUT ½" WIDE X ⅝" DEEP CONCRETE CENTERED ON CONSTRUCTION JOINT AND CAULK. HOLD CAULK ⅛" BELOW SURFACE OF CONCRETE. COLOR OF CAULK SHALL MATCH BASE COLOR OF CONCRETE STAINING.
- ◭ 1" CHAMFER.
- ■ STRUCTURAL CONCRETE ONLY ASSUMED TO THIS LINE. ADDITIONAL STRUCTURE THICKNESS PROVIDED TO MAINTAIN MINIMUM FULL STRUCTURAL CONCRETE DIMENSIONS.



RECTANGULAR CUT STONE

FORMLINER THICKNESS = 4"
COURSE HEIGHT = 12" ± 2"
MAX. RELIEF. = 3"

FORMLINER DETAILS



SECTION THRU FORMLINER

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CITY OF MADISON

CONTRACT NO: 9030

B-13-908 AESTHETIC DETAILS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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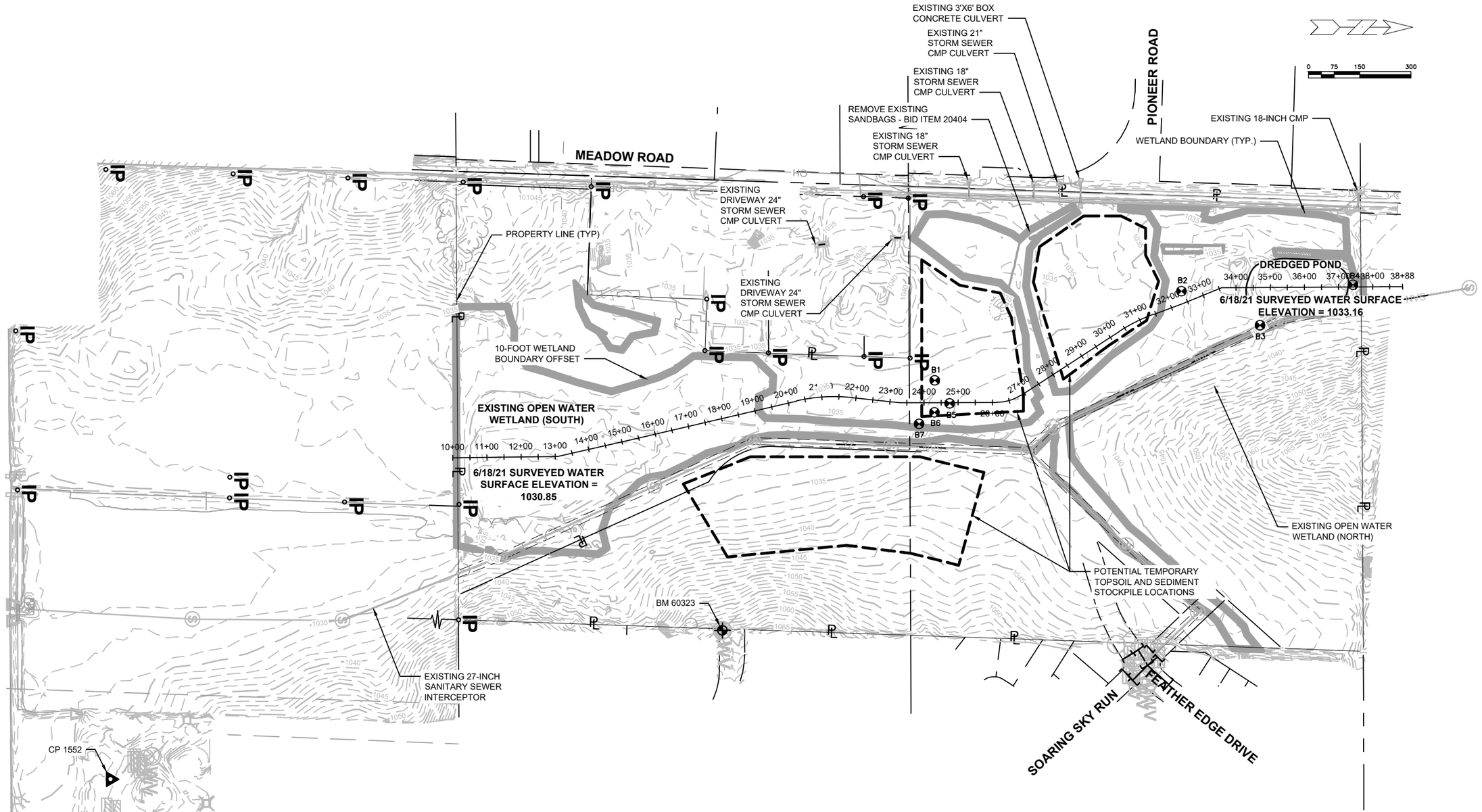

BENCHMARK / MONUMENT TABLE				
BM NO.	X	Y	DESCRIPTION	ELEV.
60323	773530.96	469083.51	BURY TAG BOLT	1065.28
900006	774269.46	467224.80	MONUMENT NAIL	1041.40

CONTROL DATA				
CP NO.	X	Y	DESCRIPTION	ELEV.
536870913	774312.34	467442.70	MAG	1042.17
1500	774314.82	467457.71	NAIL	1042.51
1551	774259.40	467242.66	NAIL	1042.61
1552	773966.80	467292.18	NAIL	1041.28

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EXISTING SURVEY AND CONTROL

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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23

MEADOW ROAD

PROPOSED SECURITY GATE. SEE DETAIL 2 ON SHEET 5.

PROPOSED MAINTENANCE PATH ALIGNMENT

PROPOSED DITCH. SEE CROSS SECTIONS ON SHEET 56 FOR MORE DETAIL.

PROPOSED 12-FOOT MAINTENANCE PATH (TYP). SEE DETAIL 1 ON SHEET 4.

10-FOOT WETLAND BOUNDARY OFFSET

FUTURE 6-FOOT WIDE MOUNTAIN BIKING PATH (BY OTHERS) (TYP.)

SLOPE INTERCEPT (TYP)

PROPERTY LINE (TYP)

PROPOSED DITCH. SEE CROSS SECTIONS ON SHEET 57 FOR MORE DETAIL.

PROTECT EXISTING TREES - BID ITEM 21302

GRADE AREA AT BOTTOM OF SLOPE TO DRAIN TO APRON END WALL.

PROPOSED BLUE HARVEST LANE ALIGNMENT

PLACE EMBANKMENT FILL - BID ITEM 20204

BLUE HARVEST LANE

APPROXIMATE LOCATION OF DITCH END.

WETLAND BOUNDARY (TYP)

APPROXIMATE LOCATION OF DITCH END.

CLAY ANTI-SEEPAGE COLLAR - BID ITEM 90032

PROPOSED MAIN LINE CHANNEL (TYP.) SEE DETAIL 6 ON SHEET 4.

CLAY ANTI-SEEPAGE COLLAR - BID ITEM 90032

CLAY ANTI-SEEPAGE COLLAR - BID ITEM 90032

AEW 2.1

50 LF 18" TYPE I RCP @ 0.50%

AEW 2.2

PROPOSED MAIN LINE CHANNEL ALIGNMENT

TREETOPS DRIVE

27-INCH SANITARY SEWER INTERCEPTOR

EXISTING 27-INCH SANITARY SEWER INTERCEPTOR.

FUTURE PATH AND ROADWAY BY OTHERS

59 LF RCP

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CITY OF MADISON

CONTRACT NO: 9030

GRADING PLAN - 1

LOWER BADGER MILL CREEK FLOOD MITIGATION

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MEADOW ROAD

BLUE HARVEST LANE

INLET PLUNGE POOL. SEE DETAILS 2 AND 3 ON SHEET 4.

PROPOSED BOX CULVERT WINGWALLS AND APRON. REFER TO COM SDD 5.5.1A AND 5.5.1B "BOX CULVERT WINGWALL"

REMOVE EXISTING SANDBAGS - BID ITEM 20404

PROPERTY LINE (TYP)

CLAY ANTI-SEEPAGE COLLAR - BID ITEM 90032

SLOPE INTERCEPT (TYP)

PROPOSED 12-FOOT MAINTENANCE PATH (TYP). SEE DETAIL 1 ON SHEET 4.

PROTECT EXISTING TREES - BID ITEM 21302

CONTRACTOR SHALL STAKE OUT PROPERTY LINE PRIOR TO ANY WORK BEING COMPLETED AND GRADING SHALL BE RESTRICTED TO CITY-OWNED PROPERTY.

POND A
NORMAL WATER ELEVATION = 1032.00

POND B
NORMAL WATER ELEVATION = 1032.00

POND C

DREDGED POND
NORMAL WATER ELEVATION = 1033.00

AEW 1.1
AEW 1.2
AEW 3.1
AEW 3.2
AEW 4.1
AEW 4.2
AEW 5.1
AEW 5.2
AEW 6.1
AEW 6.2
AEW 7.1
AEW 7.2
AEW 8.1
AEW 8.2
AEW 9.1
AEW 9.2

PROPOSED MAIN LINE CHANNEL. SEE DETAIL 6 ON SHEET 4.

10-FOOT WETLAND BOUNDARY OFFSET

WETLAND BOUNDARY (TYP)

EXISTING OPEN WATER WETLAND (NORTH)

EXISTING 27-INCH SANITARY SEWER INTERCEPTOR

FUTURE MULTI-USE PATH AND ROAD WORK TO BE COMPLETED BY OTHERS WITH SEPARATE CONTRACT.

OUTLET 1 - POND C OUTLET CONTROL STRUCTURE
4-FT DIA. SS MH W/ NEENAH R-1480-E FRAME & LID
RIM = 1035.75
NORTH I.E. = 1031.78
SOUTH I.E. = 1031.78

POND C OVERFLOW SPILLWAY

FEATHER EDGE DRIVE

0 25 50 100

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CITY OF MADISON

CONTRACT NO: 9030

GRADING PLAN - 2

LOWER BADGER MILL CREEK FLOOD MITIGATION

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EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL FINAL ACCEPTANCE BY THE CITY OF MADISON.
3. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE WDNR STANDARDS OVERSIGHT COUNCIL (SOC) STANDARDS AND CITY OF MADISON STANDARD SPECIFICATIONS.
4. THE CONTRACTOR SHALL PROVIDE STREET CLEANING AS NEEDED ON A DAILY BASIS TO KEEP TRACKING TO A MINIMUM.
5. POLYMER SHALL BE APPLIED TO DISTURBED AREAS AS DIRECTED BY THE CONSTRUCTION ENGINEER.
6. ALL RESTORATION AREAS TO BE SEED SHALL HAVE 6-INCHES OF TOPSOIL

EROSION CONTROL LEGEND:

- CONSTRUCTION ENTRANCE (COM S.D.D. 1.07)
- SILT FENCE
- SILT SOCK (COM S.D.D. 1.12)
- CLEAR STONE BERM (COM S.D.D. 1.05)
- EROSION MATTING CLASS I, TYPE A - ORGANIC & TEMPORARY SEEDING (COM S.D.D. 1.02)
- EROSION MATTING CLASS II, TYPE C - ORGANIC AND TEMPORARY SEEDING (COM S.D.D. 1.02)
- TRM SYSTEM & TEMPORARY SEEDING (4/4)
- OVERFLOW ARMORING & TEMPORARY SEEDING (1/6)
- MAINTENANCE PATH (1/4)
- HEAVY RIPRAP - GLACIAL FIELD STONE (7/4)
- RIPRAP HEAVY

MEADOW ROAD

0 25 50 100

PROPOSED 12-FOOT MAINTENANCE PATH WITH PROPOSED DITCH (TYP). SEE DETAIL 1 ON SHEET 4.

DITCH DRAINAGE EROSION PROTECTION

PROPERTY LINE (TYP)

FUTURE 6-FOOT WIDE MOUNTAIN BIKING PATH (BY OTHERS) (TYP.)

SEE SHEETS 28 - 30 FOR THE TREE INVENTORY PLAN

10-FOOT WETLAND BOUNDARY OFFSET

WETLAND BOUNDARY (TYP)

PROPOSED MAIN LINE CHANNEL. SEE DETAIL 6 ON SHEET 4.

EXISTING OPEN WATER WETLAND (SOUTH)

FLOW

TREETOPS DRIVE

FUTURE WORK BY OTHERS

SILT FENCE AROUND STOCKPILE

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CITY OF MADISON

CONTRACT NO: 9030

EROSION CONTROL AND RESTORATION PLAN - 1

LOWER BADGER MILL CREEK FLOOD MITIGATION

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MEADOW ROAD

SEE SHEETS 28 - 30 FOR
THE TREE INVENTORY PLAN.

PROPERTY LINE (TYP)

PROPOSED 12-FOOT
MAINTENANCE PATH (TYP).
SEE DETAIL 1 ON SHEET 4.

BLUE HARVEST LANE

POND A

POND B

POND C

DREDGED POND

EXISTING OPEN WATER
WETLAND (NORTH)

PROPOSED MAIN LINE CHANNEL.
SEE DETAIL 6 ON SHEET 4.

10-FOOT WETLAND
BOUNDARY OFFSET

WETLAND BOUNDARY (TYP)

FUTURE WORK BY OTHERS

0 25 50 100

EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL FINAL ACCEPTANCE BY THE CITY OF MADISON.
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5. POLYMER SHALL BE APPLIED TO DISTURBED AREAS AS DIRECTED BY THE CONSTRUCTION ENGINEER.
6. ALL RESTORATION AREAS TO BE SEED SHALL HAVE 6-INCHES OF TOPSOIL

EROSION CONTROL LEGEND:

- CONSTRUCTION ENTRANCE (COM S.D.D. 1.07)
- SILT FENCE
- SILT SOCK (COM S.D.D. 1.12)
- CLEAR STONE BERM (COM S.D.D. 1.05)
- EROSION MATTING CLASS I, TYPE A - ORGANIC & TEMPORARY SEEDING (COM S.D.D. 1.02)
- EROSION MATTING CLASS II, TYPE C - ORGANIC AND TEMPORARY SEEDING (COM S.D.D. 1.02)
- TRM SYSTEM & TEMPORARY SEEDING (4/4)
- OVERFLOW ARMORING & TEMPORARY SEEDING (1/6)
- MAINTENANCE PATH (1/4)
- HEAVY RIPRAP - GLACIAL FIELD STONE (7/4)
- RIPRAP HEAVY

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EROSION CONTROL AND RESTORATION PLAN - 2

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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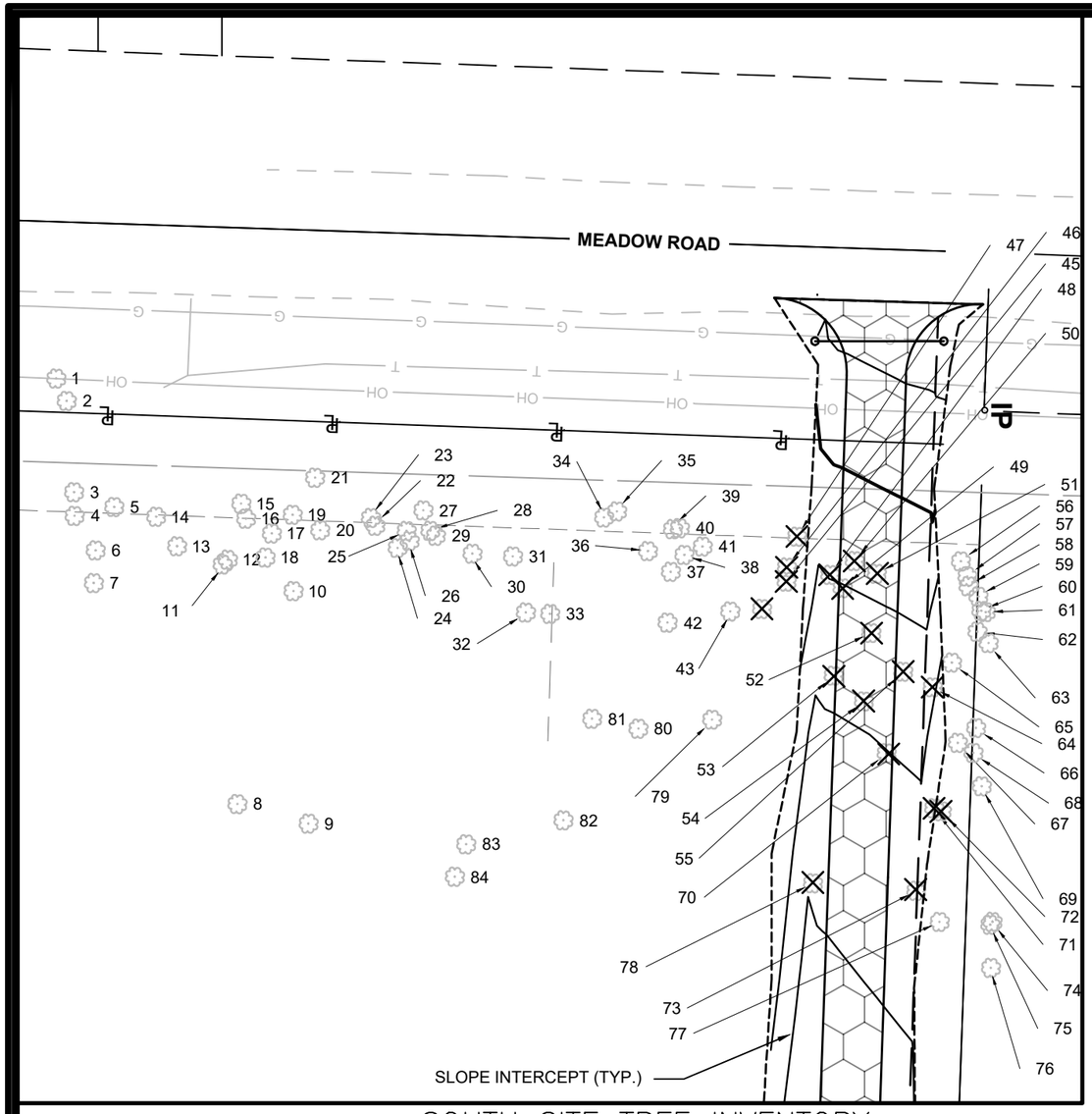
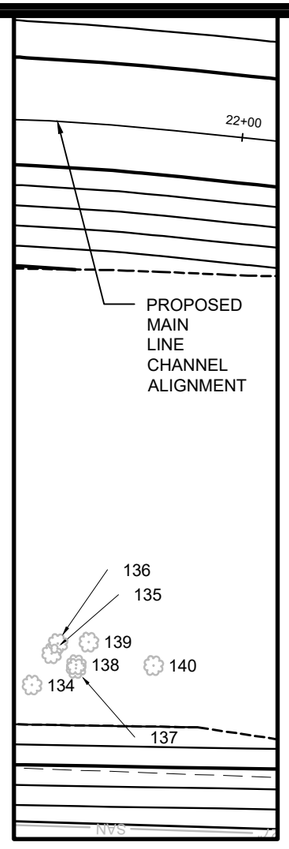
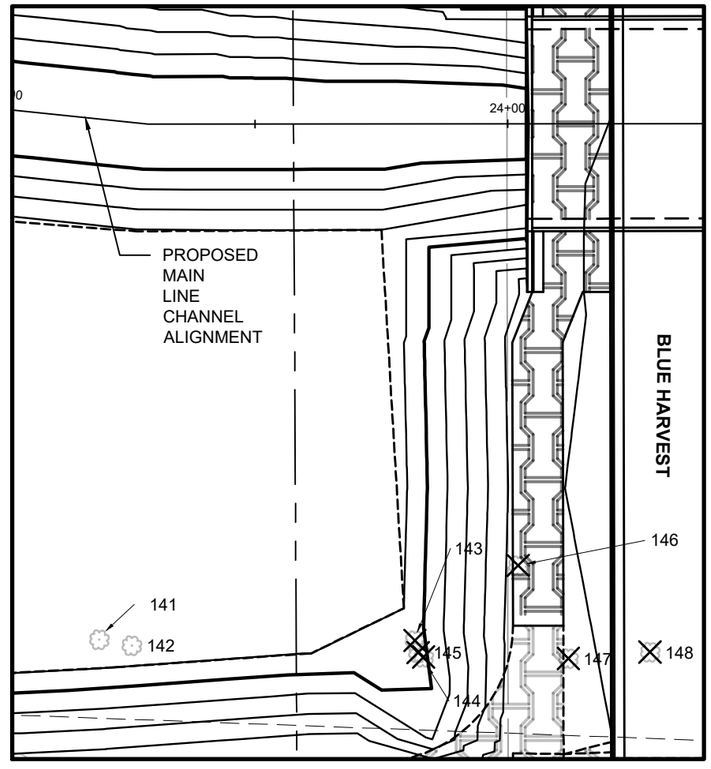


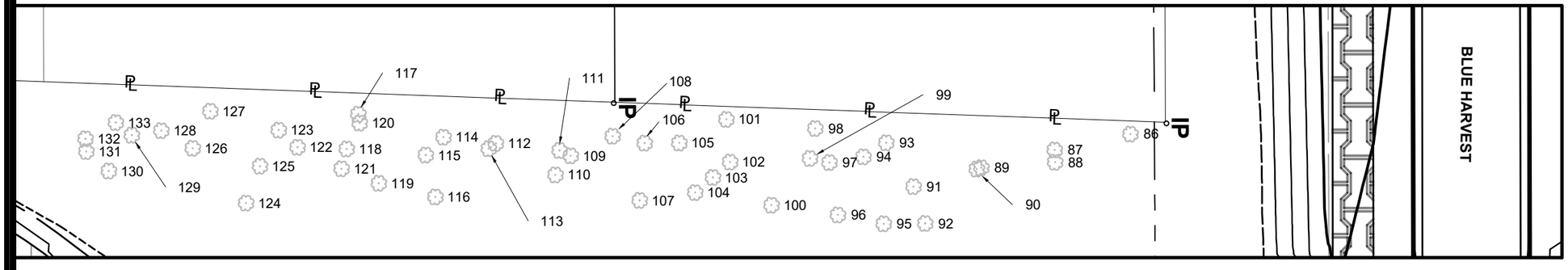
A 28 SOUTH SITE TREE INVENTORY
SCALE: 1" = 30'



B 28 SOUTHEAST BLUE HARVEST
SCALE: 1" = 30'



C 28 SOUTHEAST BLUE HARVEST
SCALE: 1" = 30'



D 28 BLUE HARVEST AND BASIN C TREE INVENTORY
SCALE: 1" = 30'

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TREE INVENTORY PLAN - 1

CITY OF MADISON

CONTRACT NO: 9030

LOWER BADGER MILL CREEK FLOOD MITIGATION

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MEADOW ROAD

DREDGED POND

POND A

POND B

POND C

BLUE HARVEST LANE

SLOPE INTERCEPT (TYP.)

SLOPE INTERCEPT (TYP.)

EXISTING OPEN WATER WETLAND (NORTH)

25+00

26+00

37+00

36+00

34+00

33+00

32+00

A/29 NORTH SITE TREE INVENTORY
SCALE: 1" = 30'

B/29 POND C TREE INVENTORY
SCALE: 1" = 30'

C/29 POND A AND B TREE INVENTORY
SCALE: 1" = 30'

LEGEND

TREE PROTECTION 5/5

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CITY OF MADISON

CONTRACT NO: 9030

TREE INVENTORY PLAN - 2

LOWER BADGER MILL CREEK FLOOD MITIGATION

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Trees To Be Removed

PLAN TREE INVENTORY			PLAN TREE INVENTORY			PLAN TREE INVENTORY			PLAN TREE INVENTORY		
Tree ID	Type	Diameter (in)	Tree ID	Type	Diameter (in)	Tree ID	Type	Diameter (in)	Tree ID	Type	Diameter (in)
44	BLACKLOCUST	12.5	190	SPRUCE	6	259	GREENASH	5.5	329	BLACKLOCUST	6.5
45	BLACKLOCUST	7.5	191	SPRUCE	7	262	GREENASH	7	330	BLACKLOCUST	5.5
46	BLACKLOCUST	8	192	SPRUCE	7	263	GREENASH	6.5	331	BLACKLOCUST	6
47	BLACKLOCUST	10	193	SPRUCE	10	265	GREENASH	4	332	BLACKLOCUST	5
48	BLACKLOCUST	3.5	194	SPRUCE	5	266	AMERICANELM	10	333	BLACKLOCUST	7
49	BLACKLOCUST	6	195	SPRUCE	7	267	MULBERRY	4	334	BLACKLOCUST	5.5
50	BLACKLOCUST	19.5	196	SPRUCE	5	268	GREENASH	4	335	BLACKLOCUST	4
51	BLACKLOCUST	6	197	SPRUCE	6.5	269	BIGTOOTHASPEN	7	336	BLACKLOCUST	6
52	BLACKLOCUST	9	198	SPRUCE	5	270	GREENASH	6	339	BUCKTHORN	3.5
53	BLACKLOCUST	4.5	199	SPRUCE	9	271	AMERICANELM	4.5	340	BUCKTHORN	4.5
54	BLACKLOCUST	8	200	CRABAPPLE	4.5	272	GREENASH	6			
55	BLACKLOCUST	9.8	201	SPRUCE	12	273	GREENASH	4.5			
64	BLACKLOCUST	11	202	SPRUCE	16	276	BOXELDER	6.5			
70	BLACKLOCUST	5.5	203	SPRUCE	16	277	GREENASH	7.5			
71	BLACKLOCUST	8	204	SPRUCE	16	278	BOXELDER	5			
72	BLACKLOCUST	9.5	205	SPRUCE	8	279	AMERICANELM	5.5			
73	BLACKLOCUST	6	206	SPRUCE	6.2	280	BUCKTHORN	4			
78	BLACKLOCUST	4	207	SPRUCE	10	281	SILVERMAPLE	5			
143	BASSWOOD	3.5	208	BLACKCHERRY	8	282	SILVERMAPLE	6			
144	CRABAPPLE	4	209	SPRUCE	7	283	SILVERMAPLE	5			
145	CRABAPPLE	4.5	210	SPRUCE	8	284	BLACKLOCUST	3.5			
146	BOXELDER	6.5	211	SPRUCE	9	285	BIGTOOTHASPEN	13			
147	CRABAPPLE	3.5	212	BLACKCHERRY	4	286	BIGTOOTHASPEN	14			
148	BLACKCHERRY	10	213	SPRUCE	7.5	287	AMERICANELM	4			
149	HAWTHORN	5	214	SPRUCE	6	288	SILVERMAPLE	4			
150	BUCKTHORN	6	215	SPRUCE	9.5	289	AMERICANELM	4.5			
151	BOXELDER	5	216	SPRUCE	9	290	BOXELDER	3.5			
152	BIGTOOTHASPEN	3.5	217	SPRUCE	7	291	GREENASH	6.5			
153	BIGTOOTHASPEN	12	218	SPRUCE	8	292	AMERICANELM	4			
154	BIGTOOTHASPEN	6.5	219	SPRUCE	10	293	SILVERMAPLE	6.5			
155	BLACKCHERRY	5.5	220	SPRUCE	13	294	BLACKLOCUST	8.5			
156	BOXELDER	5	221	SPRUCE	14	295	BLACKLOCUST	12			
157	BIGTOOTHASPEN	7.5	222	SPRUCE	15	296	BLACKLOCUST	8			
158	BLACKCHERRY	12	223	SPRUCE	10	297	BIGTOOTHASPEN	4			
159	HAWTHORN	3.5	224	SPRUCE	17	298	BIGTOOTHASPEN	20			
160	HAWTHORN	3.5	225	SPRUCE	10	299	BIGTOOTHASPEN	12			
161	HAWTHORN	4	226	SPRUCE	10	300	BLACKLOCUST	8.5			
162	HAWTHORN	4	227	SPRUCE	13	301	BLACKLOCUST	26			
163	HAWTHORN	5	228	SPRUCE	0	302	BIGTOOTHASPEN	12.5			
164	AMERICANELM	4	229	SPRUCE	9	303	AMERICANELM	4			
165	BASSWOOD	11.5	230	SPRUCE	6	304	AMERICANELM	9.5			
166	BASSWOOD	5.5	231	SPRUCE	8	305	BLACKLOCUST	3.5			
167	BASSWOOD	4.5	232	SPRUCE	8	306	BLACKLOCUST	6			
168	BASSWOOD	4.5	233	SPRUCE	7	307	BLACKLOCUST	10			
169	BASSWOOD	5.5	234	GREENASH	6	308	BLACKLOCUST	4.5			
170	BASSWOOD	4.5	235	BIGTOOTHASPEN	11	309	BLACKLOCUST	7			
171	BASSWOOD	6	236	BIGTOOTHASPEN	10	310	BLACKLOCUST	8.5			
172	BASSWOOD	6	237	BIGTOOTHASPEN	6	311	SILVERMAPLE	6			
173	BASSWOOD	7	238	BIGTOOTHASPEN	7	312	BLACKLOCUST	6.5			
174	MULBERRY	5	239	BIGTOOTHASPEN	10.5	313	BLACKLOCUST	7			
175	BASSWOOD	3.5	240	GREENASH	4.5	314	BLACKLOCUST	11			
176	AMERICANELM	7	242	GREENASH	8	315	SILVERMAPLE	7			
177	BASSWOOD	7	243	WILLOW	4	316	BLACKLOCUST	11			
178	BASSWOOD	5.5	244	GREENASH	6.5	317	BLACKLOCUST	5.5			
179	BASSWOOD	7	245	SPRUCE	7	318	BLACKLOCUST	7			
180	BASSWOOD	7.5	246	GREENASH	5.5	319	BLACKLOCUST	13			
181	BIGTOOTHASPEN	14.5	248	GREENASH	4	320	BLACKLOCUST	6.5			
182	BASSWOOD	7	249	GREENASH	4.5	321	SILVERMAPLE	5.5			
183	BASSWOOD	4.5	250	AMERICANELM	5.5	322	SILVERMAPLE	4.5			
184	BASSWOOD	12	251	BUCKTHORN	3.5	323	SILVERMAPLE	7			
185	SPRUCE	9	252	AMERICANELM	5	324	BLACKLOCUST	5.5			
186	SPRUCE	8	253	GREENASH	3.5	325	BOXELDER	4			
187	SPRUCE	8.5	254	GREENASH	4.5	326	SILVERMAPLE	6			
188	SPRUCE	5	255	GREENASH	6.5	327	SILVERMAPLE	11			
189	SPRUCE	8	257	GREENASH	6.5	328	BLACKLOCUST	8			

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TREE INVENTORY PLAN - 3

CITY OF MADISON

LOWER BADGER MILL CREEK FLOOD MITIGATION

CONTRACT NO: 9030

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30

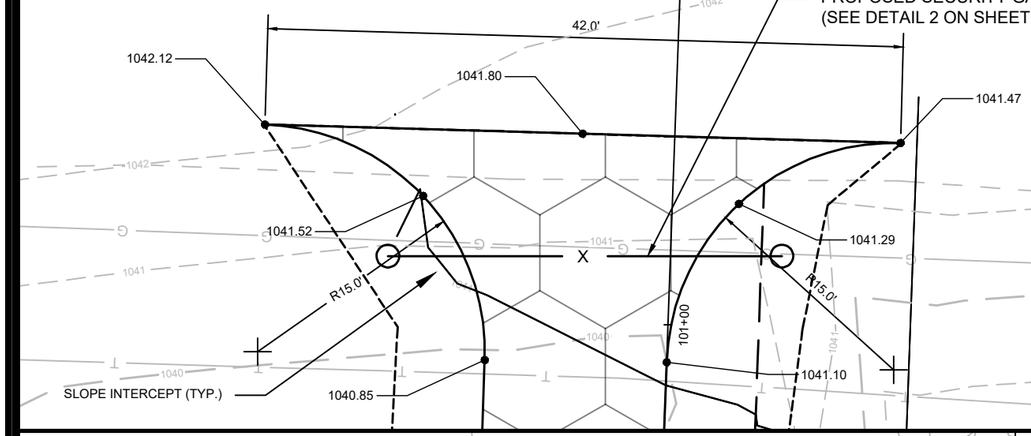
SOUTH MAINTENANCE PATH INTERSECTION

PROPOSED MAINTENANCE PATH ALIGNMENT

PROPERTY LINE

MEADOW ROAD

PROPOSED SECURITY GATE (SEE DETAIL 2 ON SHEET 5)

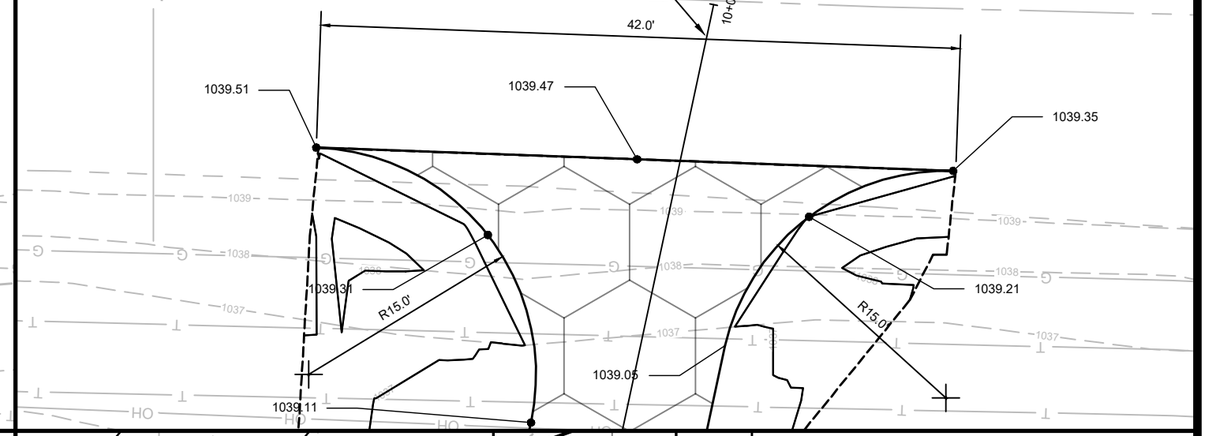


MIDDLE MAINTENANCE PATH INTERSECTION

PROPOSED MAINTENANCE PATH 2 ALIGNMENT

34 LF CMP @ 1.90%

MEADOW ROAD

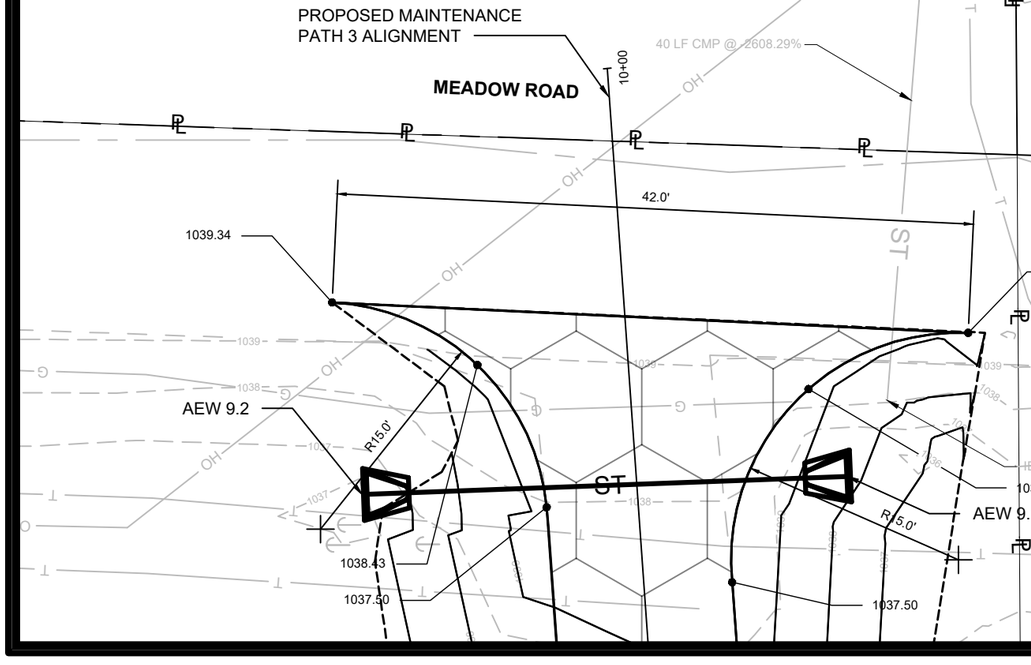


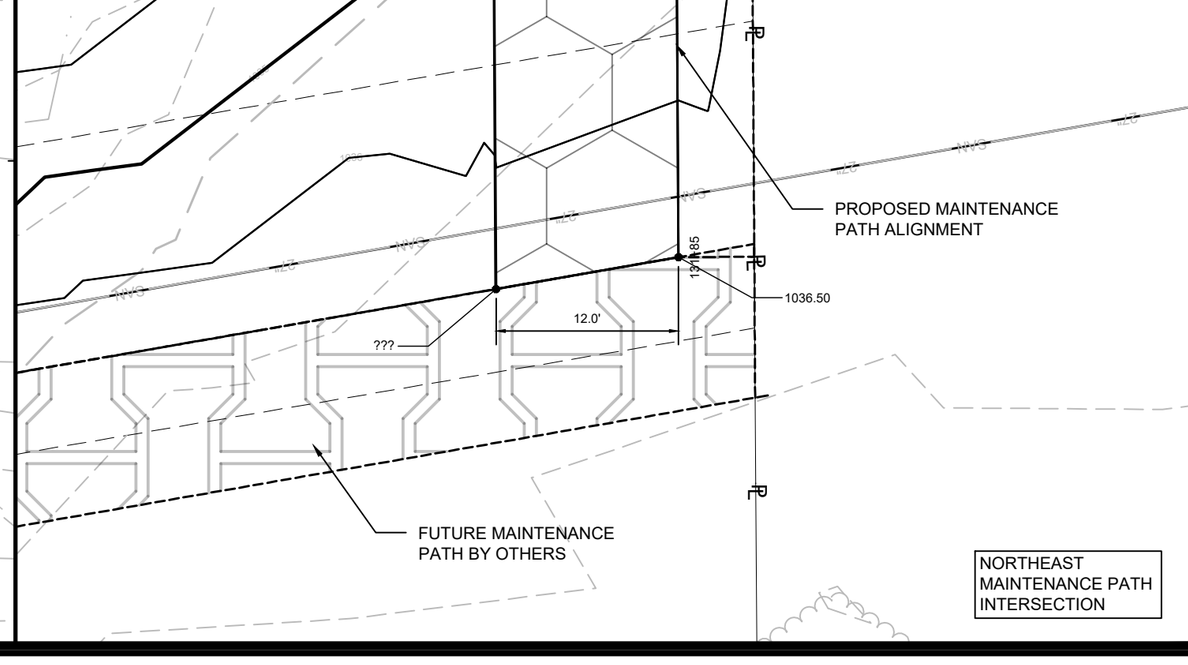
NORTHWEST MAINTENANCE PATH INTERSECTION

PROPOSED MAINTENANCE PATH 3 ALIGNMENT

40 LF CMP @ -2608.29%

MEADOW ROAD





NORTHEAST MAINTENANCE PATH INTERSECTION

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CITY OF MADISON

CONTRACT NO: 9030

INTERSECTION DETAILS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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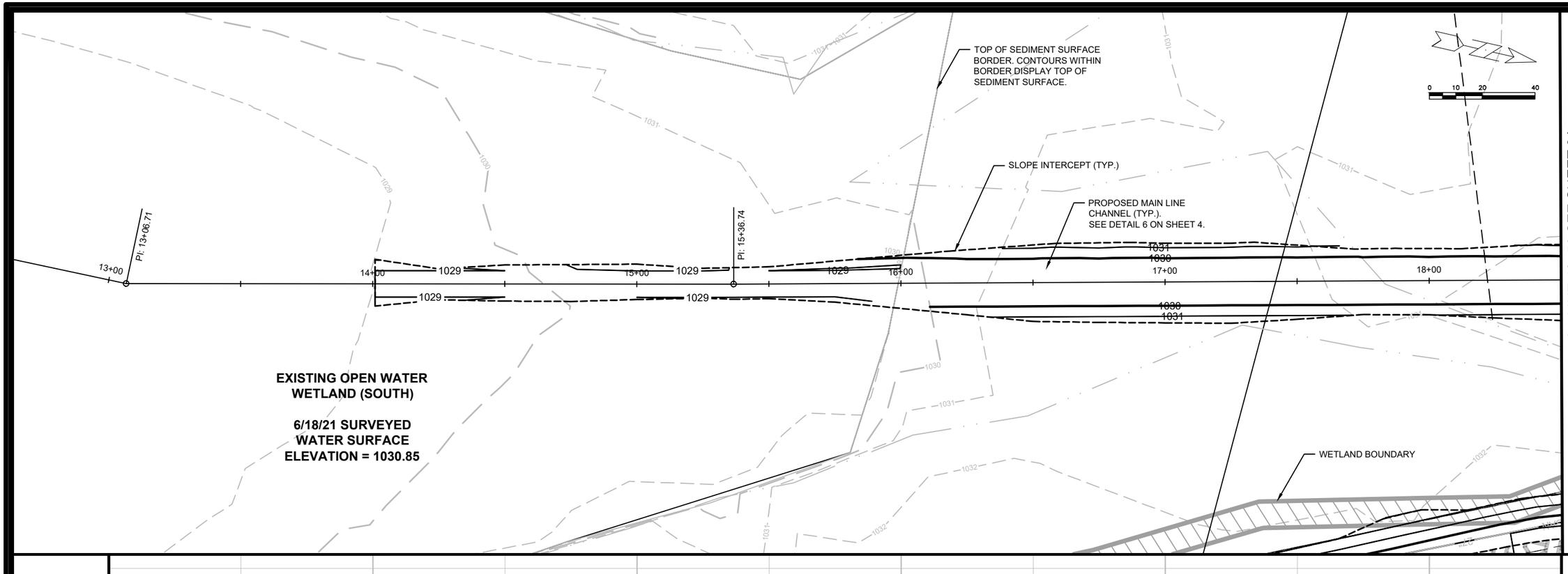
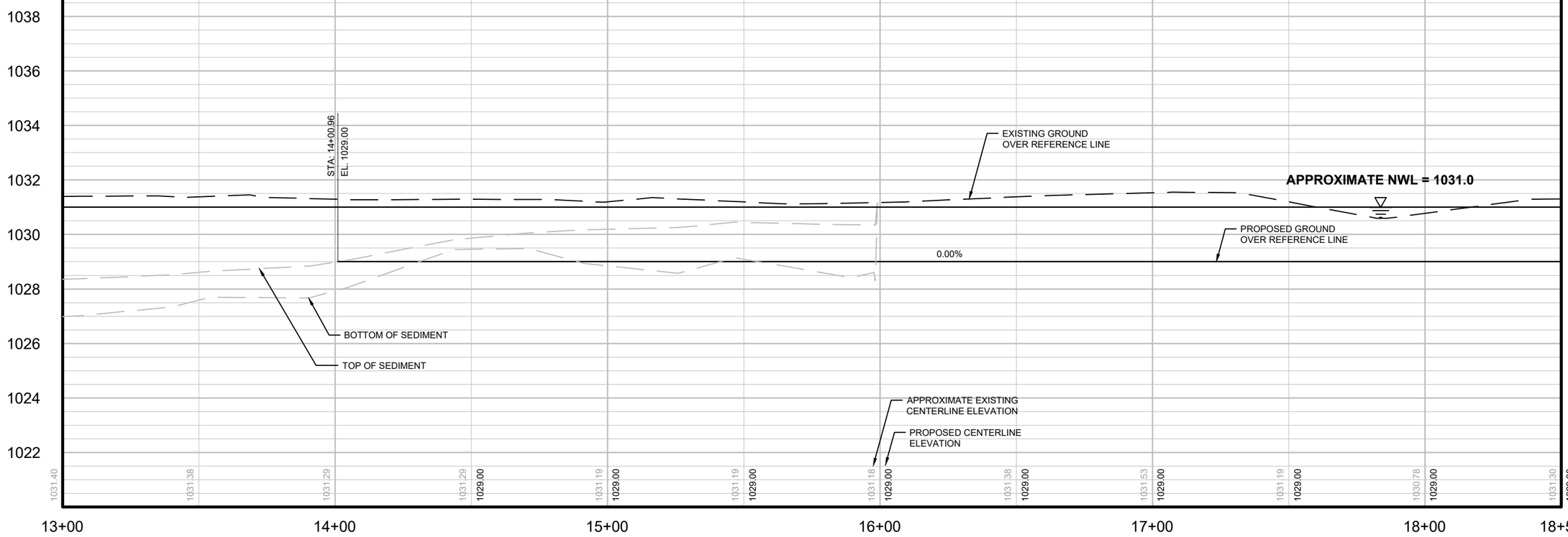
31





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Scale: 1"=40'

32

1020.129

CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL PLAN AND PROFILE - 1

LOWER BADGER MILL CREEK FLOOD MITIGATION

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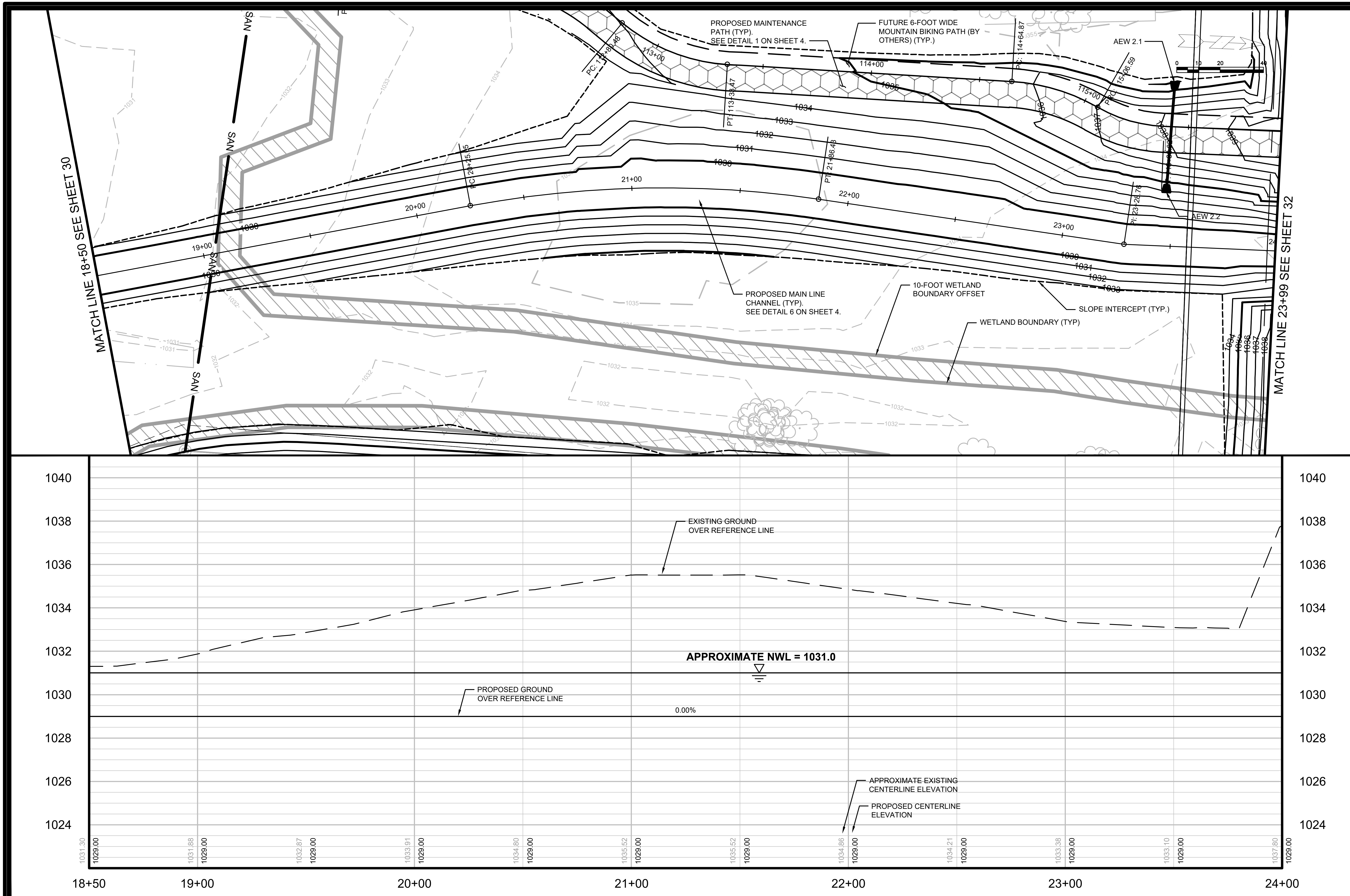
32



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CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL PLAN AND PROFILE - 2

LOWER BADGER MILL CREEK FLOOD MITIGATION

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CITY OF MADISON WISCONSIN

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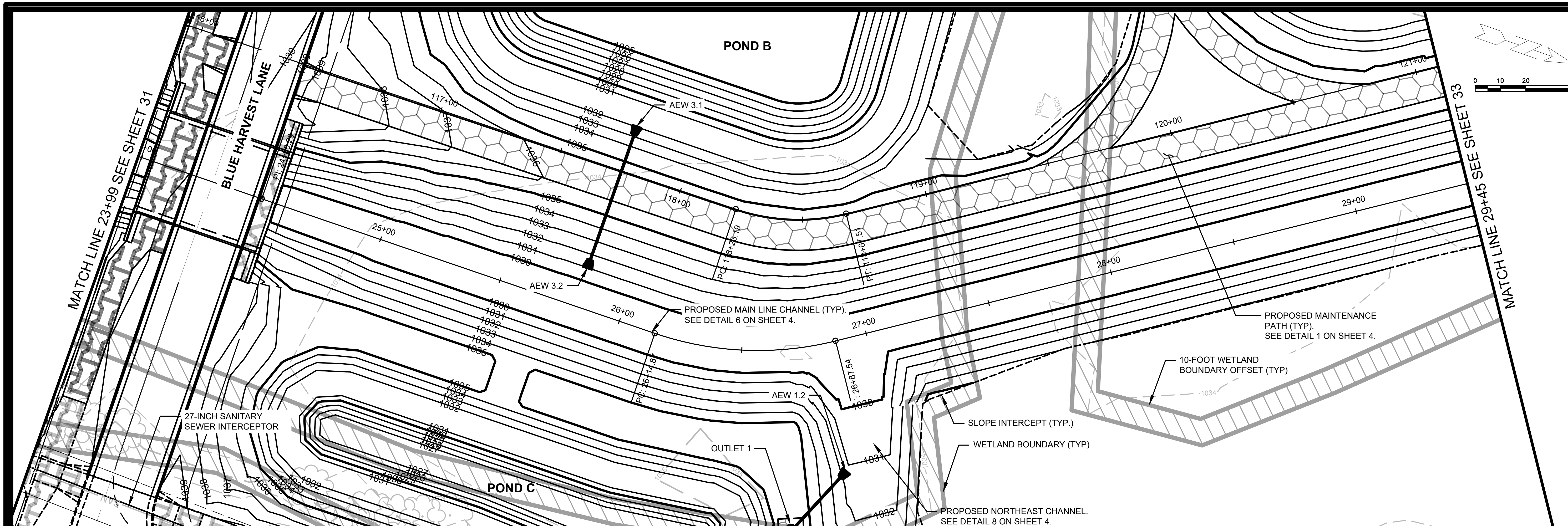

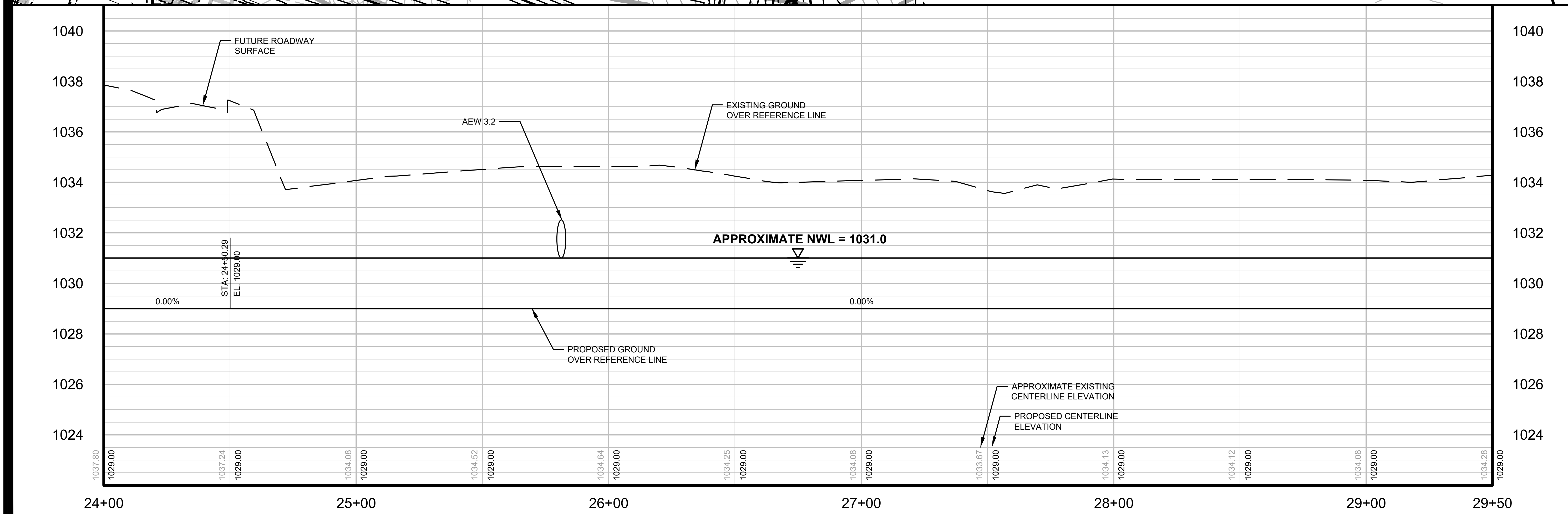

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MAIN LINE CHANNEL PLAN AND PROFILE - 3

LOWER BADGER MILL CREEK FLOOD MITIGATION

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CITY OF MADISON

CONTRACT NO: 9030

1020.129

34

POND A

MATCH LINE 29+45 SEE SHEET 32

AEW 5.1

PC: 121+20.97

RRC 122+88.30

123+00

122+00

PC: 120+32.96

31+00

30+00

AEW 5.2

PROPOSED MAINTENANCE PATH (TYP).
SEE DETAIL 1 ON SHEET 4.

PT: 131+43.96

PI: 32+33.16

32+00

33+00

PI: 33+57.51

34+00

MATCH TO EXISTING POND ELEVATION

SLOPE INTERCEPT (TYP.)

WETLAND BOUNDARY (TYP)

PROPOSED MAIN LINE
CHANNEL (TYP).
SEE DETAIL 6 ON SHEET 4.

10-FOOT WETLAND BOUNDARY OFFSET

AEW 7.2

0 10 20 40

DREDGED
POND

MATCH LINE 34+95 SEE SHEET 34

1040
1038
1036
1034
1032
1030
1028
1026
1024

EXISTING GROUND
OVER REFERENCE LINE

AEW 5.2

APPROXIMATE NWL = 1031.0

STA: 29+18.33
EL. 1029.00

0.00%

1.65%

PROPOSED GROUND
OVER REFERENCE LINE

APPROXIMATE EXISTING
CENTERLINE ELEVATION

PROPOSED CENTERLINE
ELEVATION

STA: 32+33.16
EL. 1033.20

APPROXIMATE EXISTING POND
TOP SEDIMENT ELEVATION

APPROXIMATE NWL = 1033.0

STA: 34+27.65
EL. 1031.93

APPROXIMATE EXISTING POND
BOTTOM SEDIMENT ELEVATION

22.28%

PROPOSED DREDGED
POND ELEVATION

STA: 34+58.75
EL. 1025.00

1034.28 1029.00 | 1034.52 1029.36 | 1034.40 1030.18 | 1034.50 1031.01 | 1034.18 1031.83 | 1033.45 1032.65 | 1033.22 | 1033.20 | 1033.20 | 1033.21 | 1033.25 | 1033.26

29+50 30+00 31+00 32+00 33+00 34+00 35+00

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CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL PLAN AND PROFILE - 4

LOWER BADGER MILL CREEK FLOOD MITIGATION

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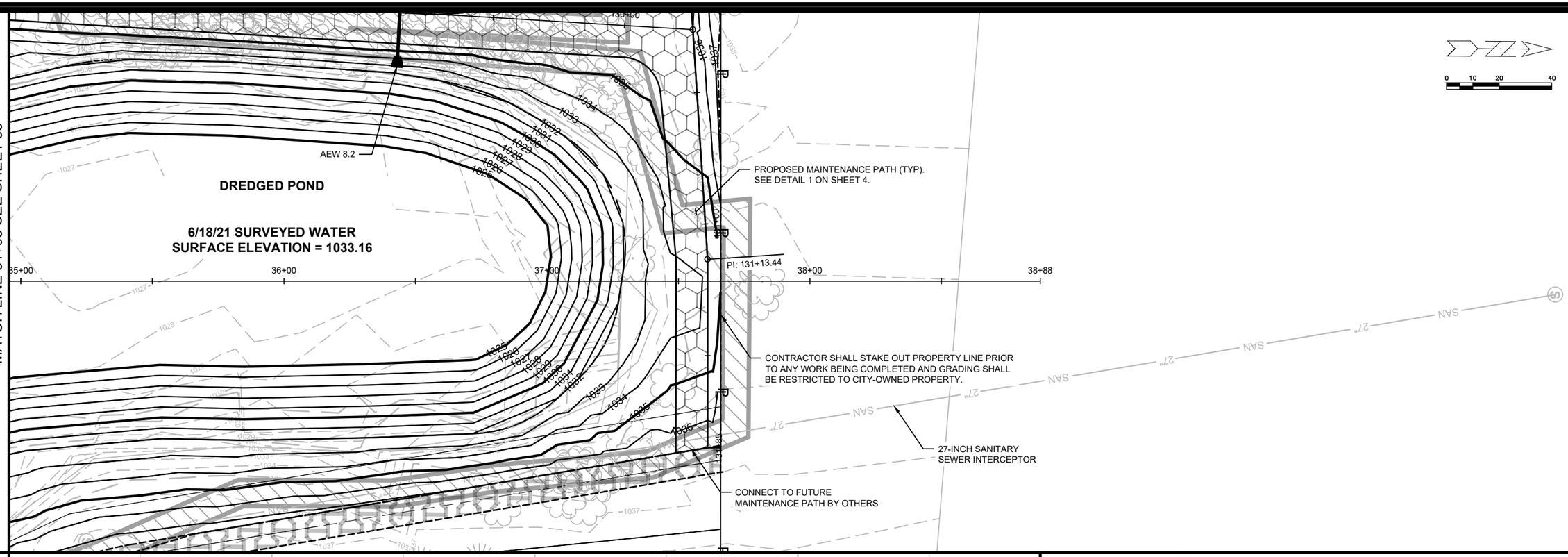
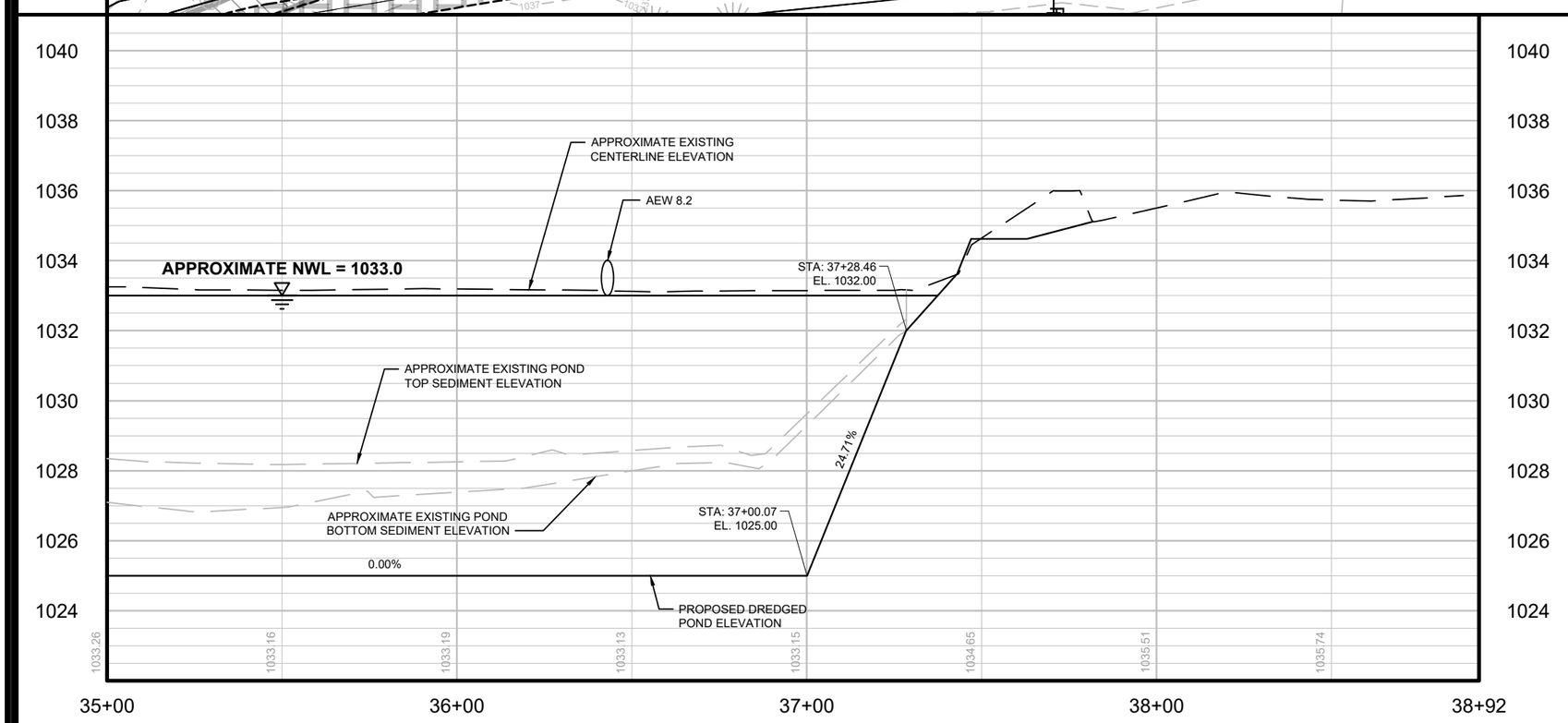
35

MATCH LINE 34+95 SEE SHEET 33





0 10 20 40

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36

CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL PLAN AND PROFILE - 5

LOWER BADGER MILL CREEK FLOOD MITIGATION

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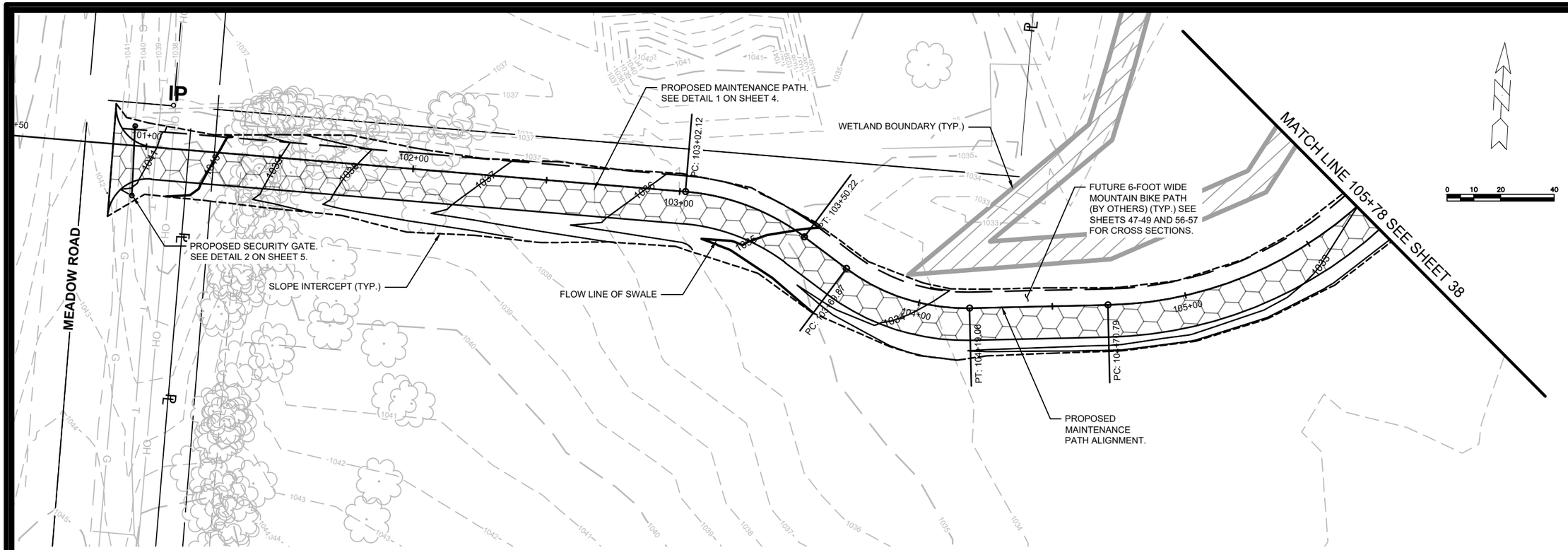
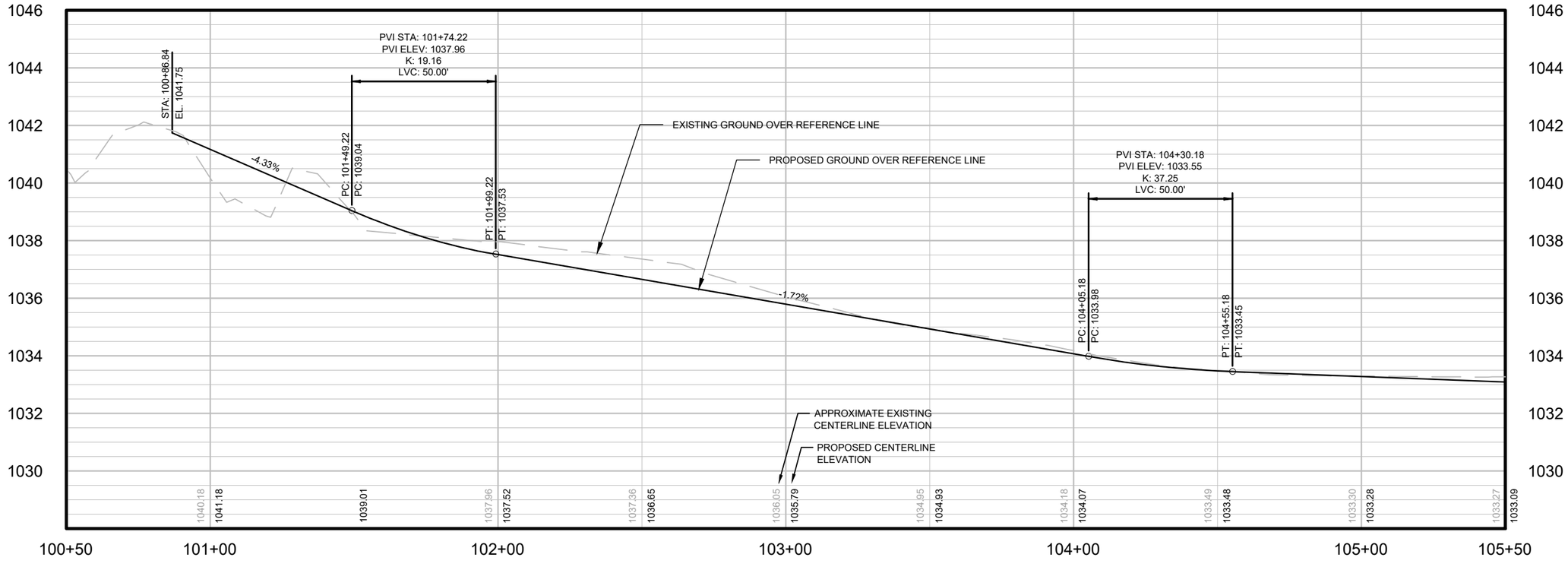
36





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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE PATH PLAN AND PROFILE - 1

LOWER BADGER MILL CREEK FLOOD MITIGATION

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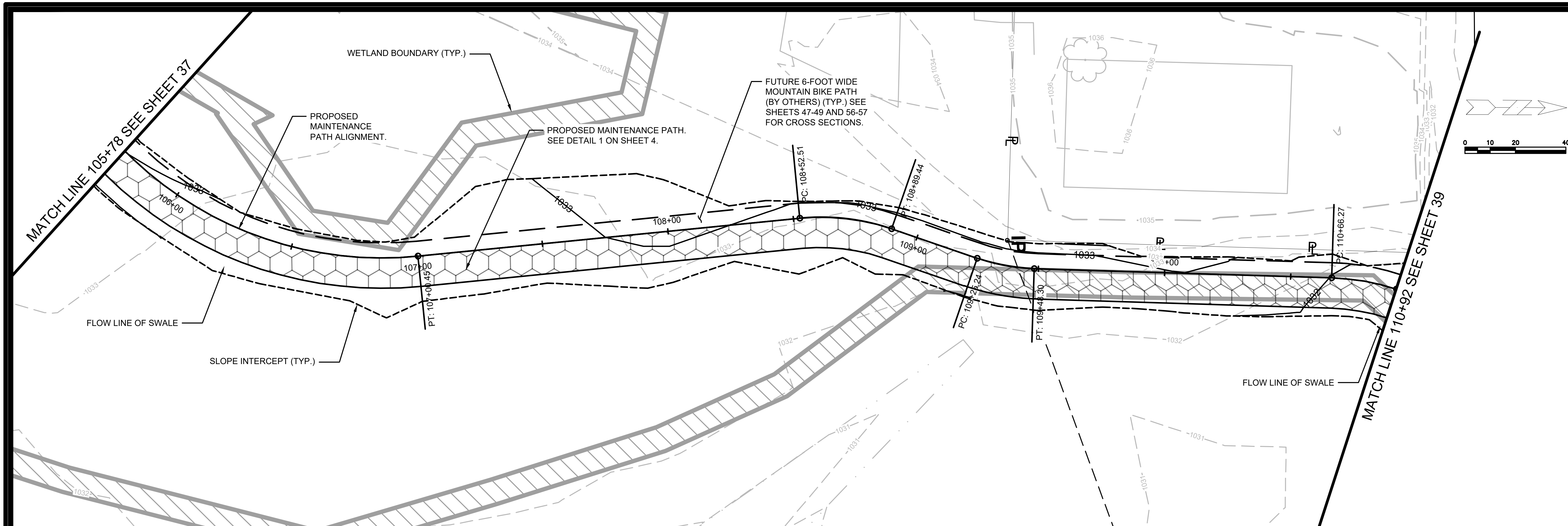
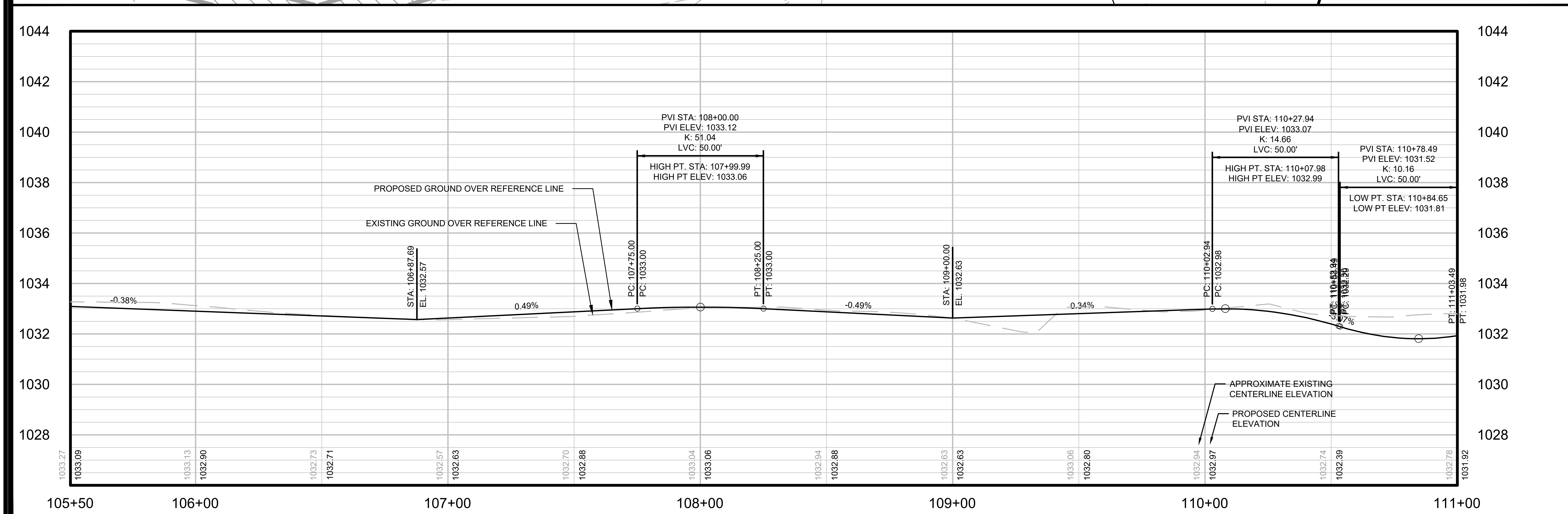
37





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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE PATH PLAN AND PROFILE - 2

LOWER BADGER MILL CREEK FLOOD MITIGATION

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CITY OF MADISON WISCONSIN

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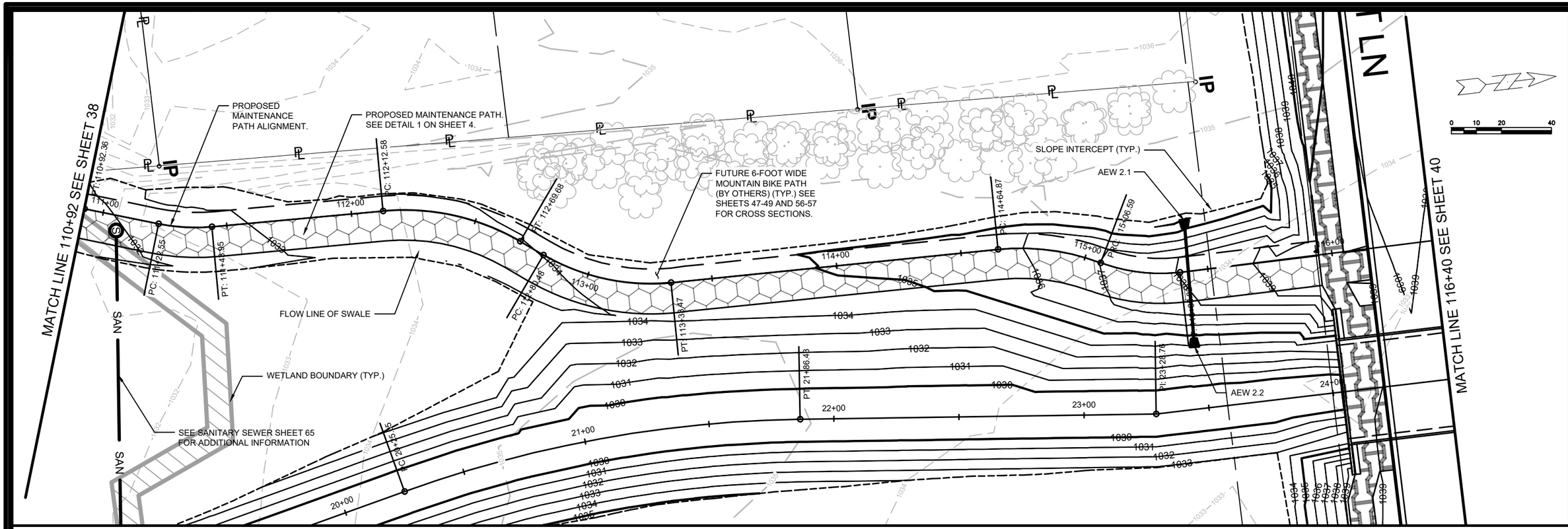

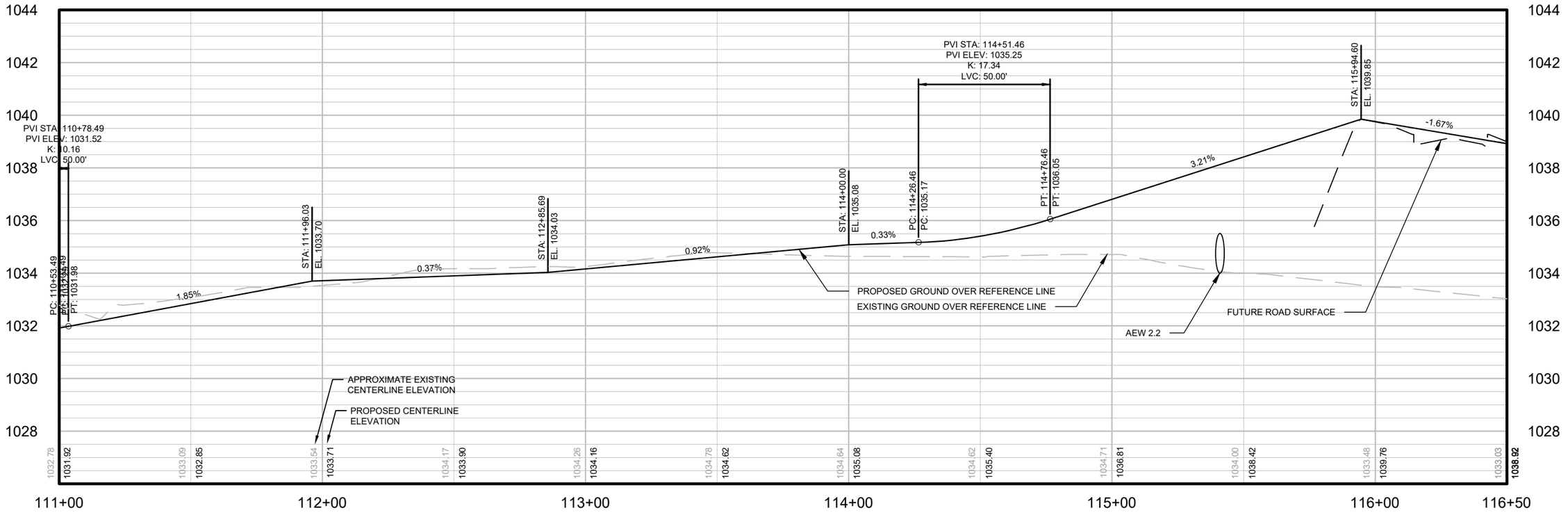

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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE PATH PLAN AND PROFILE - 3

LOWER BADGER MILL CREEK FLOOD MITIGATION

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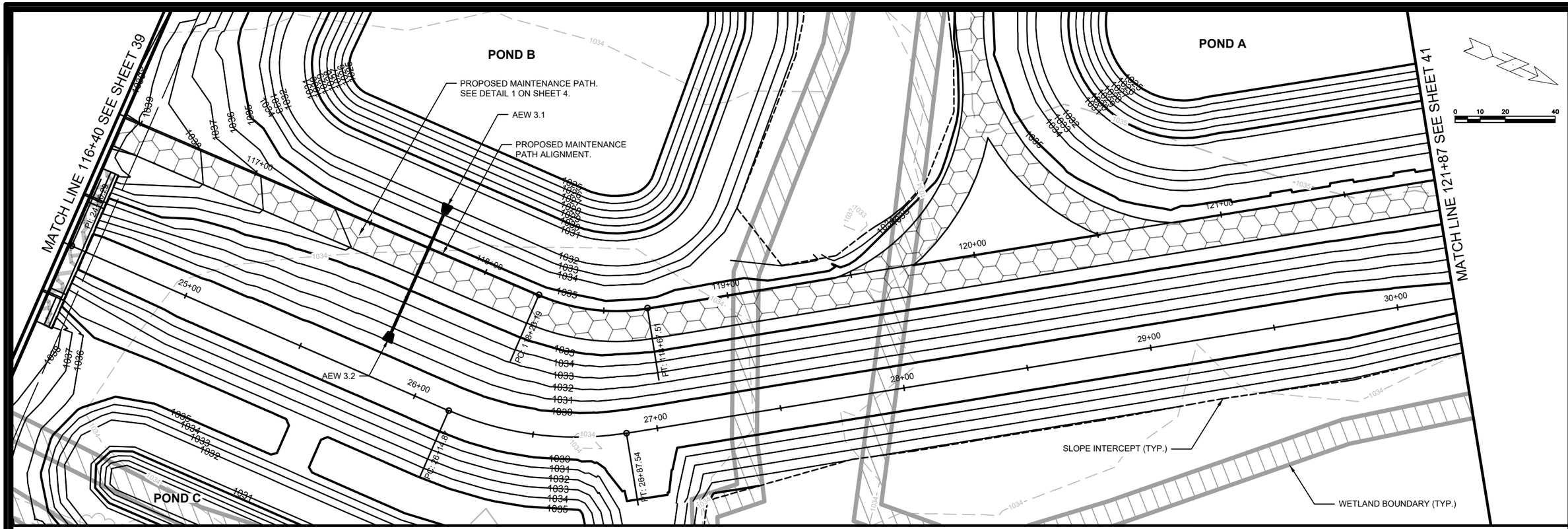
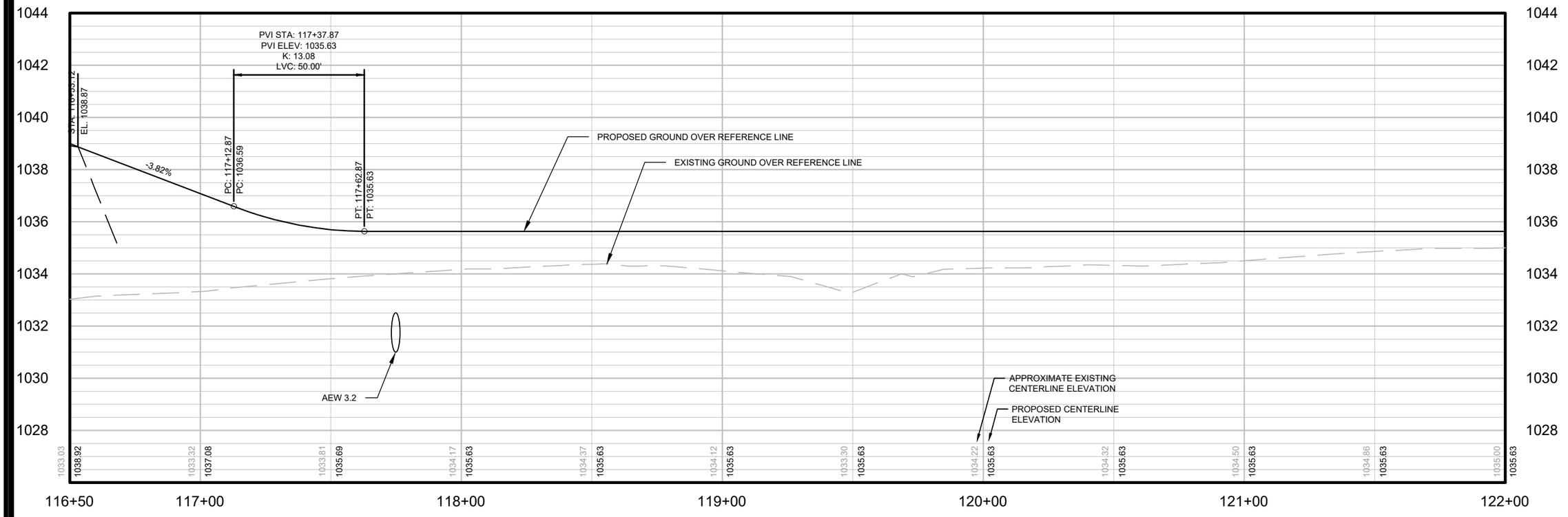
39





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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE PATH PLAN AND PROFILE - 4

LOWER BADGER MILL CREEK FLOOD MITIGATION

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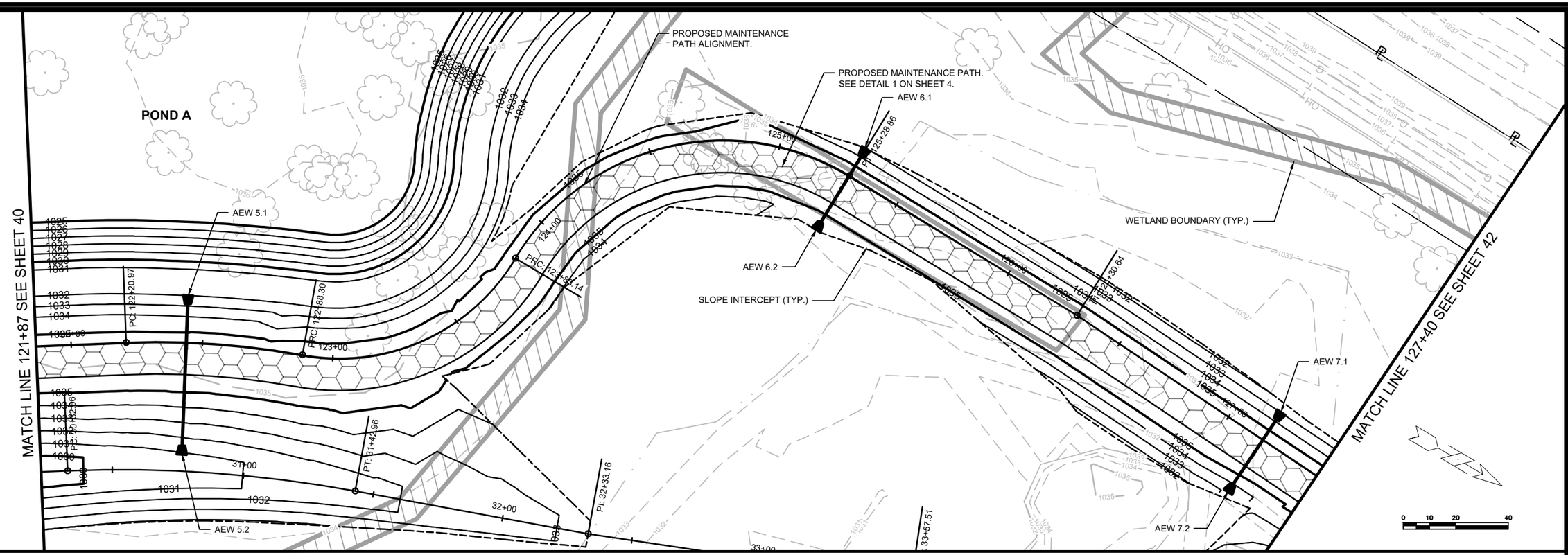
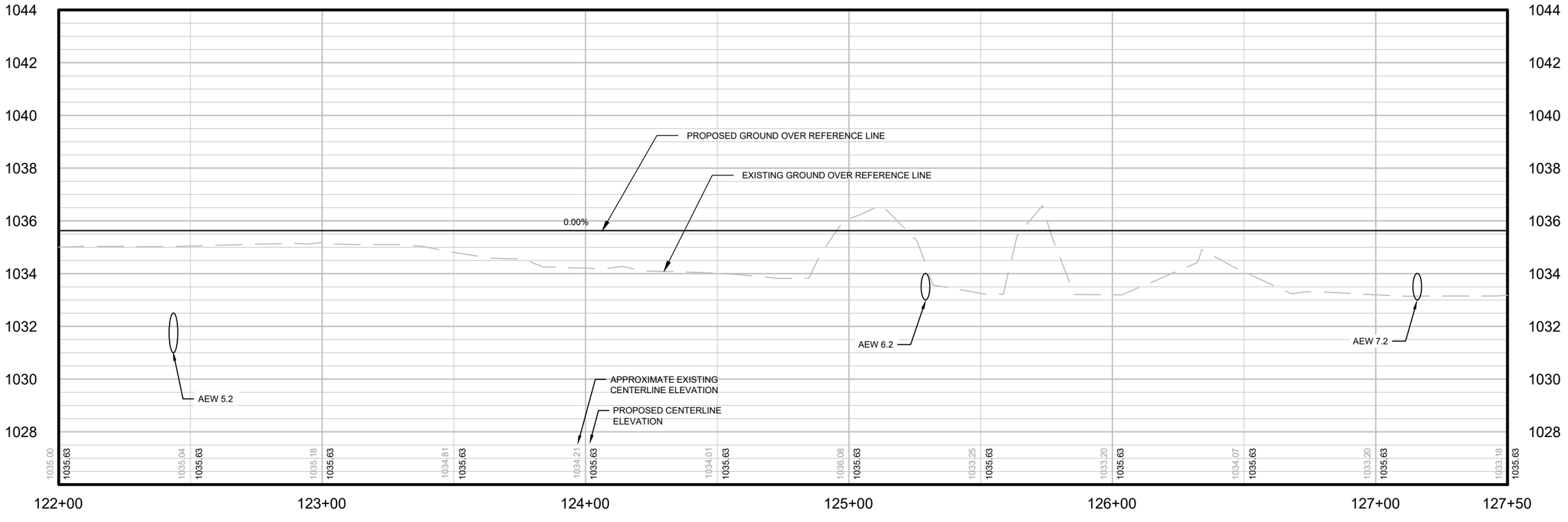
40





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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE PATH PLAN AND PROFILE - 5

LOWER BADGER MILL CREEK FLOOD MITIGATION

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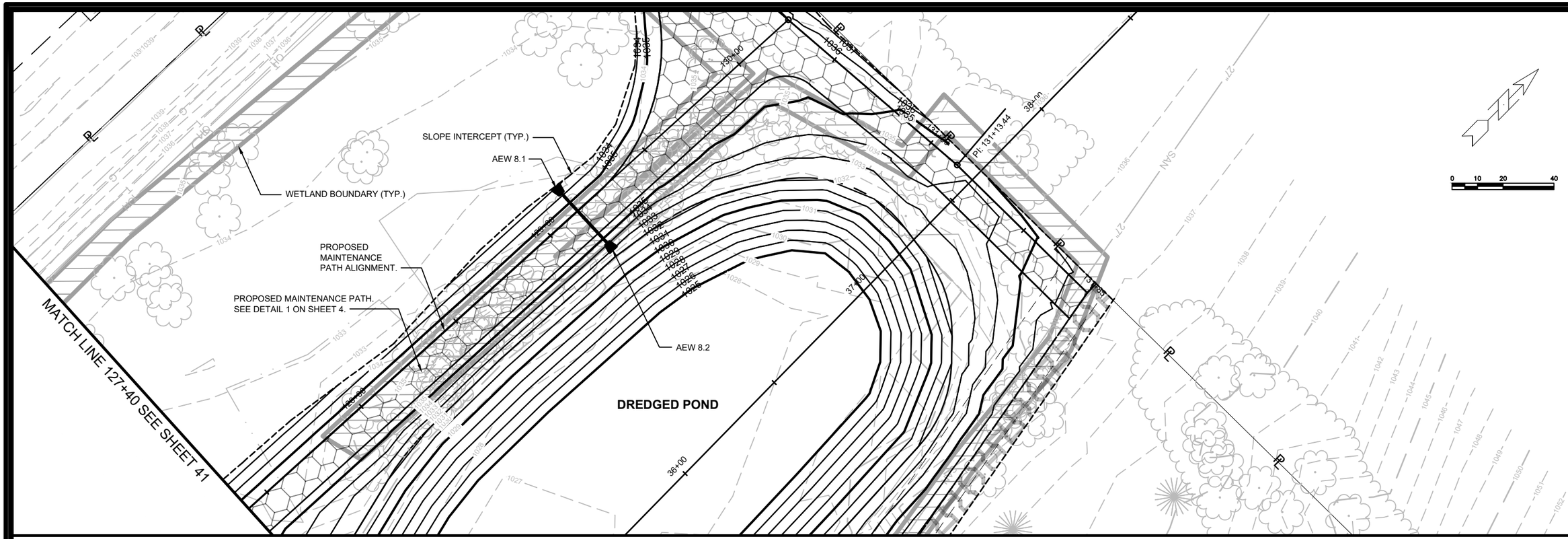
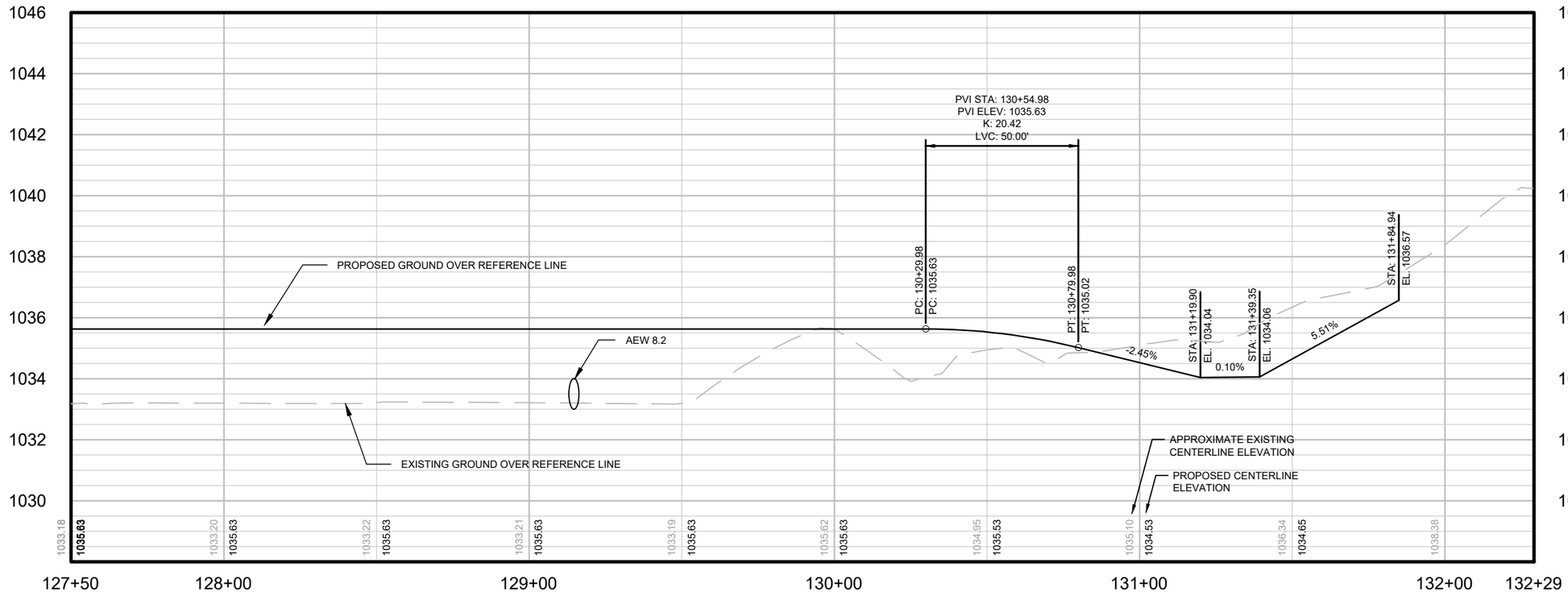
41





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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE PATH PLAN AND PROFILE - 6

LOWER BADGER MILL CREEK FLOOD MITIGATION

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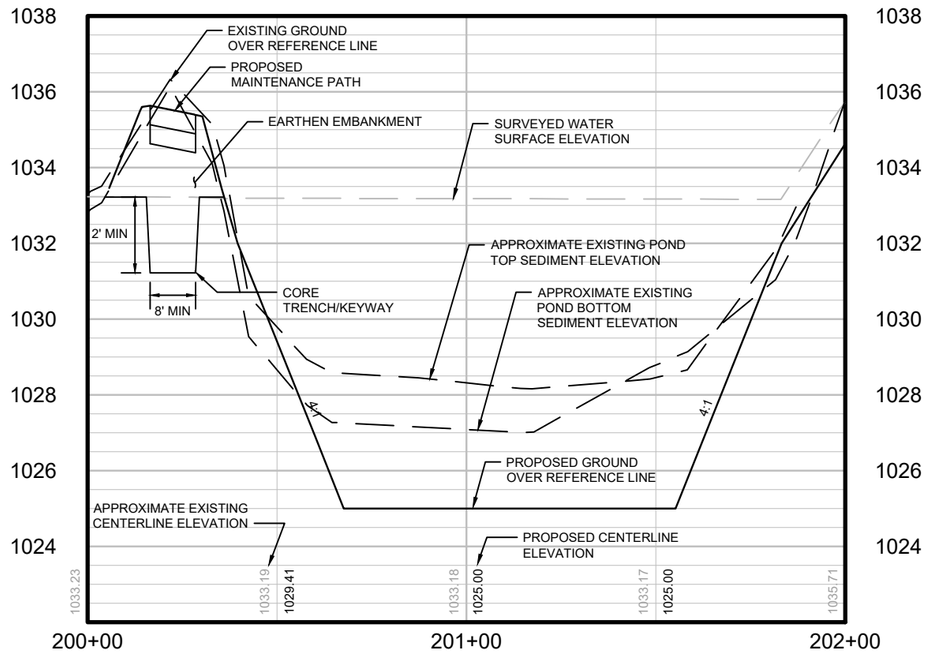
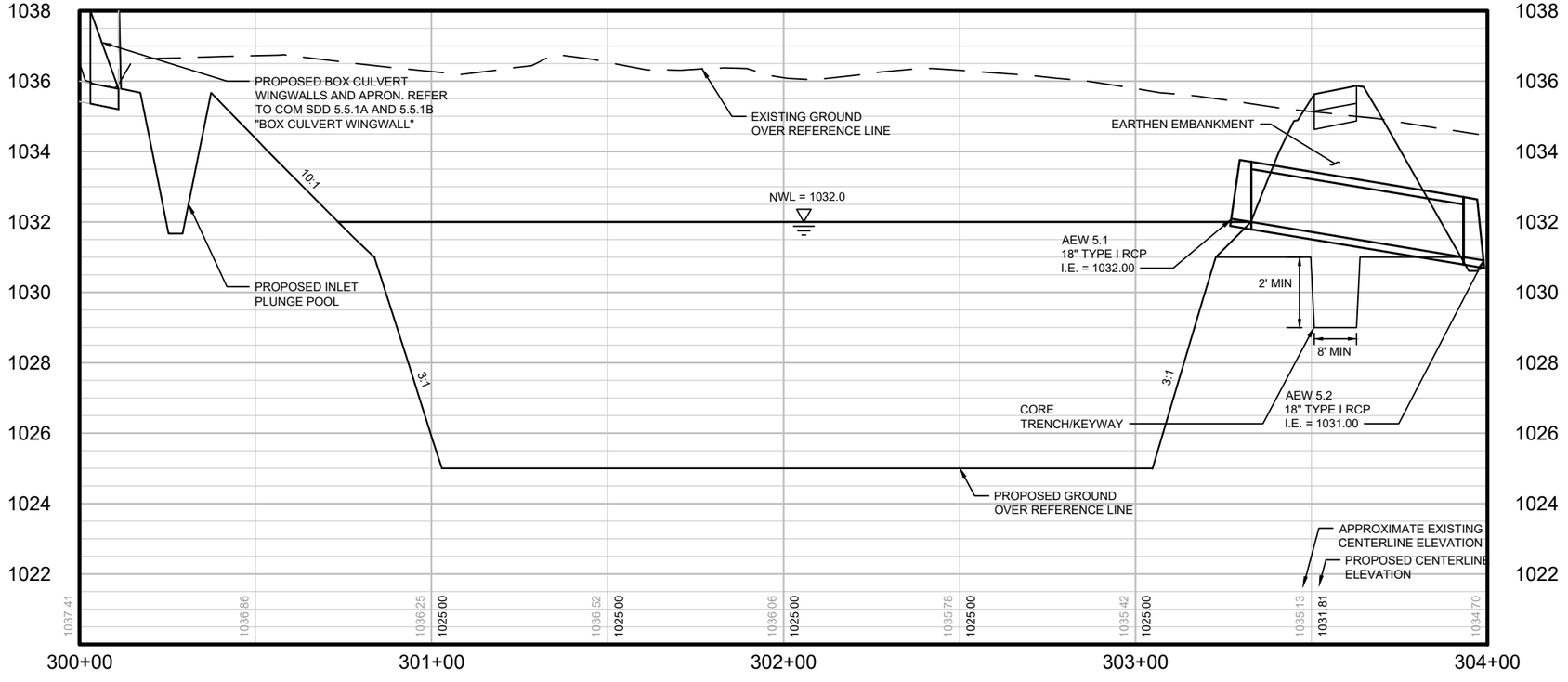
42



DREDGED POND SECTION D–D

SCALE: 1" = 40'

D
43



POND A SECTION A–A

SCALE: 1" = 40'

A
43

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43

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CITY OF MADISON

CONTRACT NO: 9030

POND SECTIONS - 1

LOWER BADGER MILL CREEK FLOOD MITIGATION

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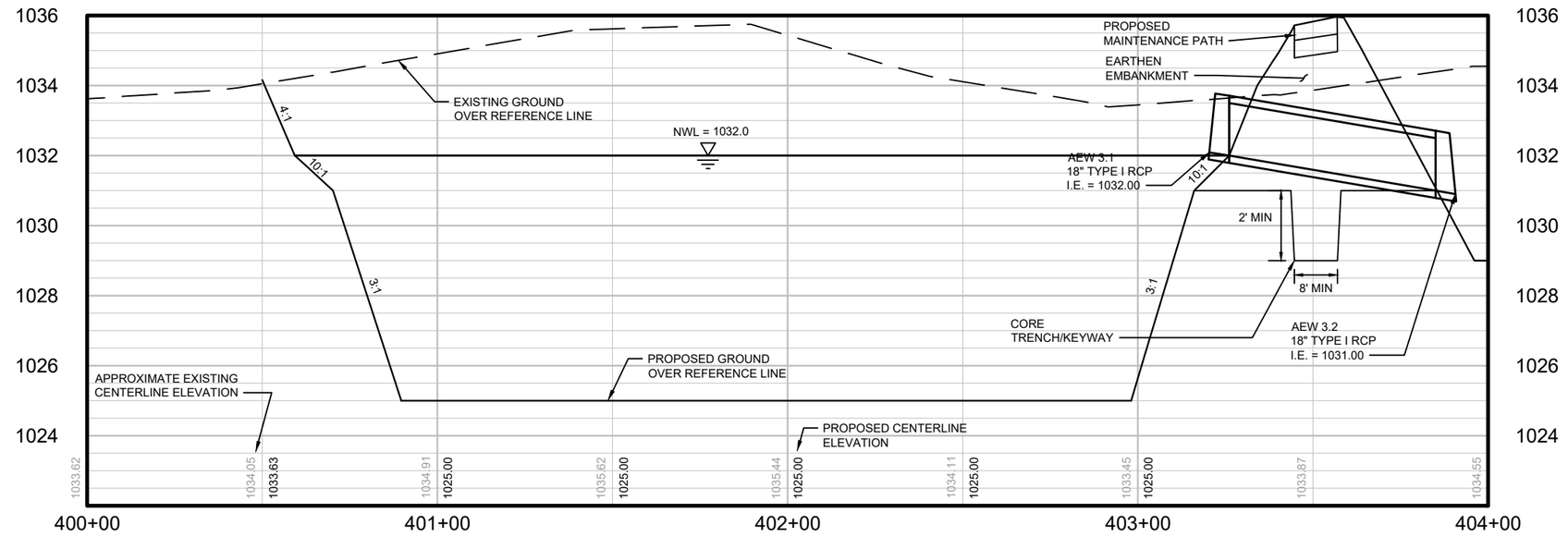
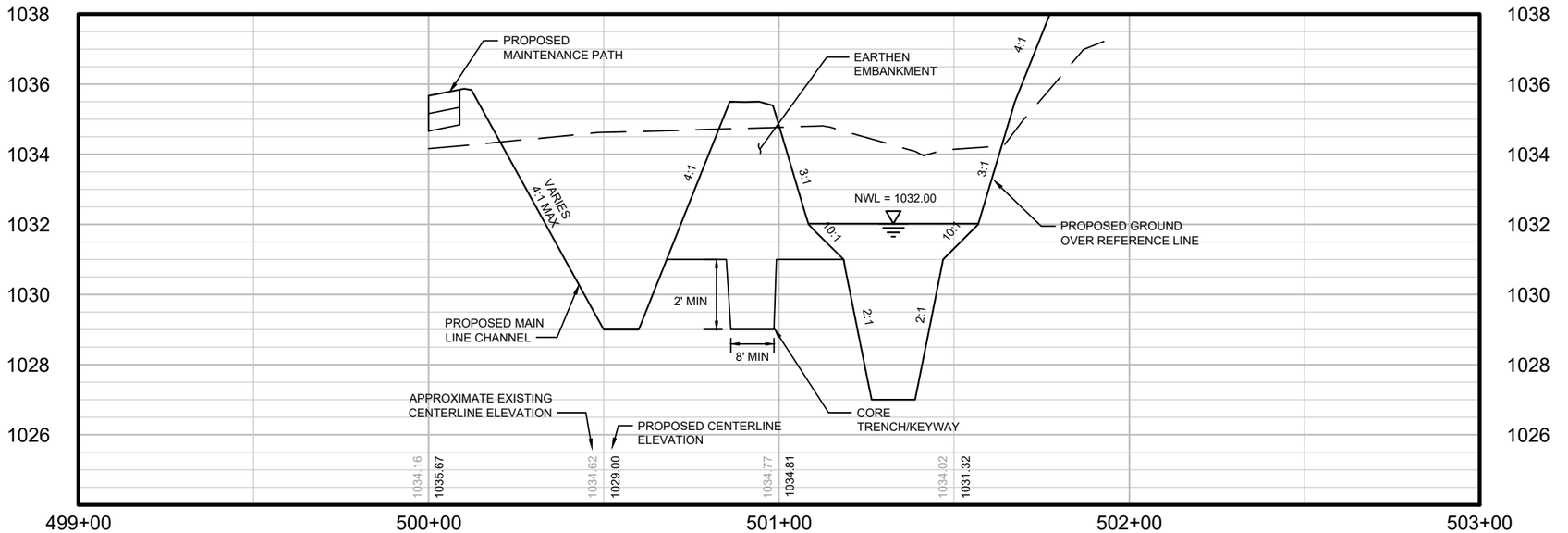
43



POND B SECTION B–B

B
44

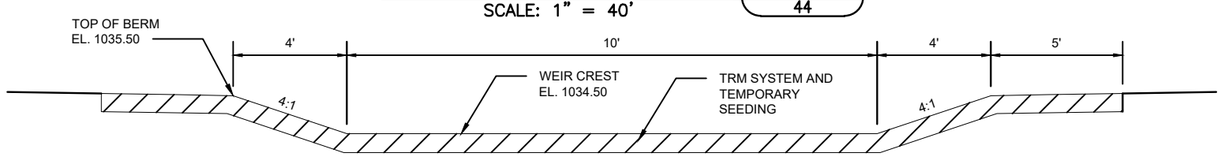
SCALE: 1" = 40'



POND C SECTION C–C

C
44

SCALE: 1" = 40'



POND C OVERFLOW SPILLWAY SECTION C1–C1

D
44

NO SCALE

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Designed By: JGG	Date: 2/1/2023 1:34 PM	Scale: 1"=40'	44		
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1020.129

CITY OF MADISON 9030

LOWER BADGER MILL CREEK FLOOD MITIGATION

CONTRACT NO:

POND SECTIONS - 2

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44

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Date: 2/1/2023 1:34 PM
Scale: 1"=10'

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45

1020.129

MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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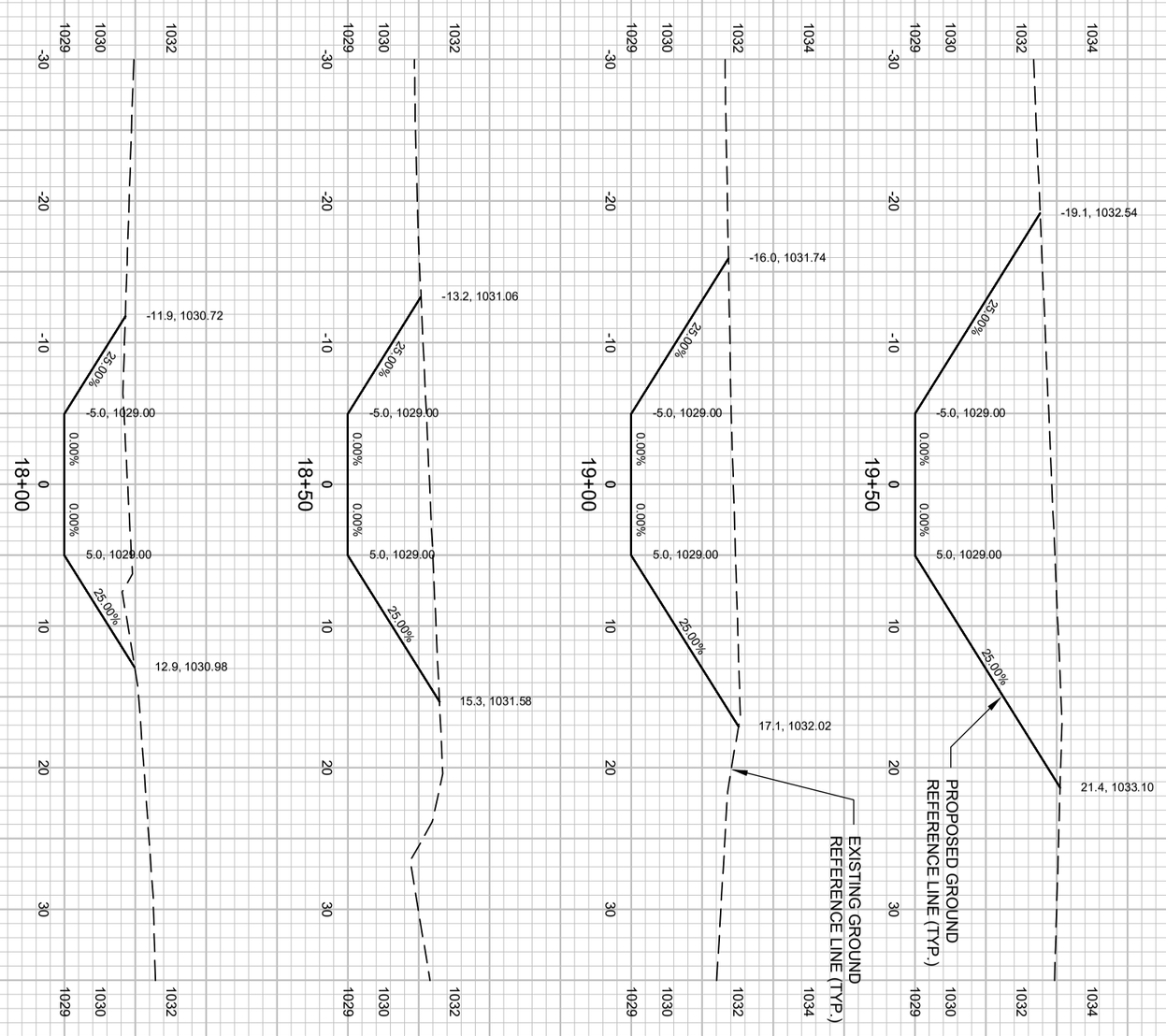
1020.129

45



46	1020.129		
MAIN LINE CHANNEL CROSS SECTIONS		1020.129	
LOWER BADGER MILL CREEK FLOOD MITIGATION		CITY OF MADISON	
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Designed By: JGG	Date: 2/1/2023 1:35 PM	Scale: 1"=10'	
1020.129			46

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MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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47

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Designed By: JGG | Date: 2/1/2023 1:35 PM | Scale: 1"=10' | 48

1020.129

CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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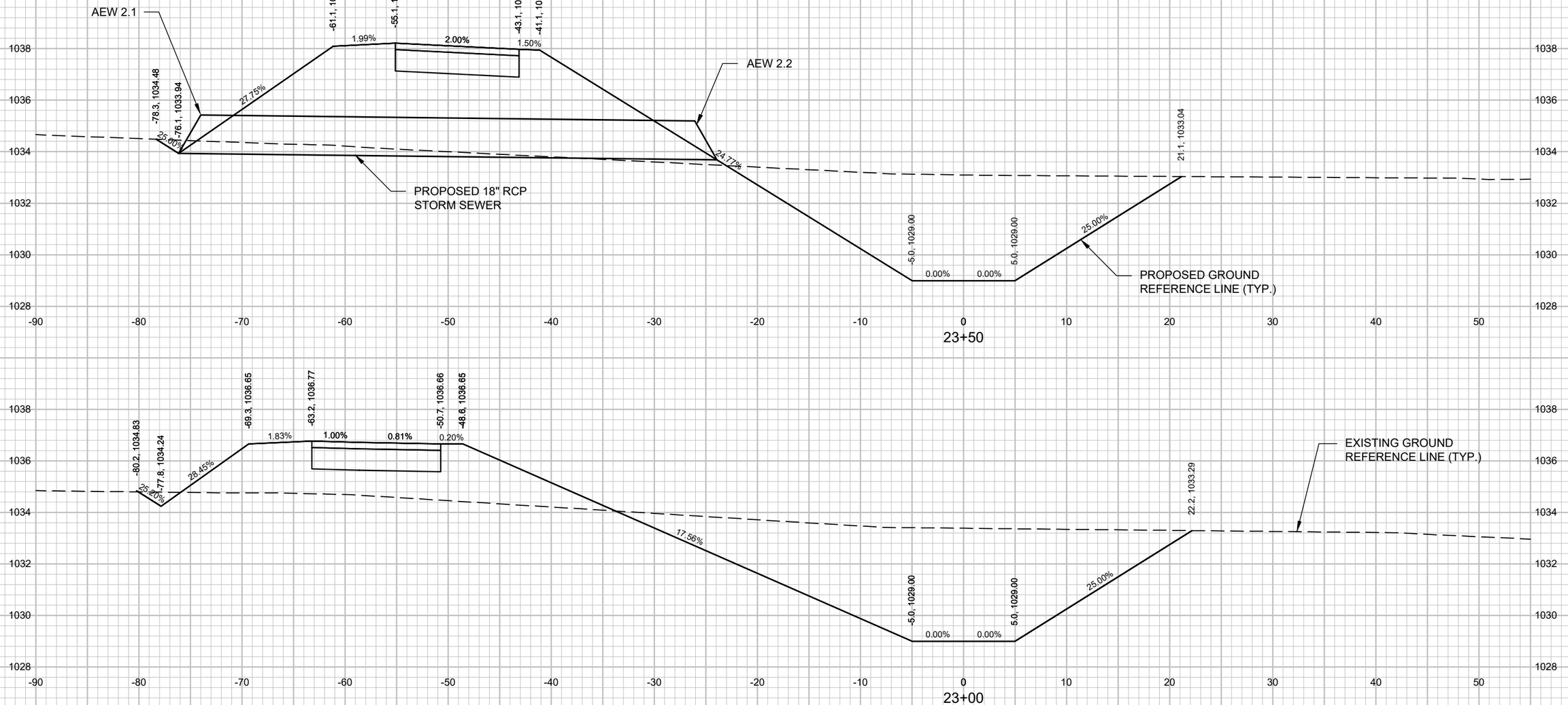
48



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MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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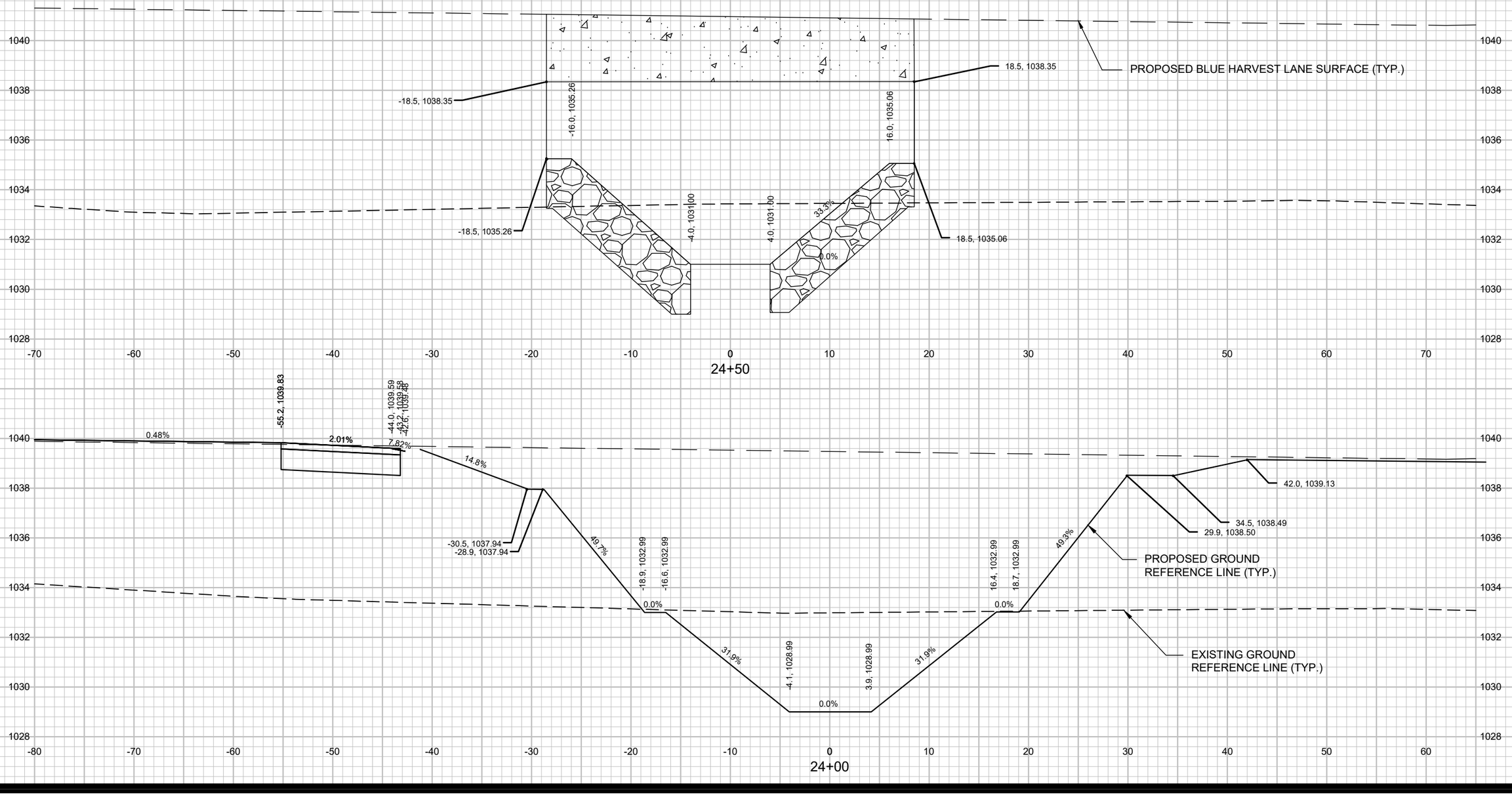
1020.129

49



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MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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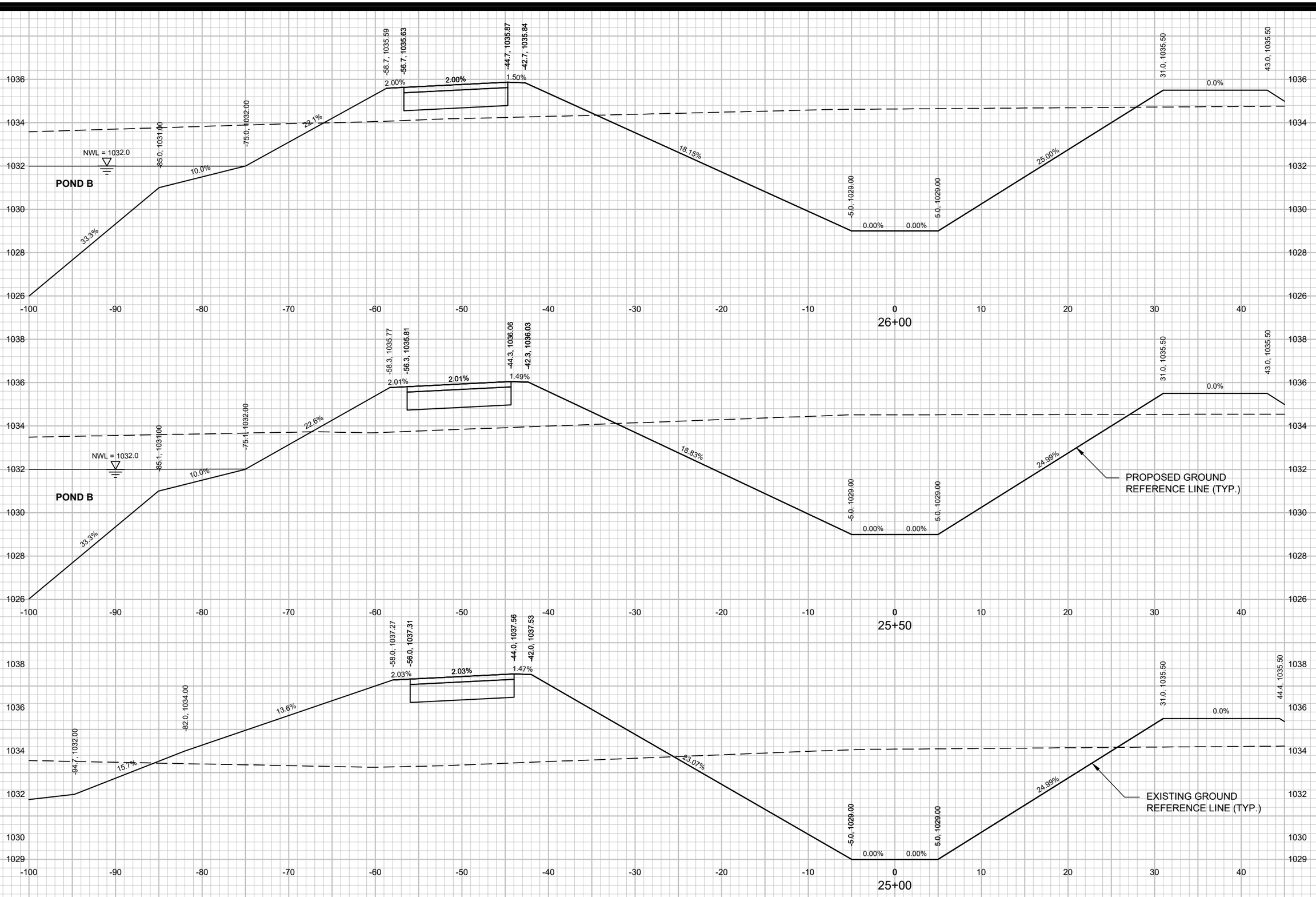
50



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Date: 2/1/2023 1:35 PM
Scale: 1"=10'

51

1020.129

CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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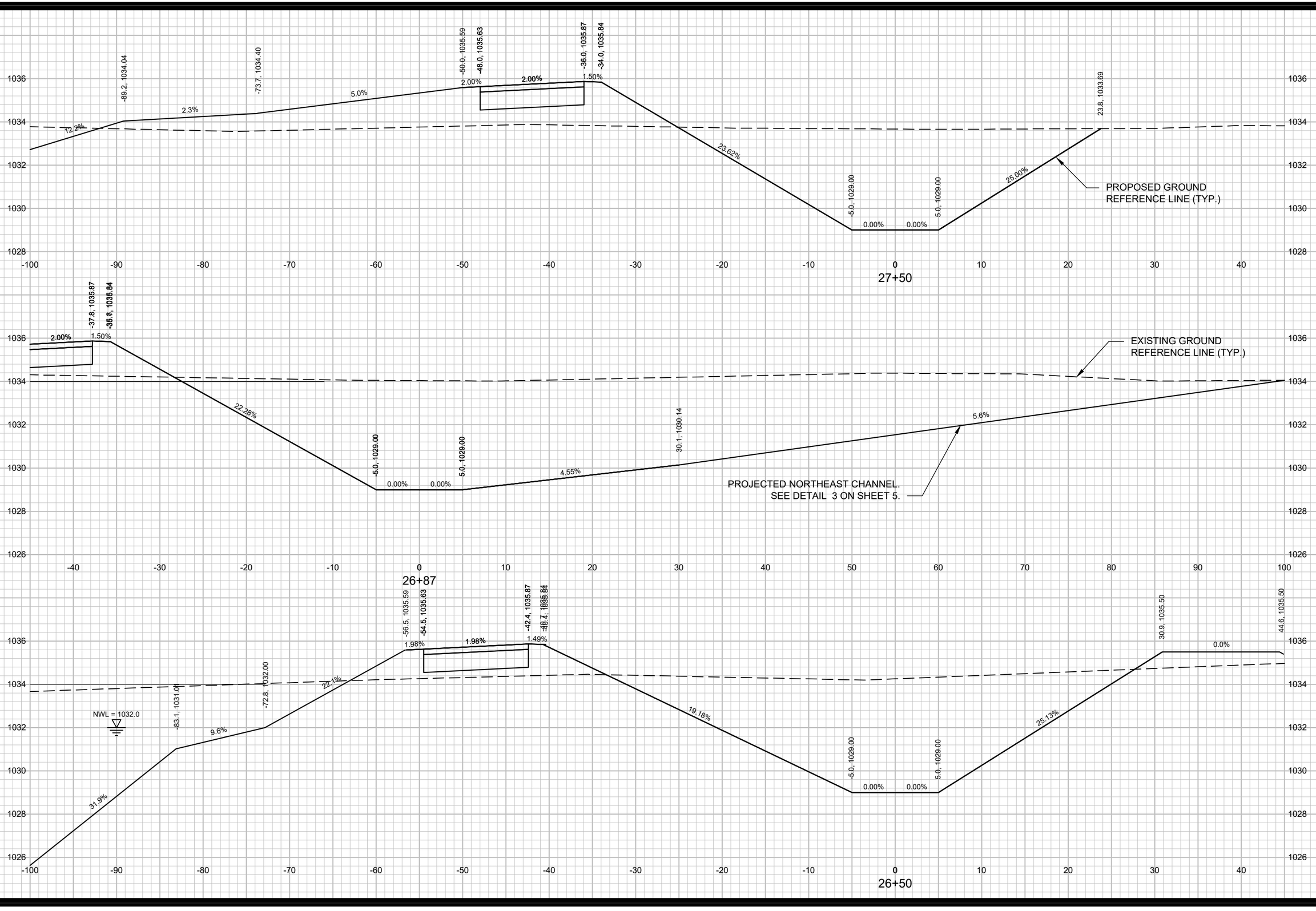
51



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1020.129

MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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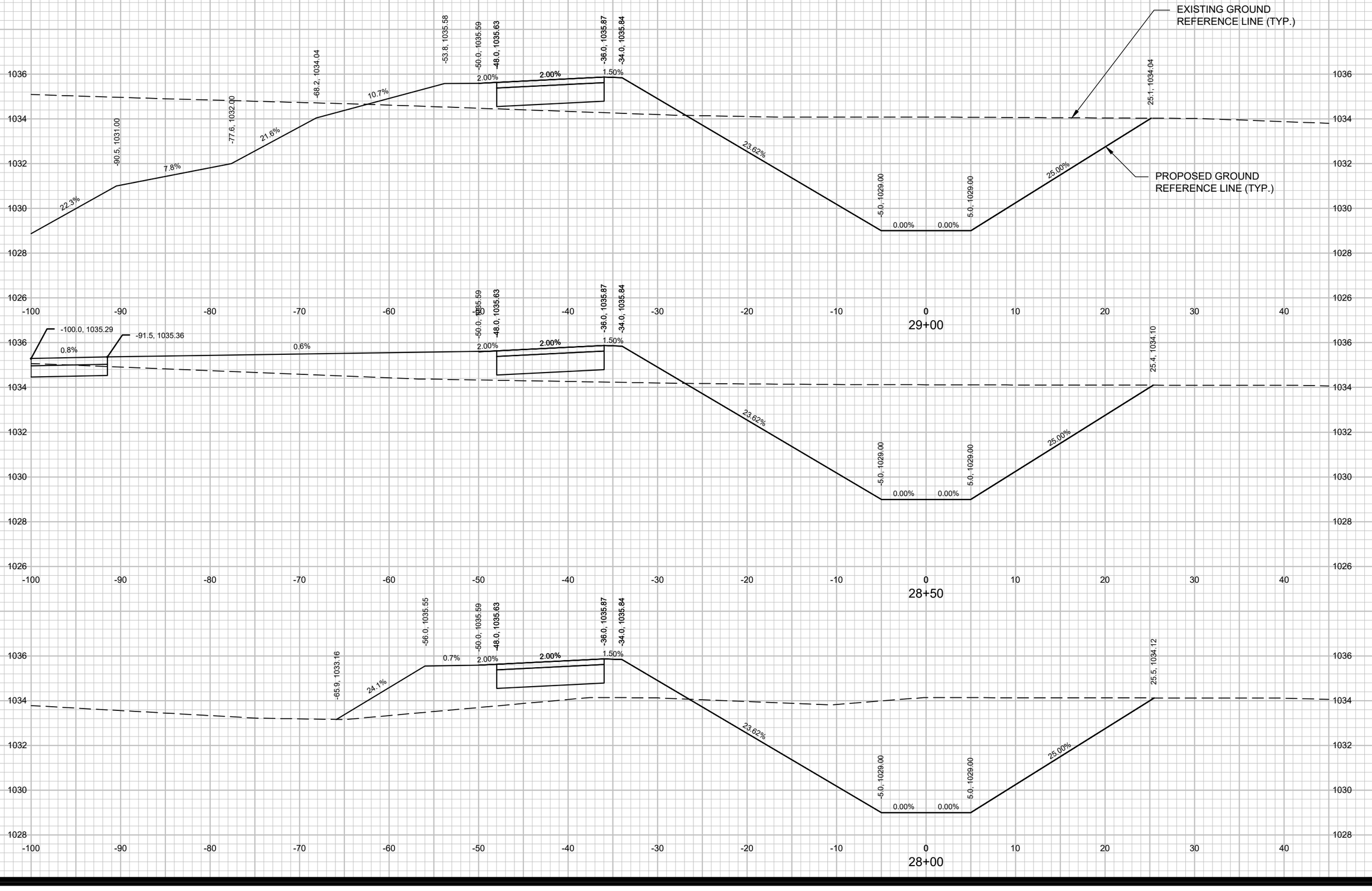
1020.129

52



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Date: 2/1/2023 1:35 PM
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1020.129

CITY OF MADISON

CONTRACT NO: 9030

MAIN LINE CHANNEL CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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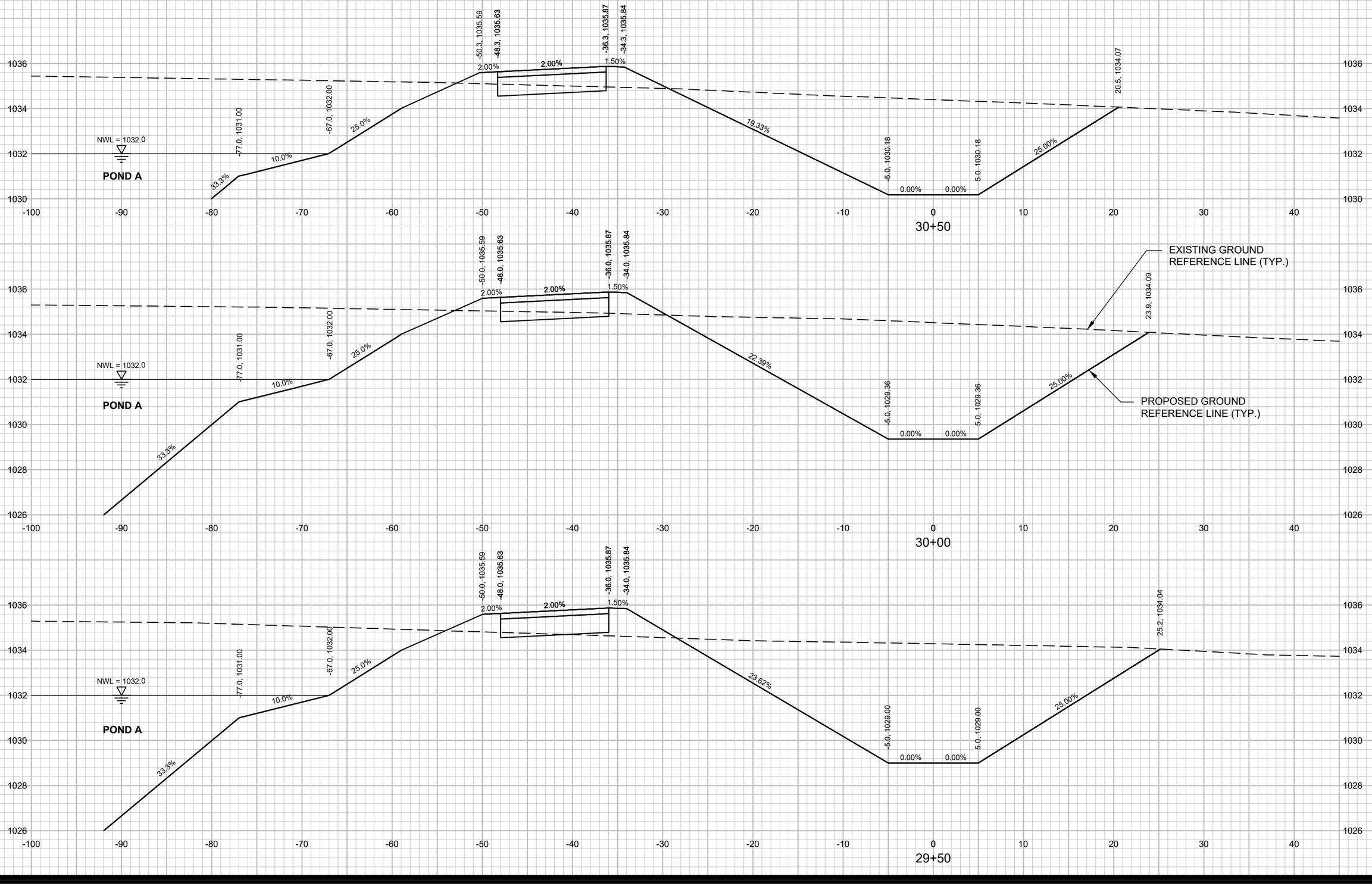
1020.129

53



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Date: 2/1/2023 1:35 PM
Scale: 1"=10'

1020.129

54

1020.129

MAIN LINE CHANNEL CROSS SECTIONS
LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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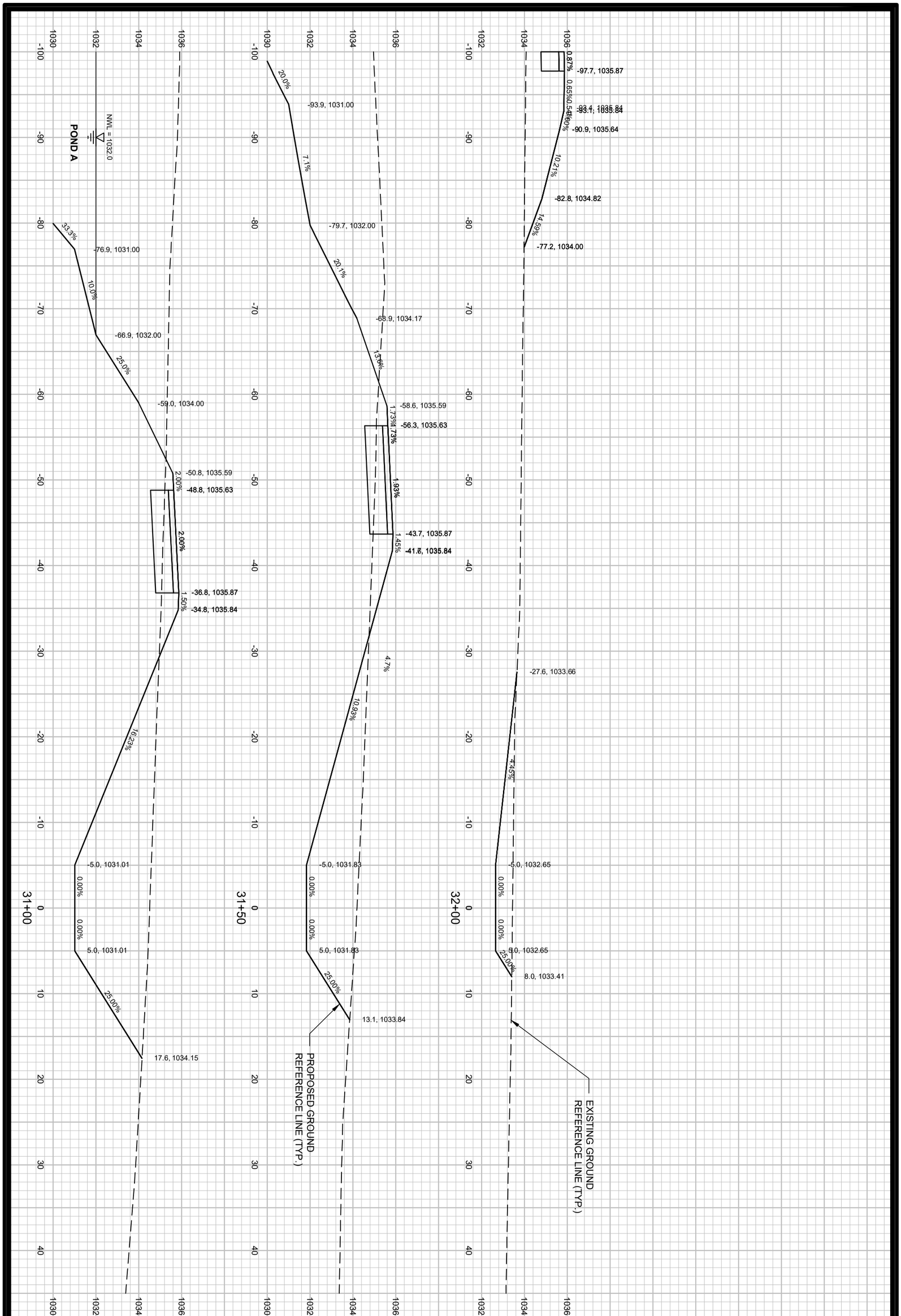
54



55	1020.129	MAIN LINE CHANNEL CROSS SECTIONS	1020.129
		LOWER BADGER MILL CREEK FLOOD MITIGATION	CITY OF MADISON
		S:\MAD\1000--1099\1020\129\Drawings\CAD\Civil 3d\SheetsPlan\Ditch XS.dwg	CONTRACT NO: 9030

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Designed By: JGG	Date: 2/1/2023 1:35 PM	Scale: 1"=10'	
1020.129			55

MARK	REVISION	DATE	BY
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Designed By: JGG
Date: 2/1/2023 1:36 PM
Scale: 1"=10'

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MAINTENANCE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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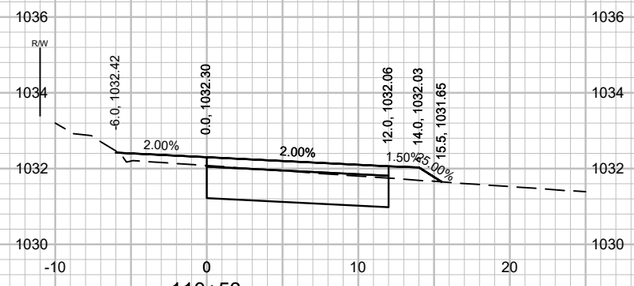
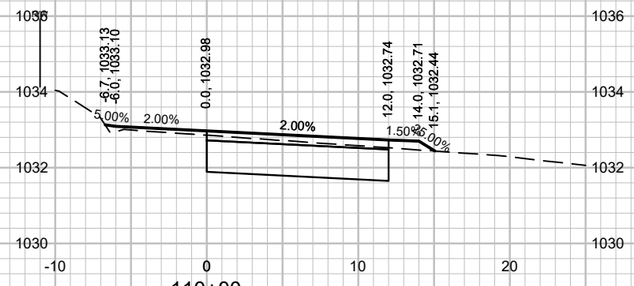
1020.129

56

SEE SHEETS 47 - 55 FOR MAINTENANCE PATH
CROSS SECTIONS STA. 113+00 - 124+00



110+53



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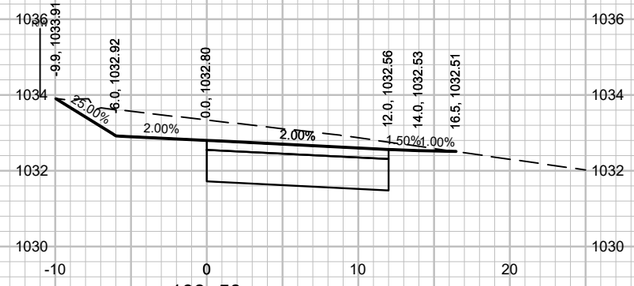

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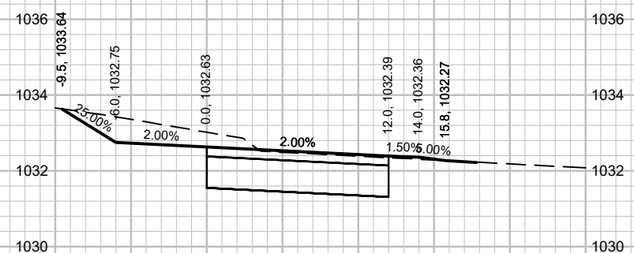

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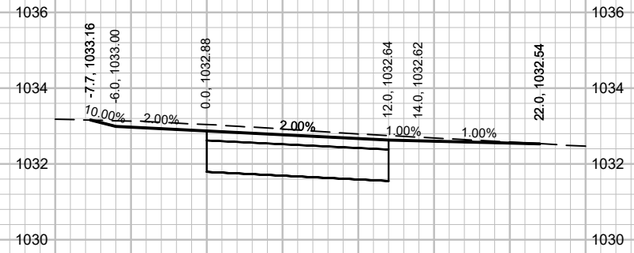

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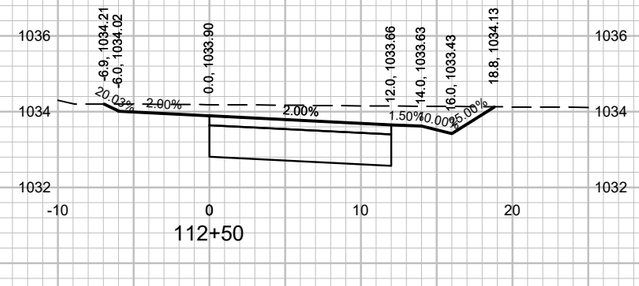

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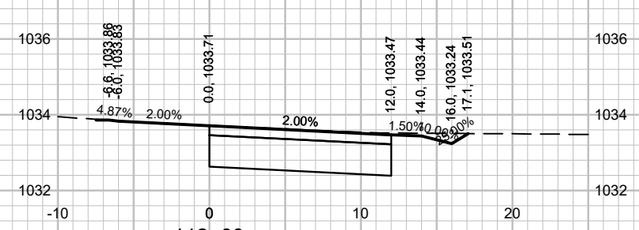
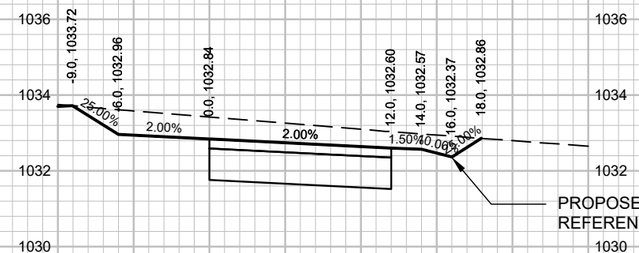
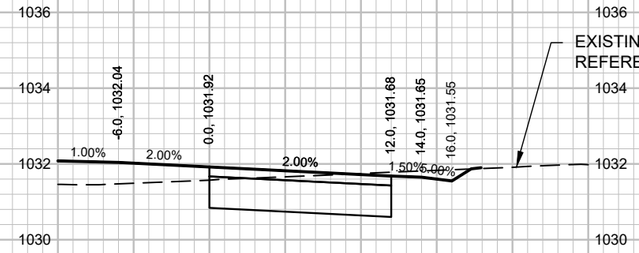


112+00



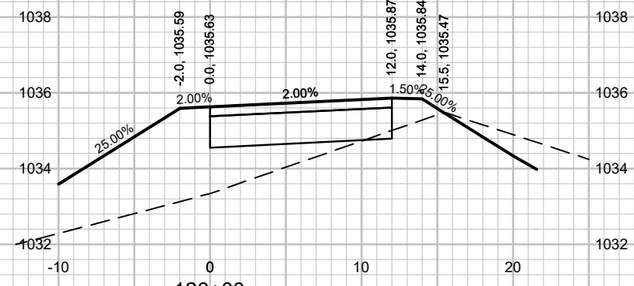
111+50



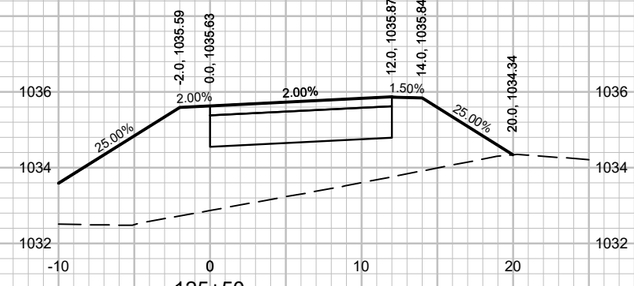
111+00

PROPOSED GROUND
REFERENCE LINE (TYP.)

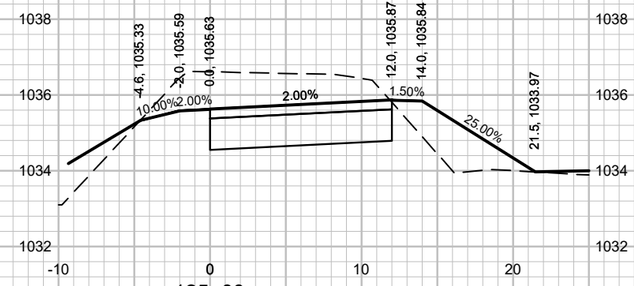
EXISTING GROUND
REFERENCE LINE (TYP.)



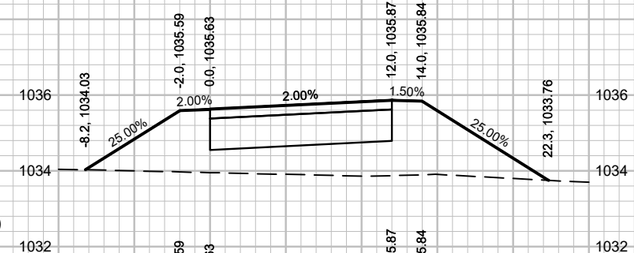
126+00



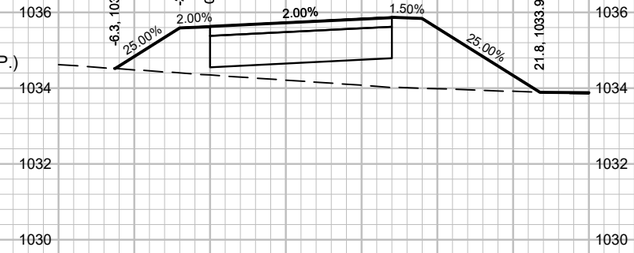
125+50



125+00



124+50



124+00

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MAINTENANCE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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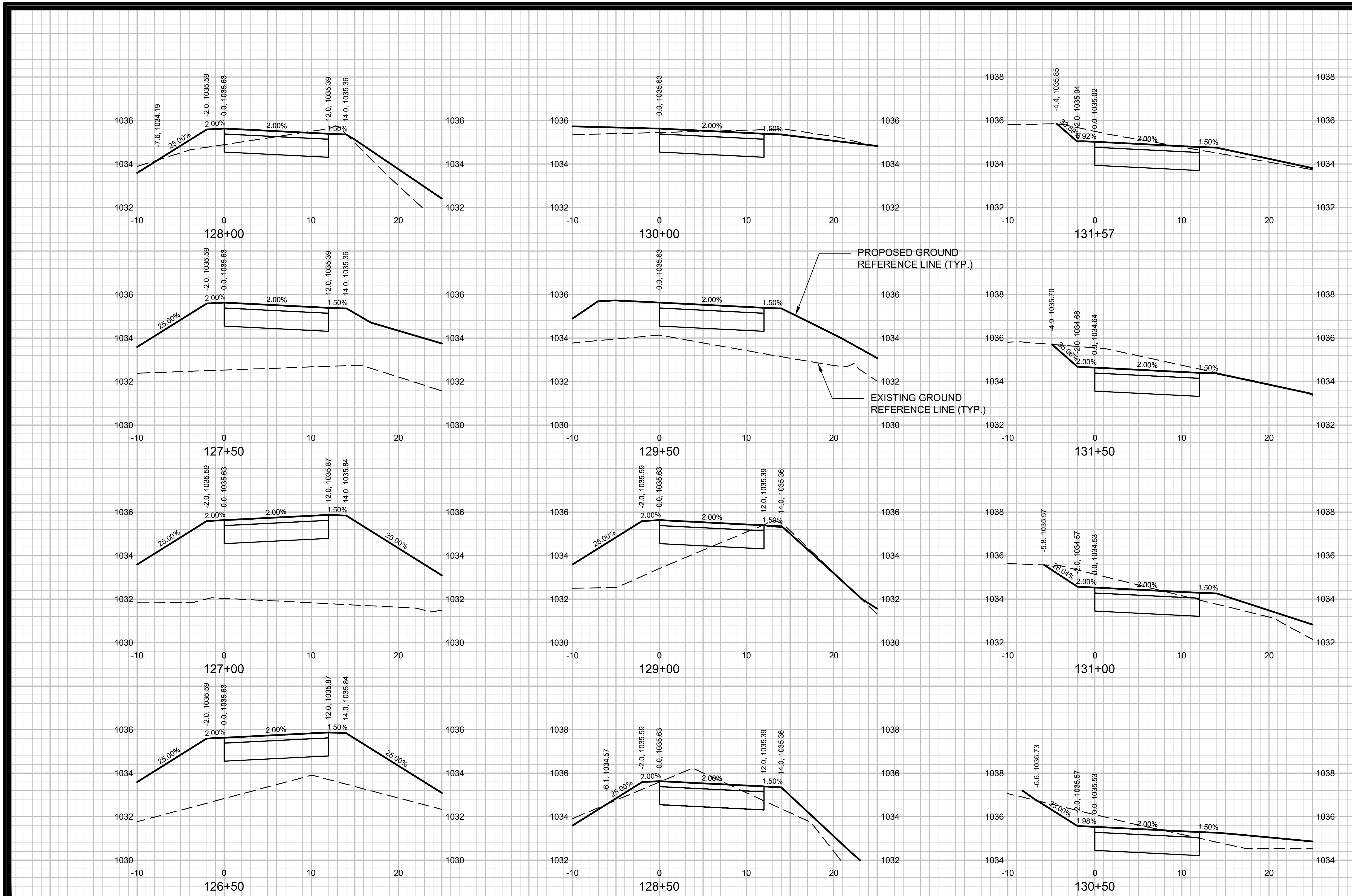
57



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CITY OF MADISON

CONTRACT NO: 9030

MAINTENANCE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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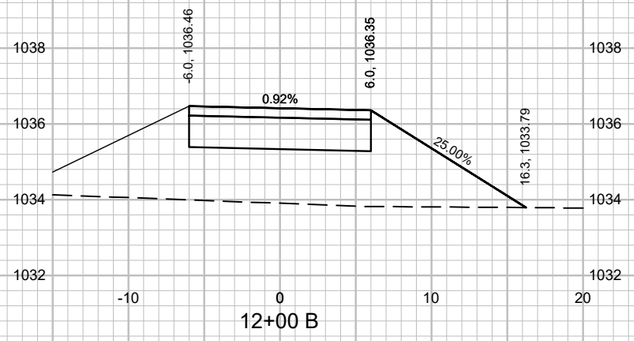
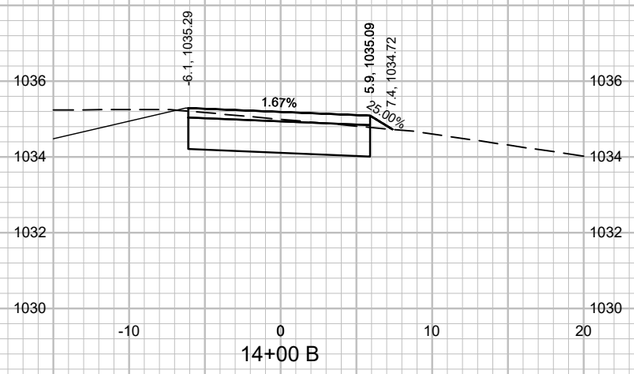
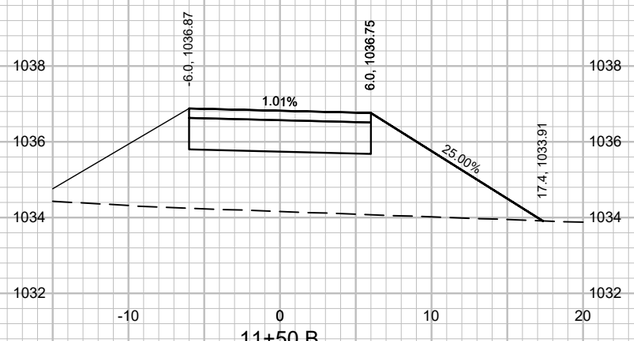
57



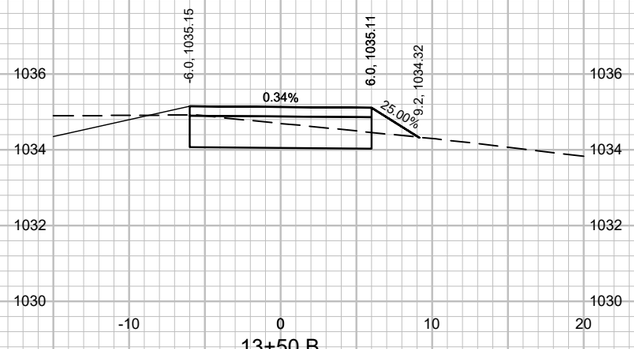
12+00 B



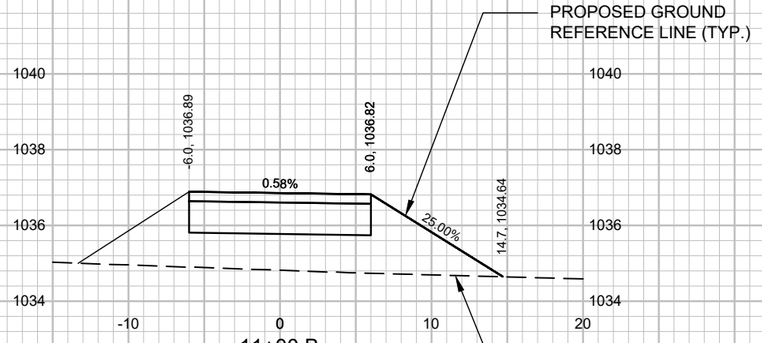
14+00 B



11+50 B



13+50 B



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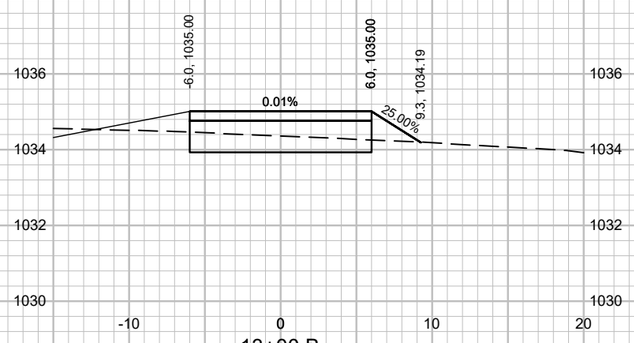
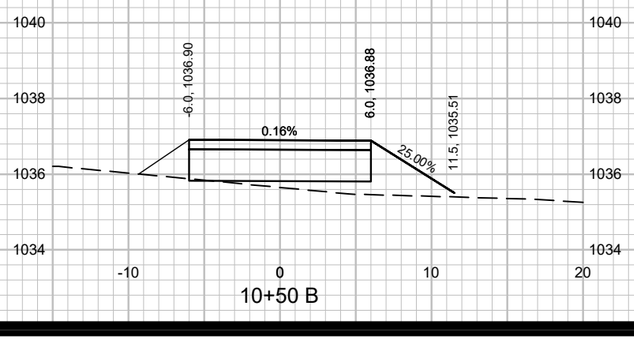


13+00 B



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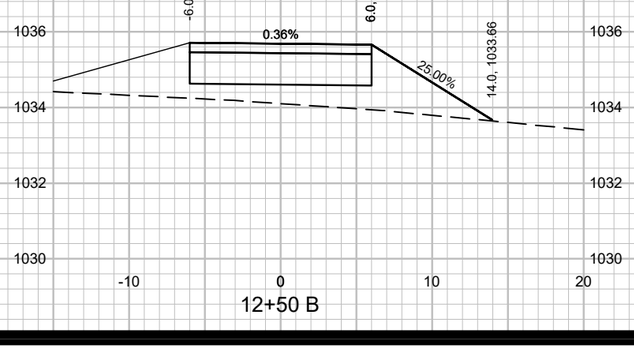
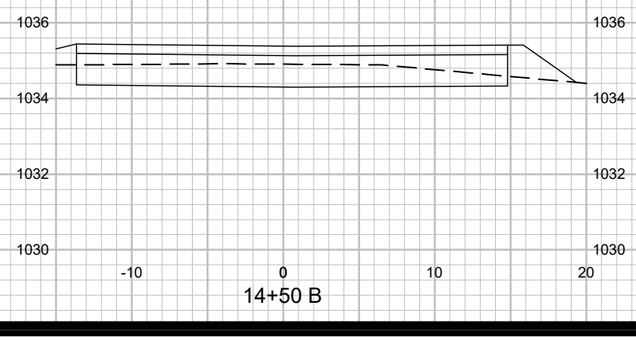


12+50 B



14+50 B

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59

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MAINTENANCE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

CONTRACT NO: 9030

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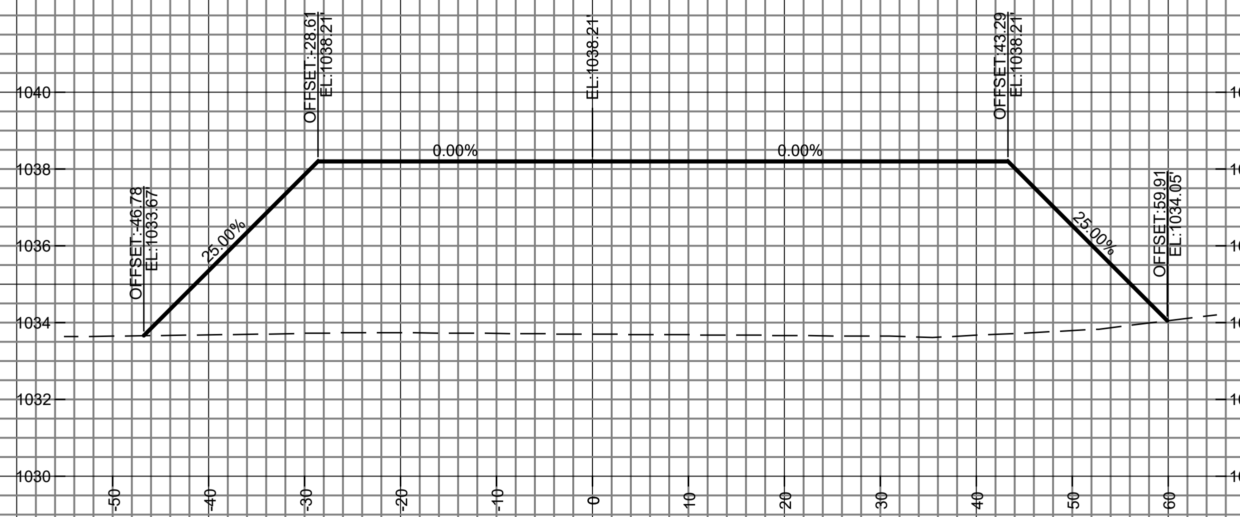
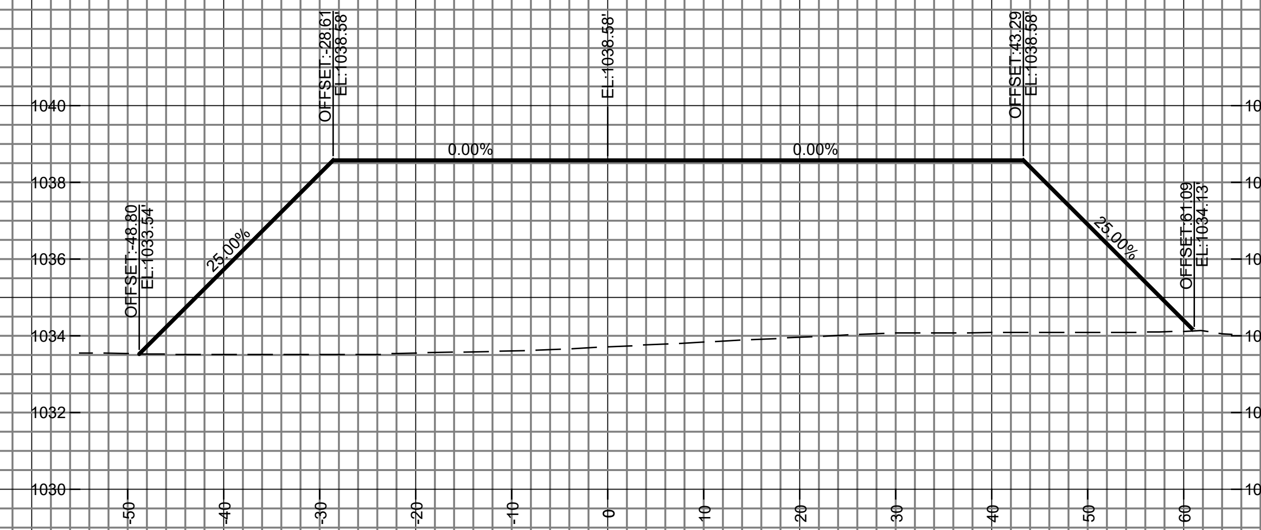


101+00.00



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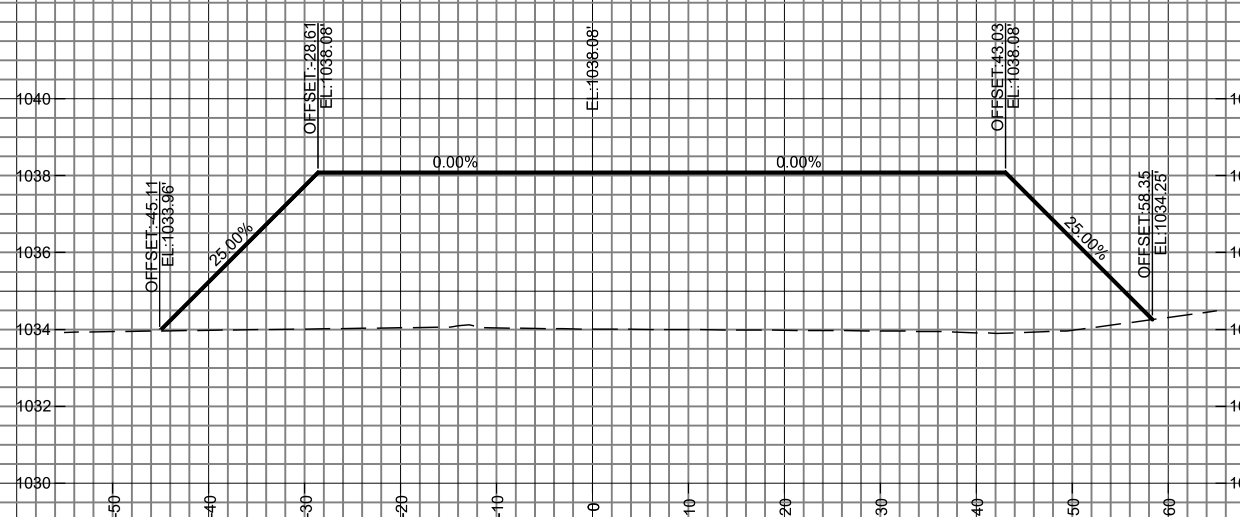

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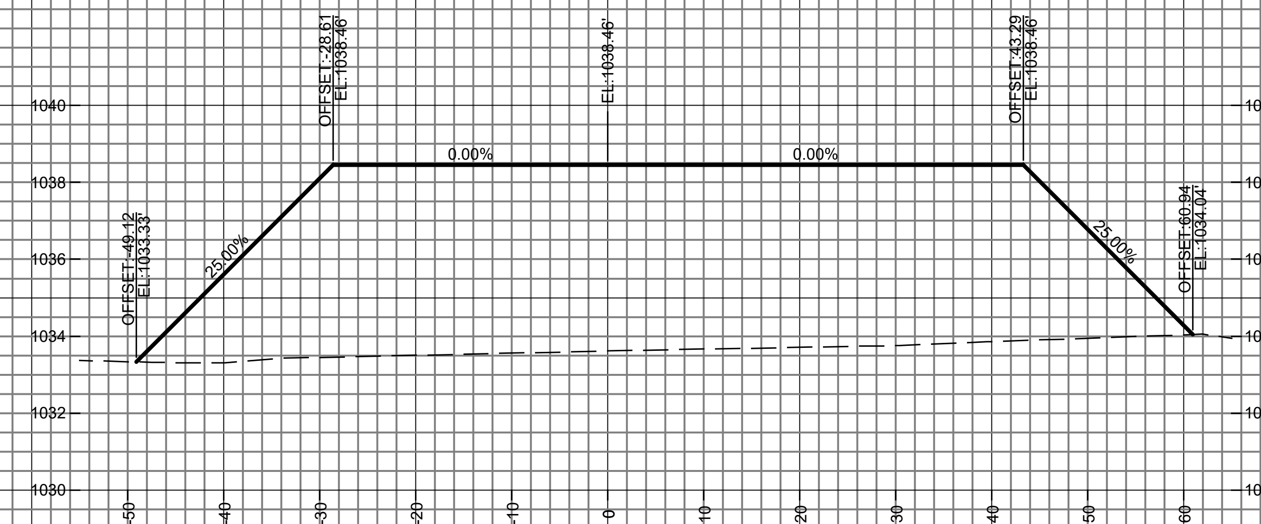

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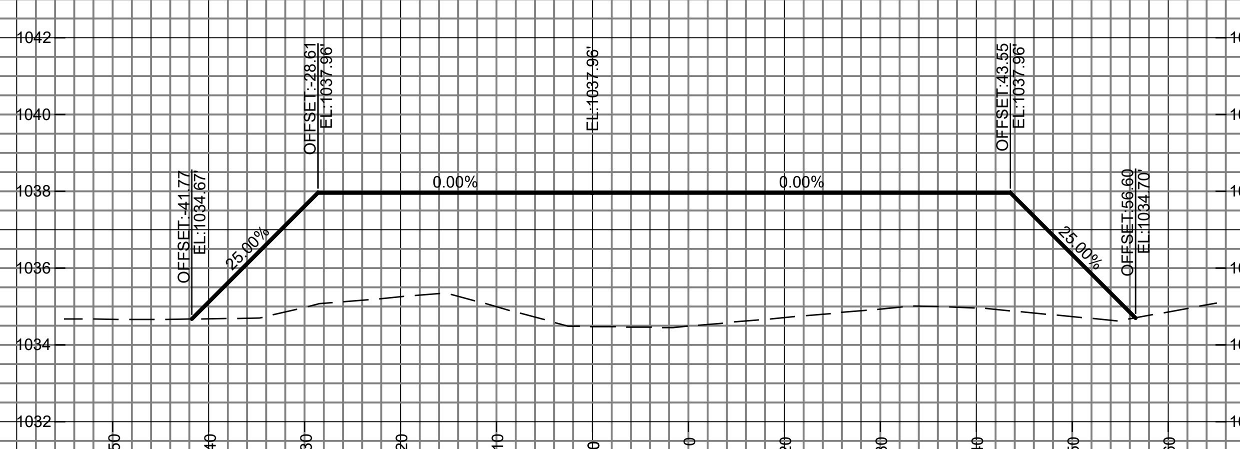

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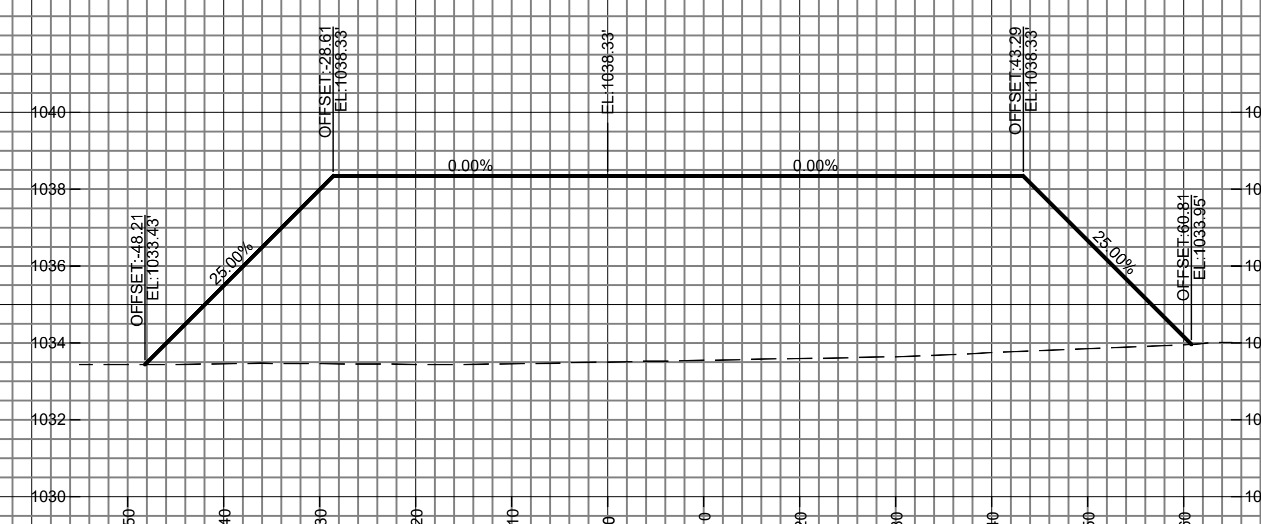

101+25.00

BLUE HARVEST LANE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

S:\MAD\1000--1099\1020\129\Correspondence\Owner\2022-12-08 BHL Subgrade surface, corridor, San. Pipe Network, TOR.dwg

CITY OF MADISON

CONTRACT NO.

1020.129

9030

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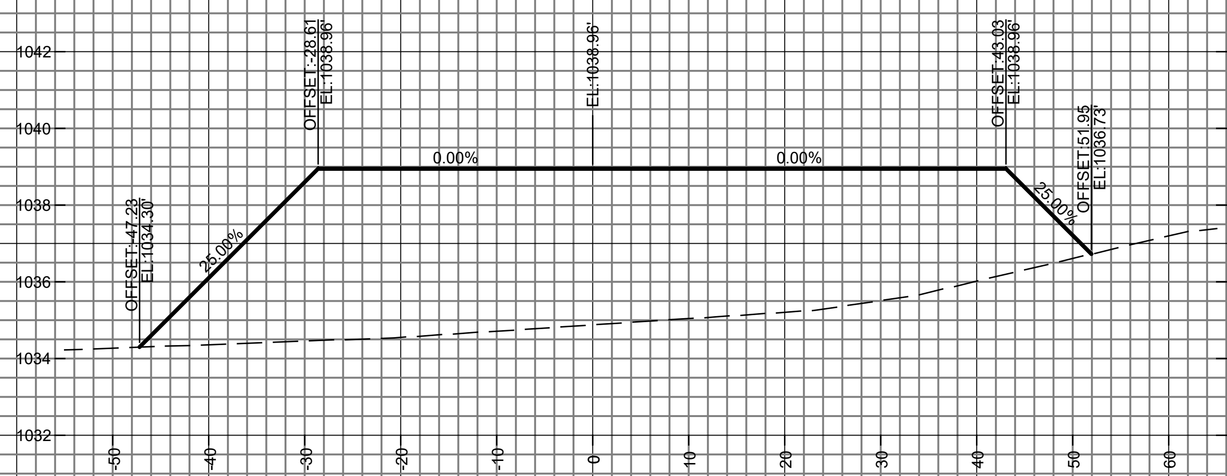
1020.129 60



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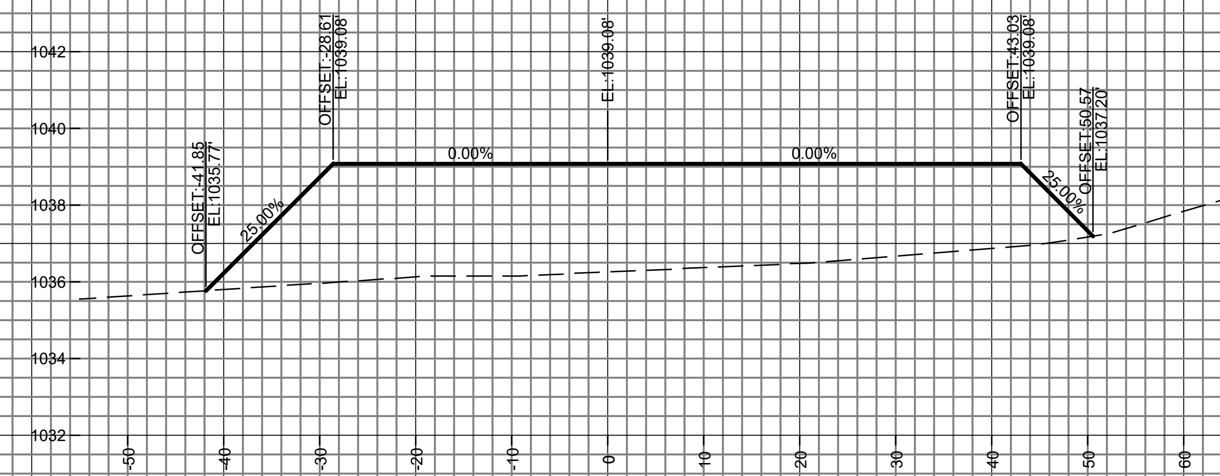

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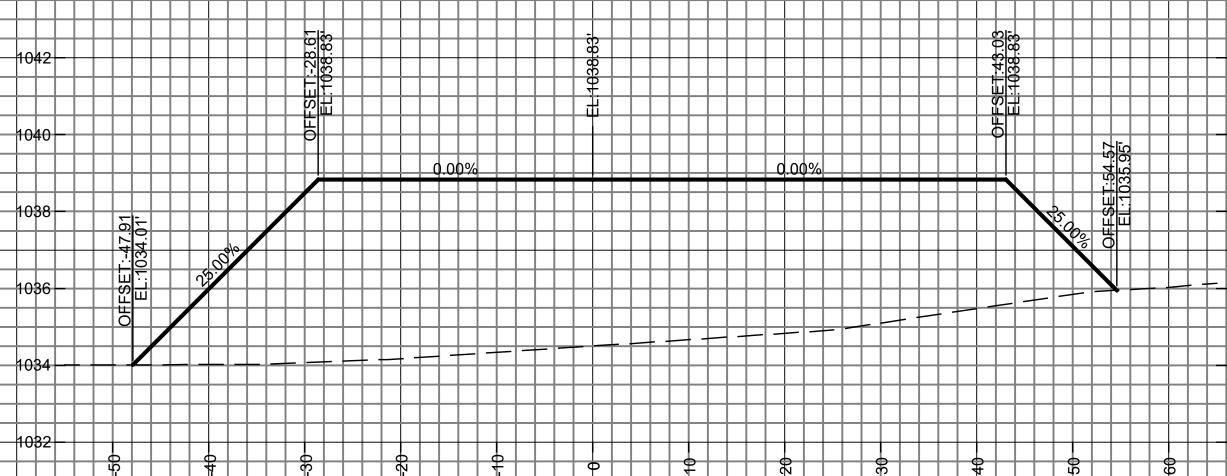

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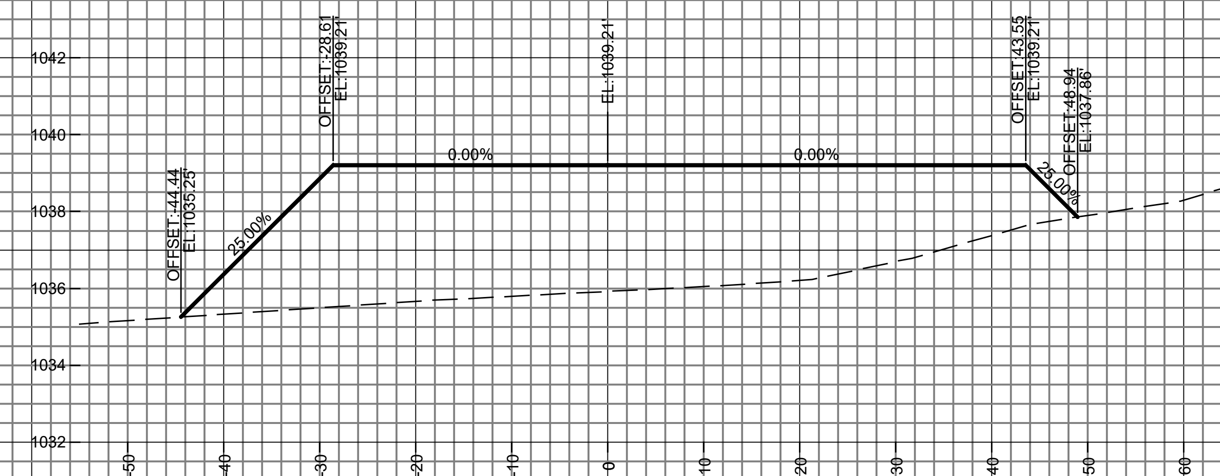

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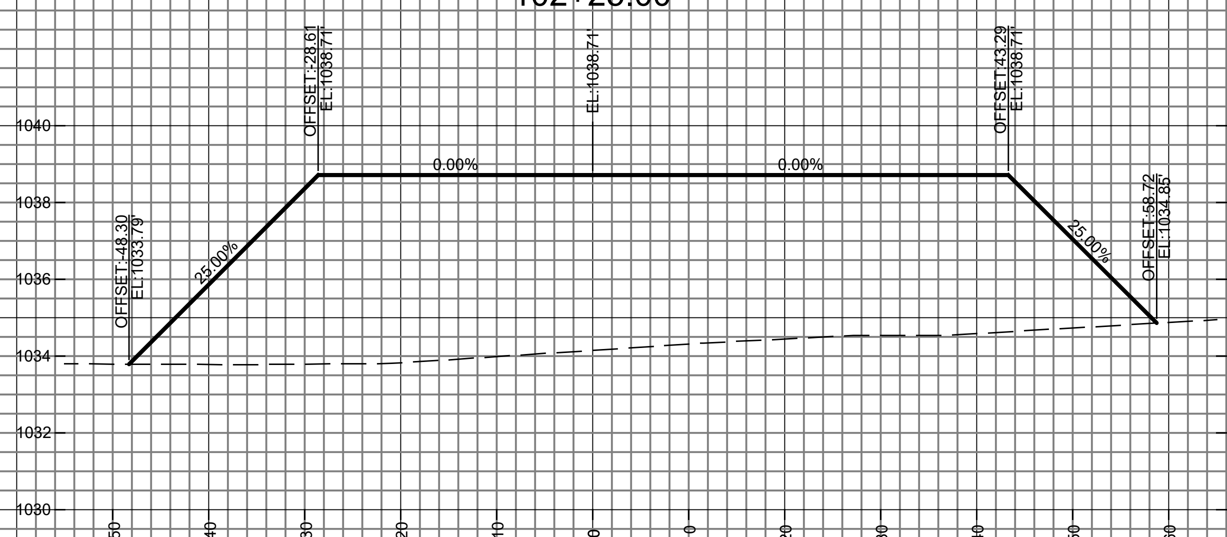

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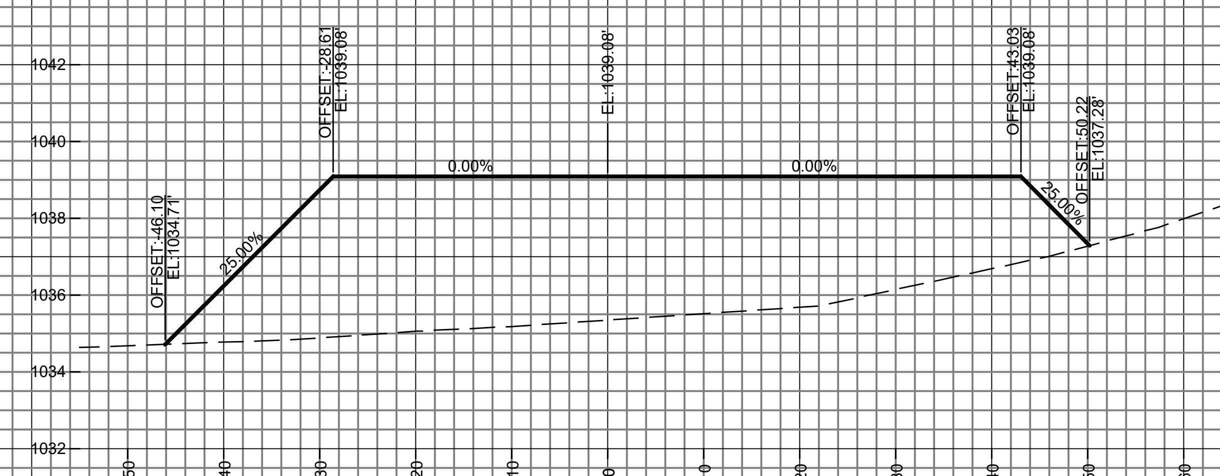

102+75.00

BLUE HARVEST LANE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

1020.129

CONTRACT NO. 9030

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1020.129 61

CITY OF MADISON WISCONSIN

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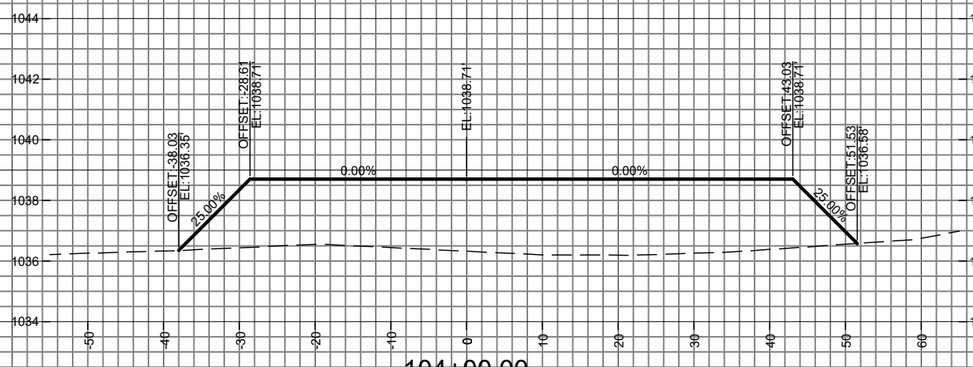
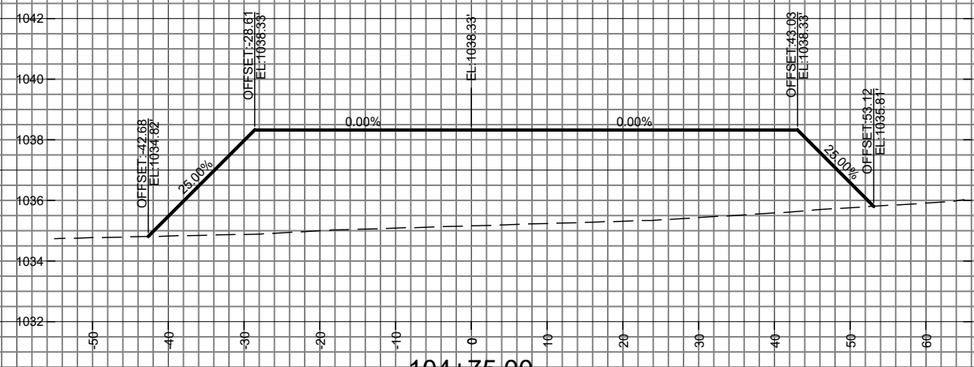
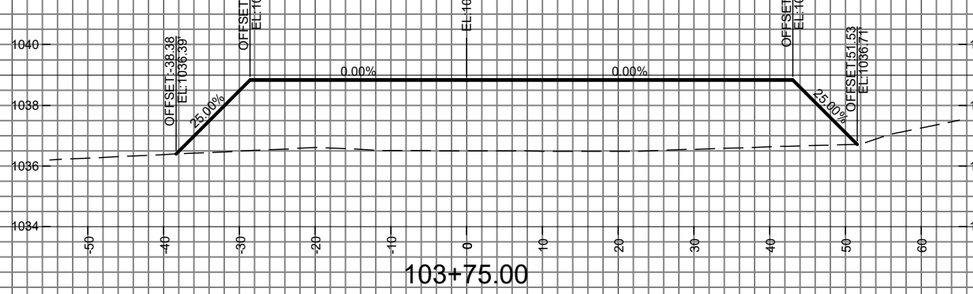
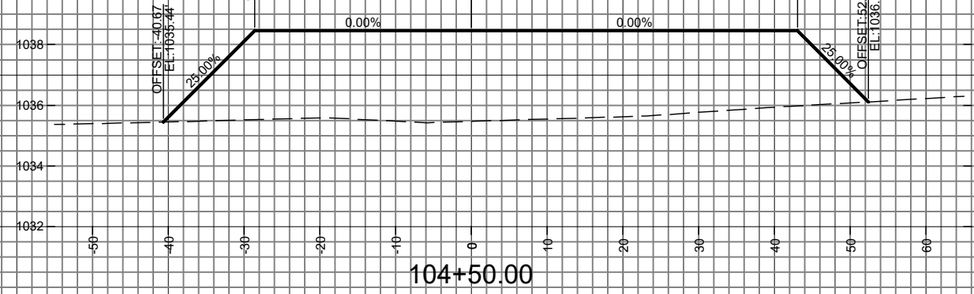
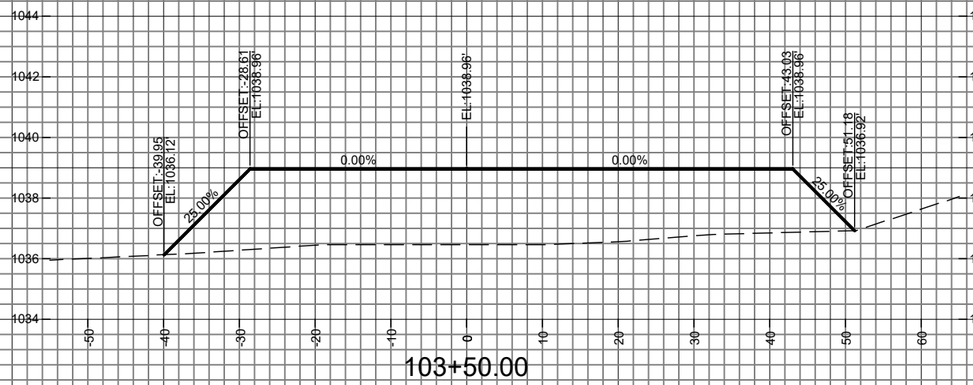
61

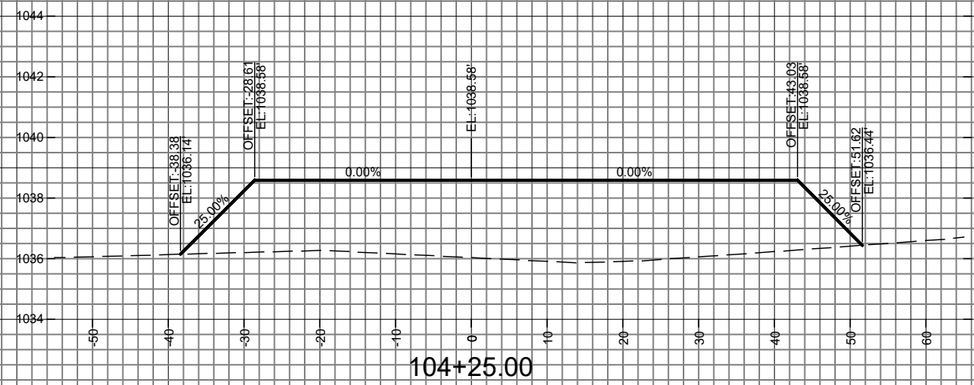












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CITY OF MADISON

9030

BLUE HARVEST LANE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

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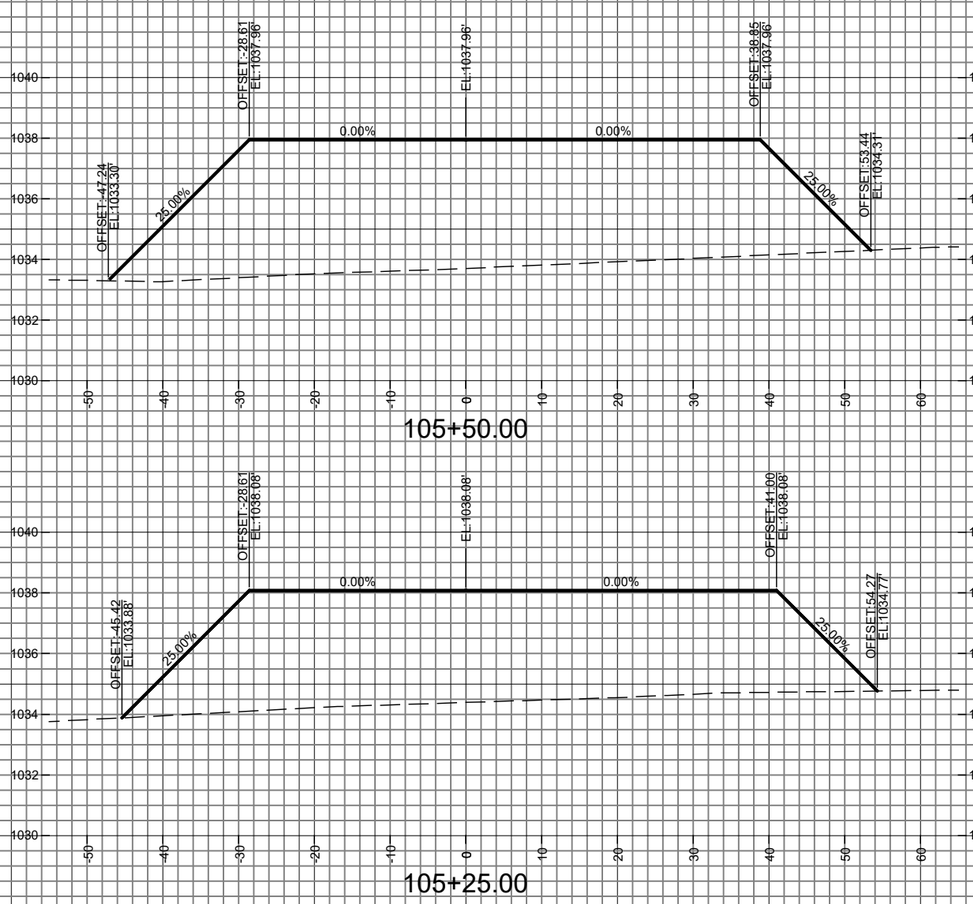
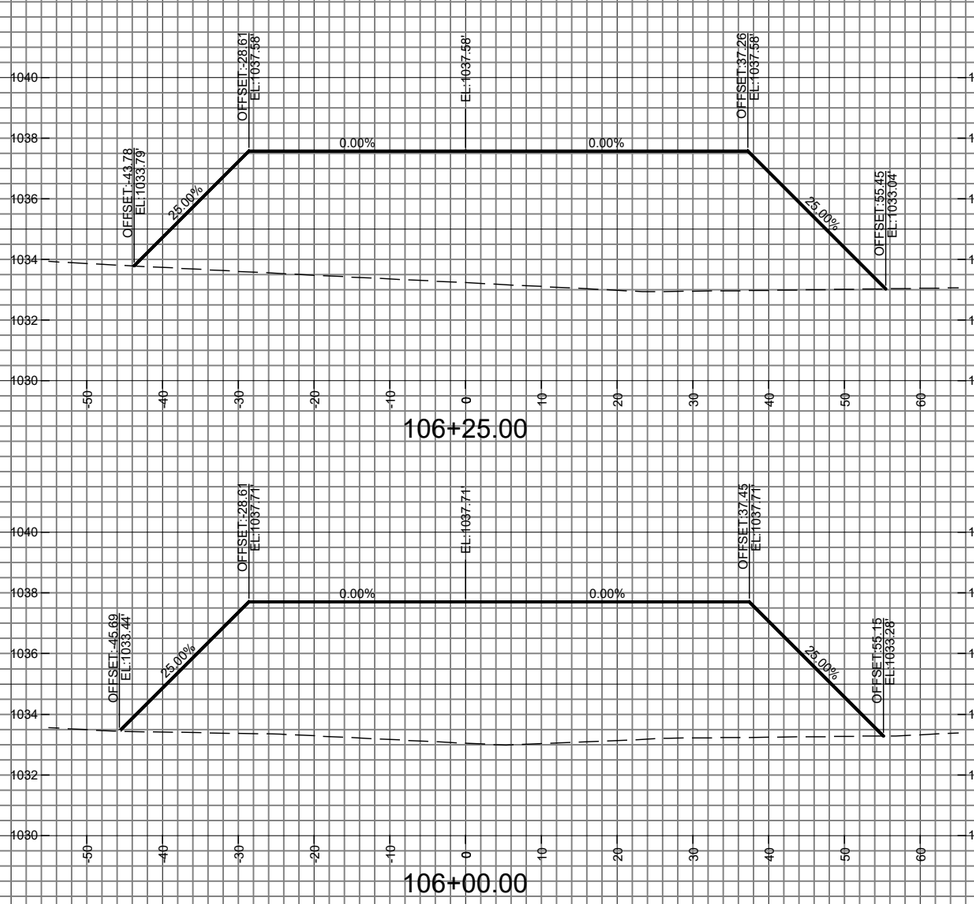
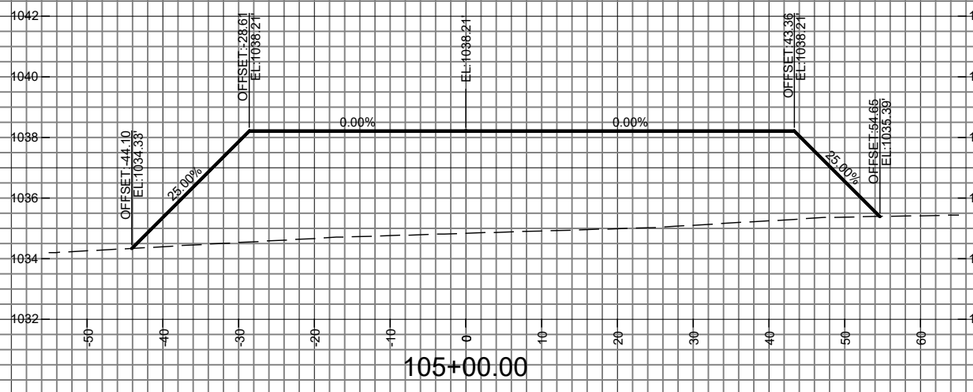
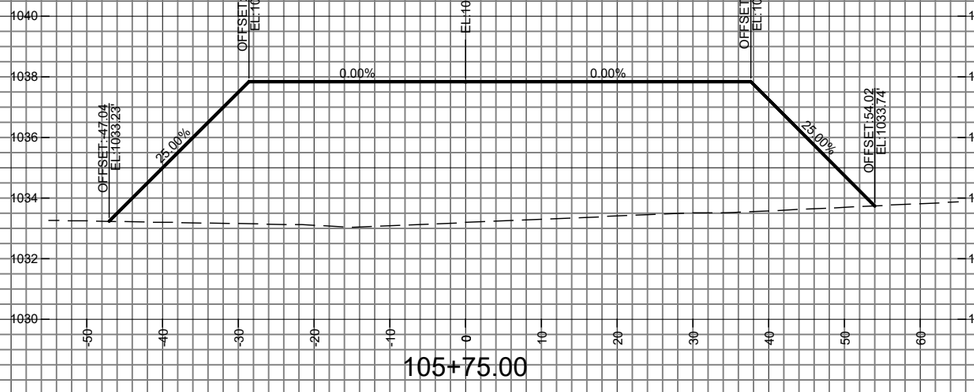
62









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BLUE HARVEST LANE CROSS SECTIONS
LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON
9030

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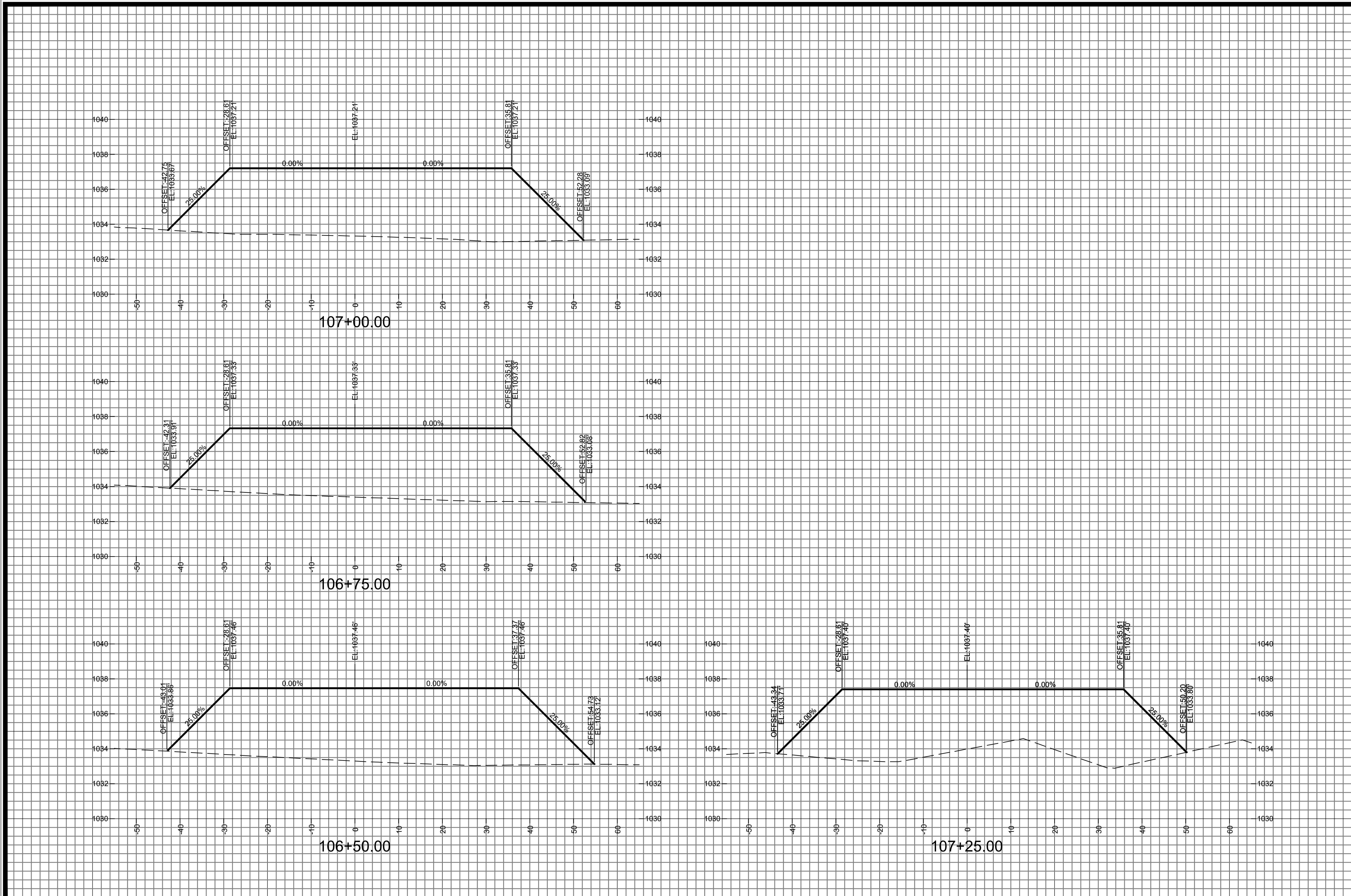

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BLUE HARVEST LANE CROSS SECTIONS

LOWER BADGER MILL CREEK FLOOD MITIGATION

CITY OF MADISON

1020.129

CONTRACT NO. 9030

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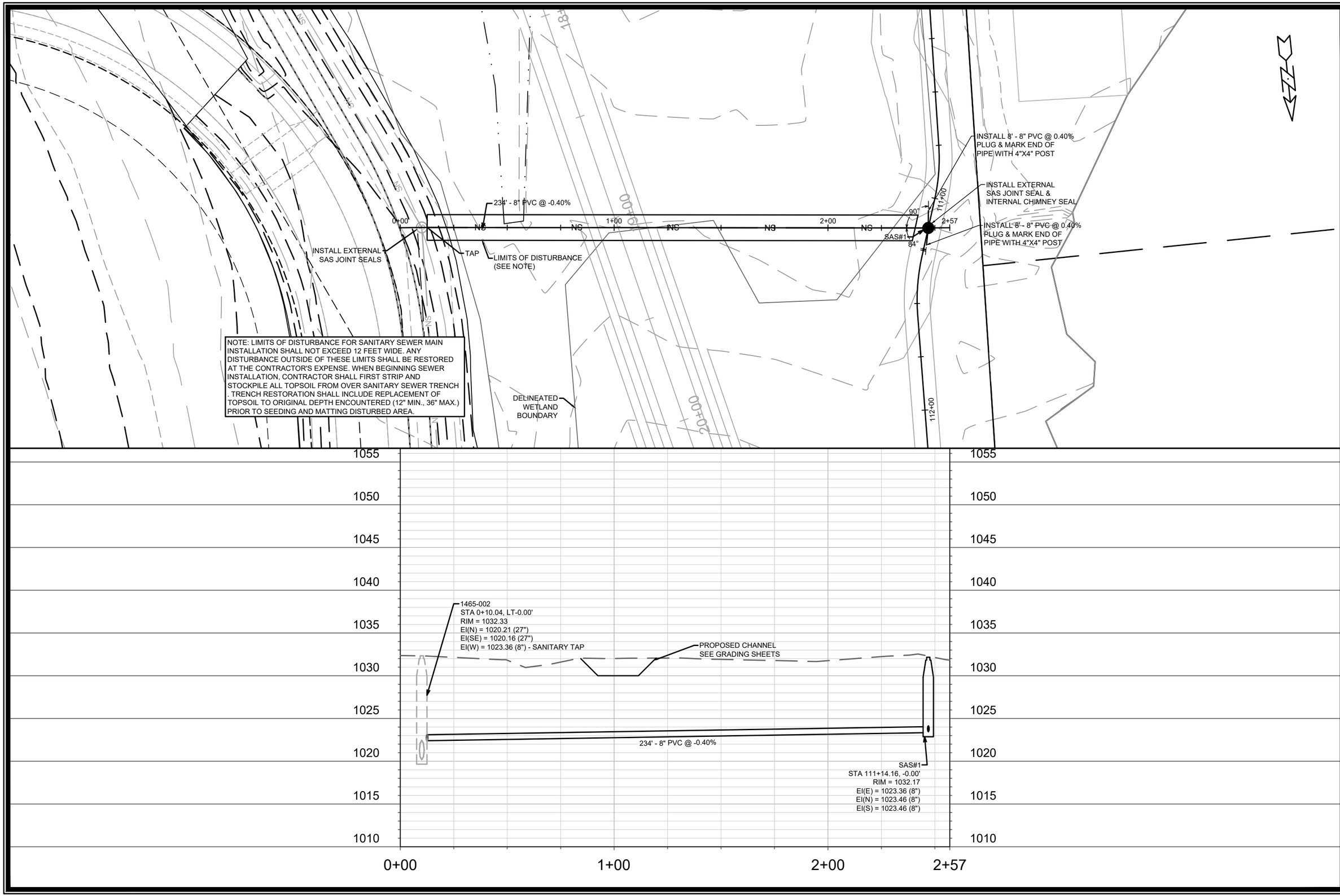
64



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11063

MADISON, WI

CONTRACT NO: 9030

SAN-1

LOWER BADGER MILL CREEK FLOOD MITIGATION

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11063

65

SANITARY SEWER SCHEDULE

LOWER BADGER MILL CREEK PONDS	SHEET NO.
PROJECT NO. 11063	66
SANITARY SEWER SCHEDULE	
CITY OF MADISON	

PROPOSED SANITARY STRUCTURES

SAS NO.	STATION	LOCATION (OFFSET)	TOP OF CASTING	E.I.	DEPTH	NOTES
MAINTENANCE PATH						
SAS#1	111+14.16 'MP'	CL	1032.17	1023.36	8.81	[1]; [2]

PROPOSED SANITARY PIPES

FROM (DNSTM)	TO (UPSTM)	DWNSTRM E.I.	UPSTRM E.I.	PLAN LGTH (FT)	SLOPE (%)	PIPE SIZE	PVC TYPE	NOTES
MAINTENANCE PATH								
EX SAS 1465-002	SAS#1	1022.42	1023.36	234	0.40%	8"	SDR-35	-

SANITARY STRUCTURE ADJUSTMENTS

SAS NO.	STATION	LOCATION (OFFSET)	EX. TOC ELEV.	PROP. ELEV.	ADJUST. DIFF.	NOTES
EX SAS 1465-002	0+10.00	CL	1032.33	1035.59	3.26	[2]; [3]

SPECIFIC NOTES:

[1] INSTALL INTERNAL CHIMNEY SEAL
[2] INSTALL EXTERNAL JOINT WRAPS
[3] SANITARY SEWER TAP