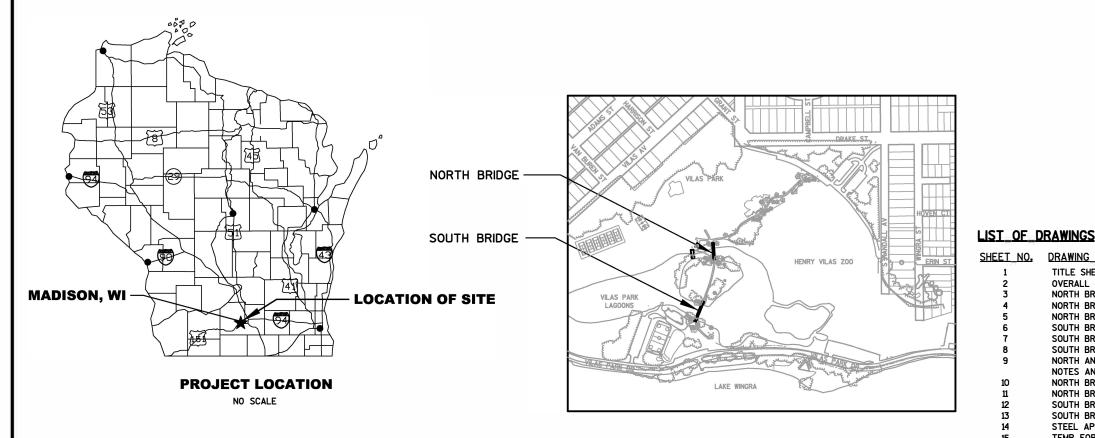
VILAS PARK - LAGOON BRIDGE REPLACEMENTS

CONTRACT 8062 MUNIS #17185-51-130



PATH DESIGN BY:

STRUCTURAL DESIGN BY:

DRAWING TITLE

TITLE SHEET

SHEET NO.

2	OVERALL SITE PLAN
3	NORTH BRIDGE DEMOLITION PLAN
4	NORTH BRIDGE SITE PLAN
5	NORTH BRIDGE STRUCTURE PLAN
6	SOUTH BRIDGE DEMOLITION PLAN
7	SOUTH BRIDGE SITE PLAN
8	SOUTH BRIDGE STRUCTURE PLAN
9	NORTH AND SOUTH BRIDGES CROSS SECTIONS,
	NOTES AND DETAILS
10	NORTH BRIDGE ABUTMENT DETAILS-1
11	NORTH BRIDGE ABUTMENT DETAILS-2
12	SOUTH BRIDGE ABUTMENT DETAILS-1
13	SOUTH BRIDGE ABUTMENT DETAILS-2
14	STEEL APPROACH RAILING DETAILS
15	TEMP. FORD CROSSING DETAILS
100	PATH AND SITE WORK SHEET INDEX
101	PATH SECTION ONE - DEMOLITION
102	PATH SECTION TWO - DEMOLITION
103	PATH SECTION THREE - DEMOLITION
104	PATH SECTION FOUR - DEMOLITION
201	PATH SECTION ONE - ALIGNMENT
202	PATH SECTION TWO - ALIGNMENT
203	PATH SECTION THREE - ALIGNMENT
204	PATH SECTION FOUR - ALIGNMENT
301	PATH SECTION ONE - GRADING
302	PATH SECTION TWO - GRADING
303	PATH SECTION THREE - GRADING
304	PATH SECTION FOUR - GRADING
401	PATH SECTION ONE - SITE RESTORATION
402	PATH SECTION TWO - SITE RESTORATION
403	PATH SECTION THREE - SITE RESTORATION
404	PATH SECTION FOUR - SITE RESTORATION
501	PATH VERTICAL ALIGNMENTS
502	PATH VERTICAL ALIGNMENTS
503	PATH VERTICAL ALIGNMENTS
504	PATH VERTICAL ALIGNMENTS
505	PATH VERTICAL ALIGNMENTS
601	PATH AND BOLLARD DETAILS
701	PATH QUANTITY CALCULATIONS

DRAFTING_SYMBOLS

KEY/SPECIFIC NOTE CALL-OUT

EXISTING OBJECTS ARE SCREENED

EXISTING OBJECTS TO BE DEMOLISHED ■

→ HIDDEN OBJECT

ARCHITECTURAL_SYMBOLS

EARTH

WATER SURFACE

TOPOGRAPHICAL SYMBOLS

SOIL BORING

EXISTING DECIDUOUS TREE SILT FENCE

BENCH MARK TURBIDITY BARRIER

CONSTRUCTION ACCESS ROUTE



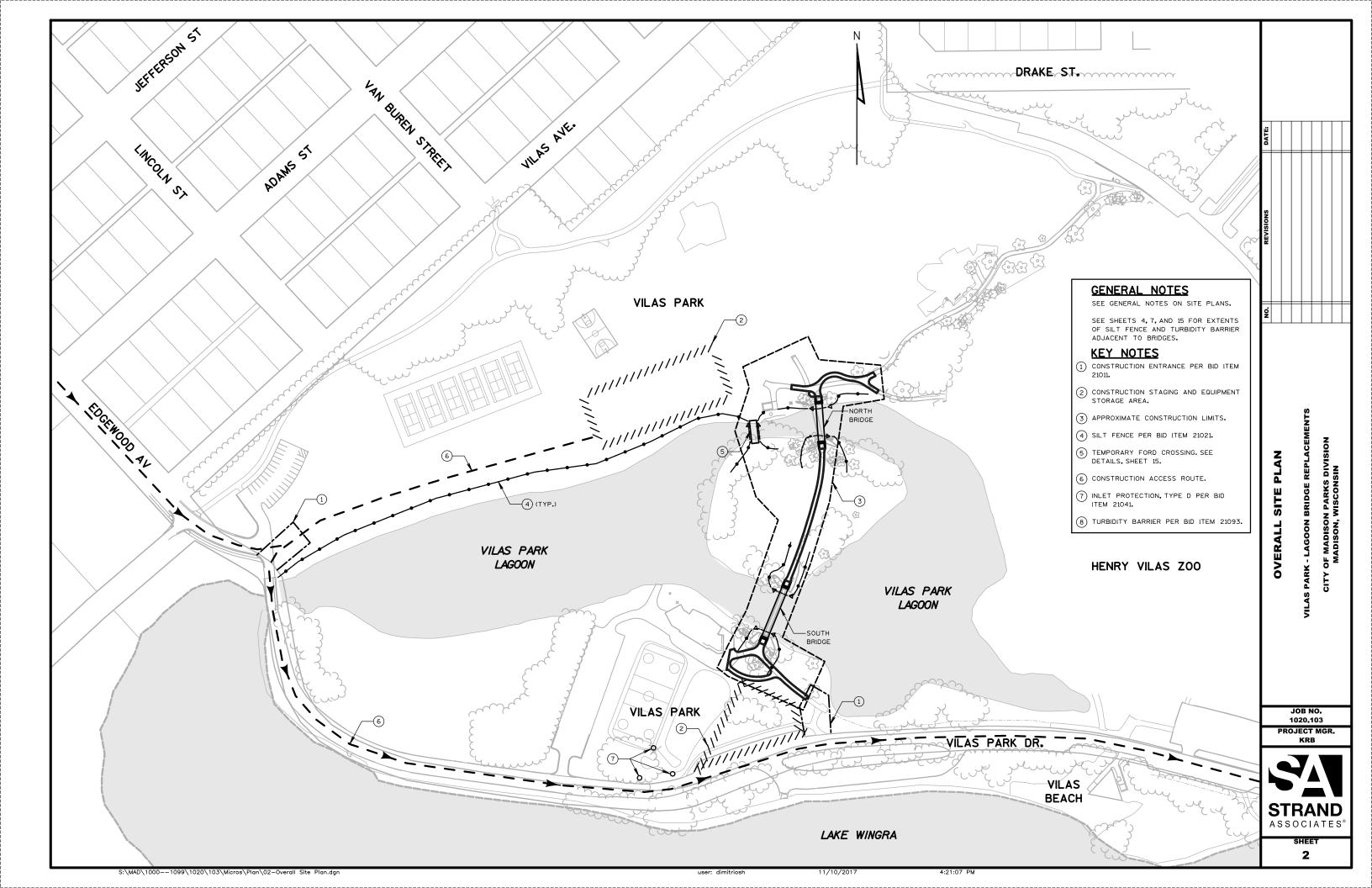
CONSTRUCTION STAGING AND STORAGE AREA

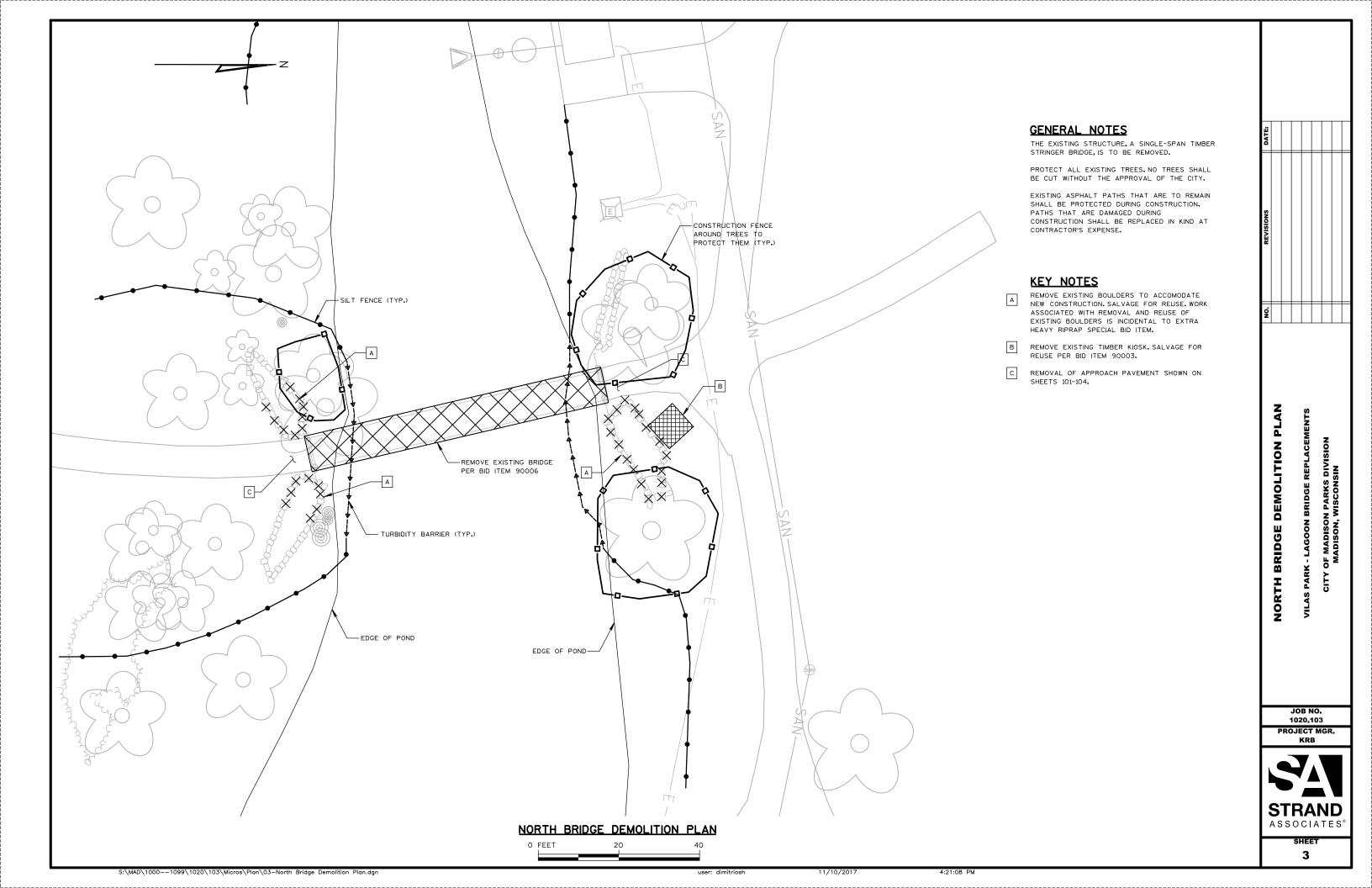
CONSTRUCTION FENCE (PLASTIC)

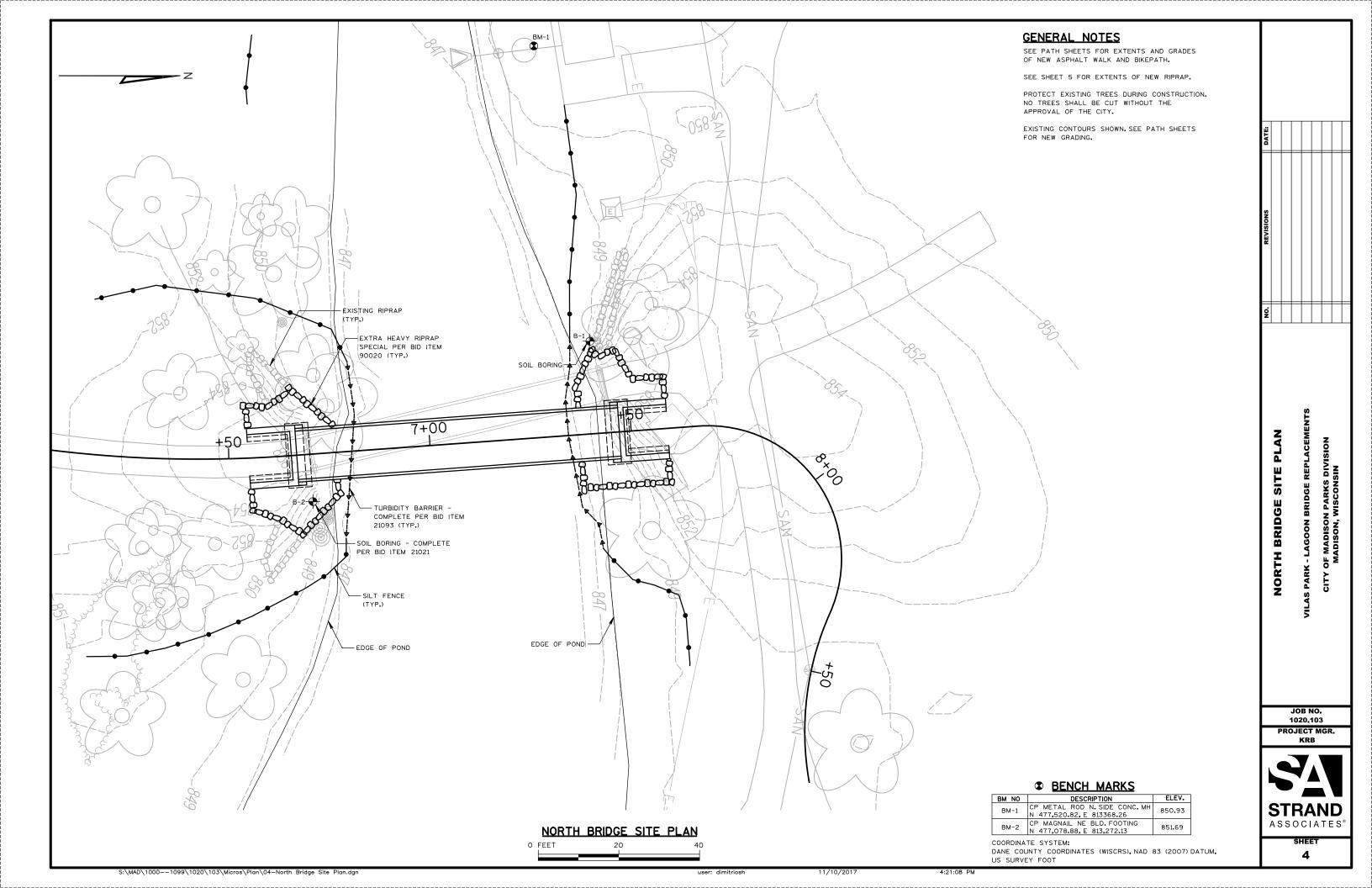


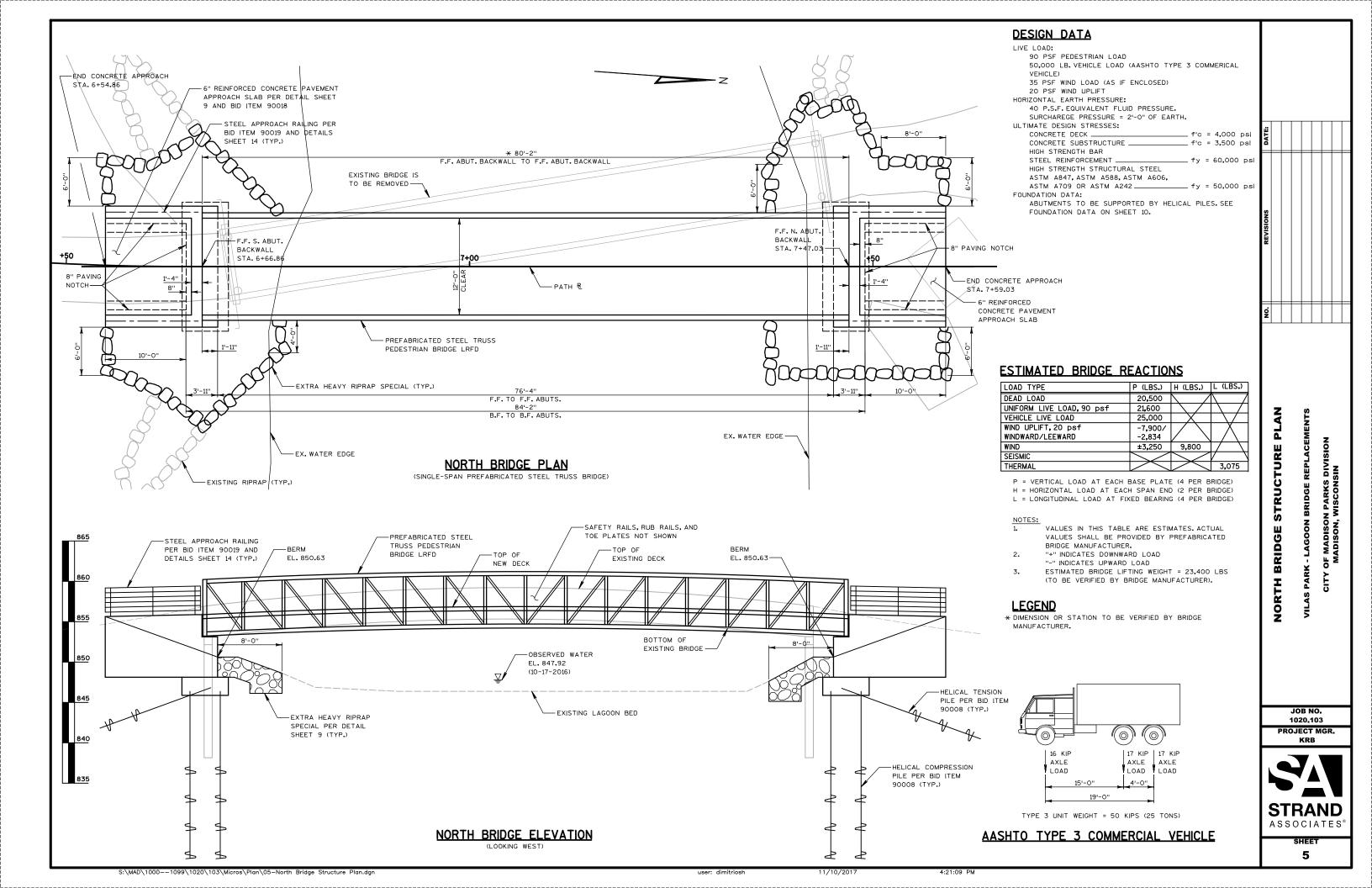
JOB NO. 1020.103

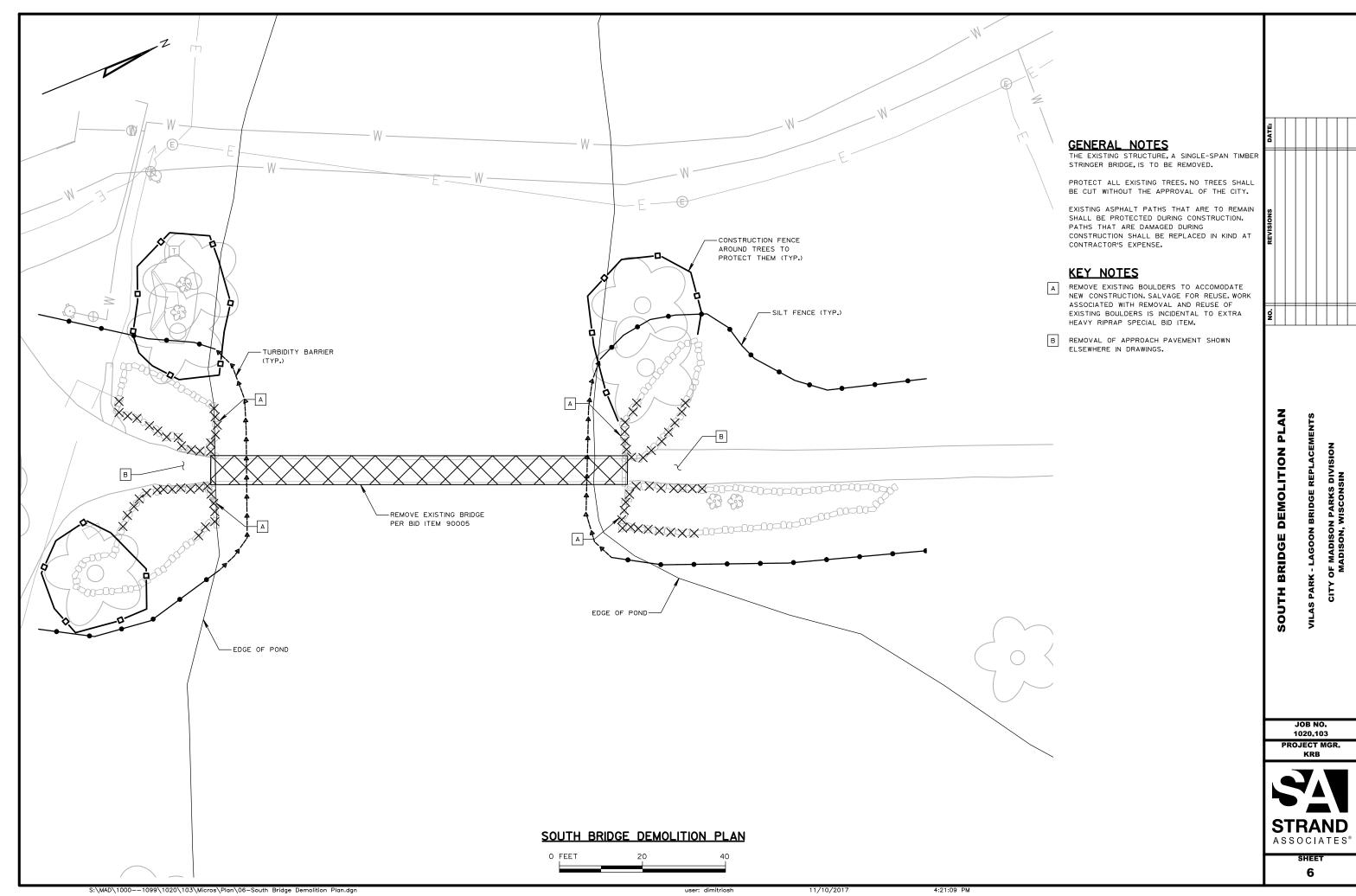
910 West Wingra Drive Madison, WI 53715 608-251-4843 608-251-8655 fax www.strand.com

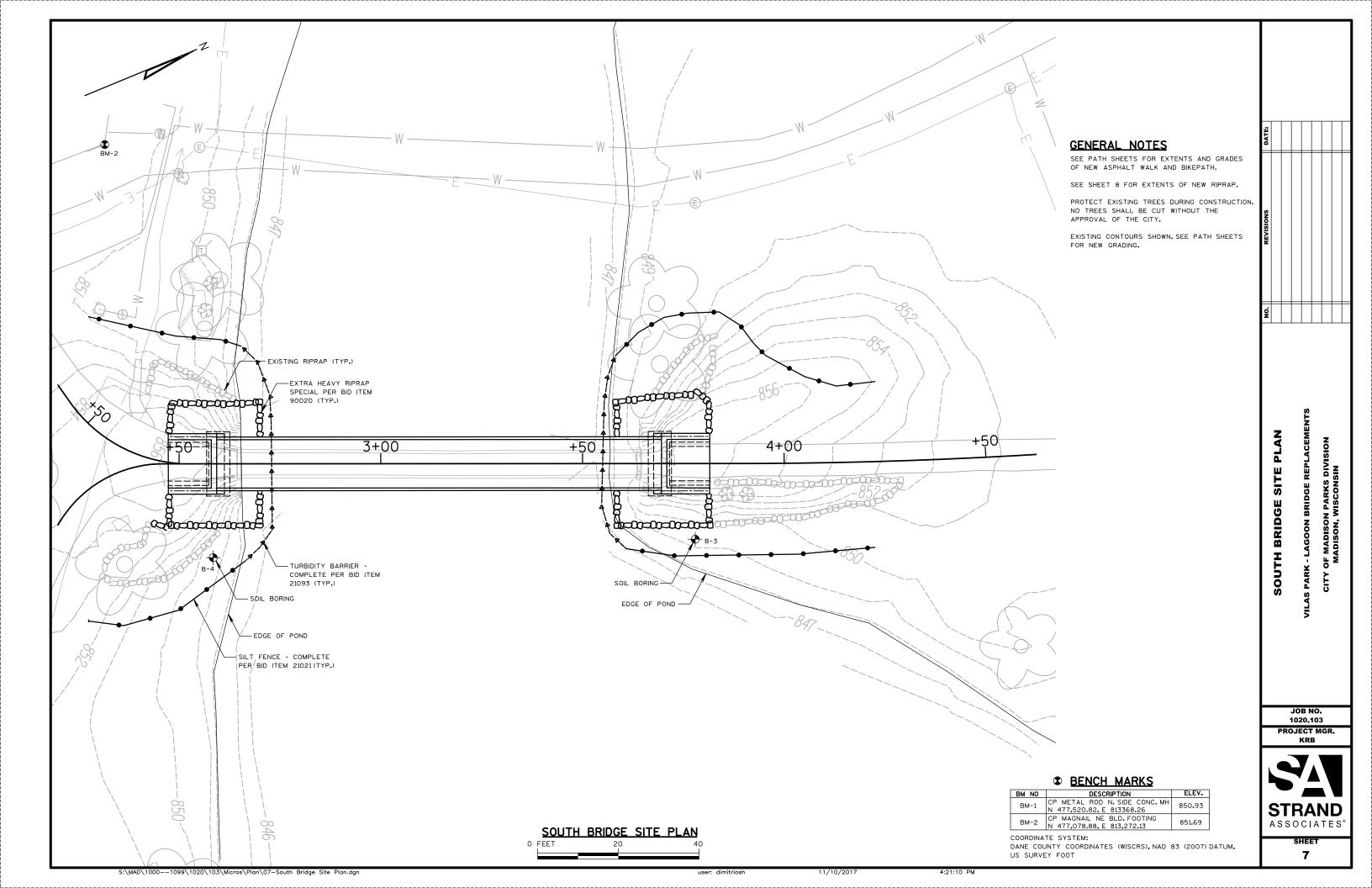


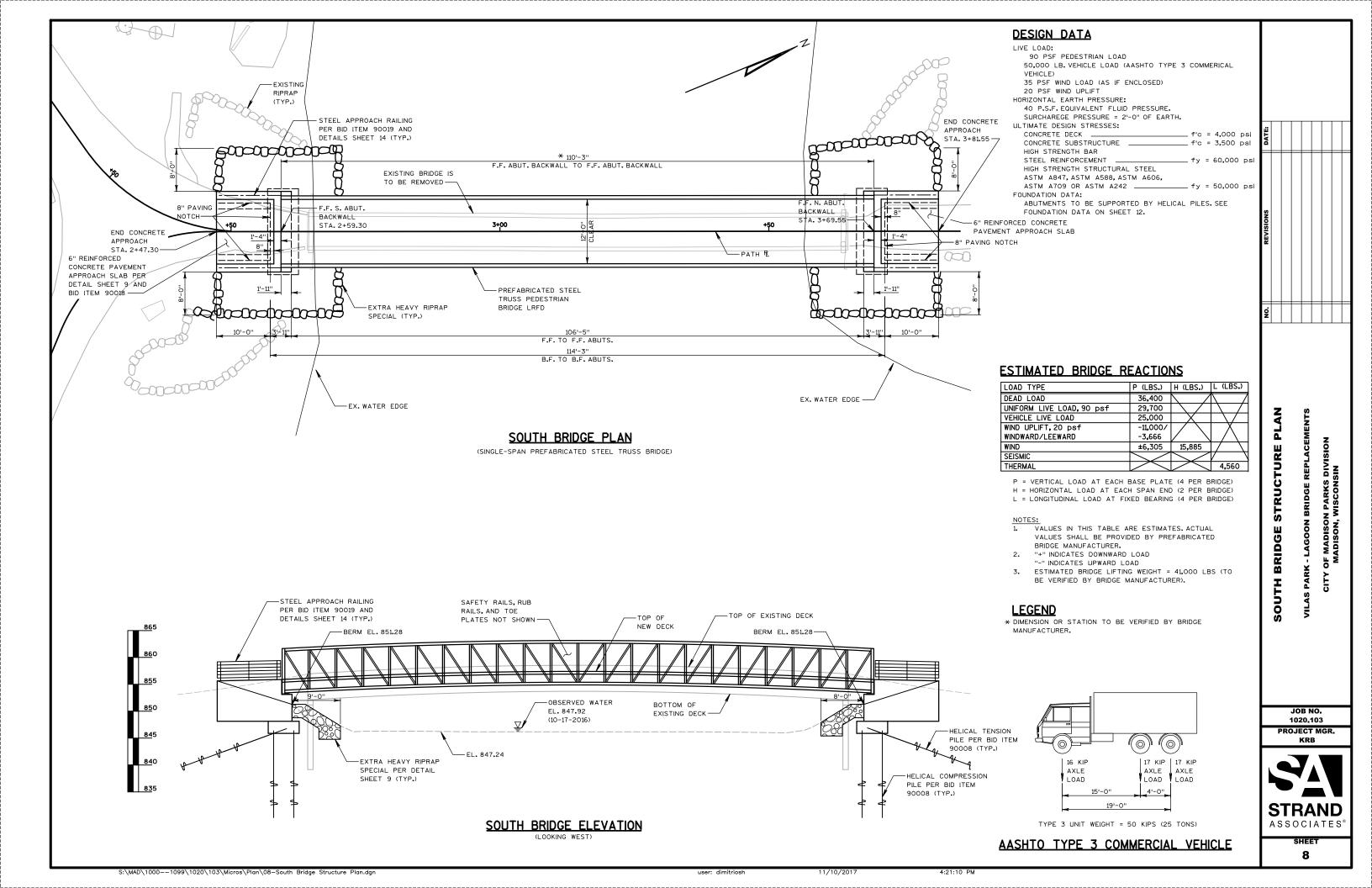


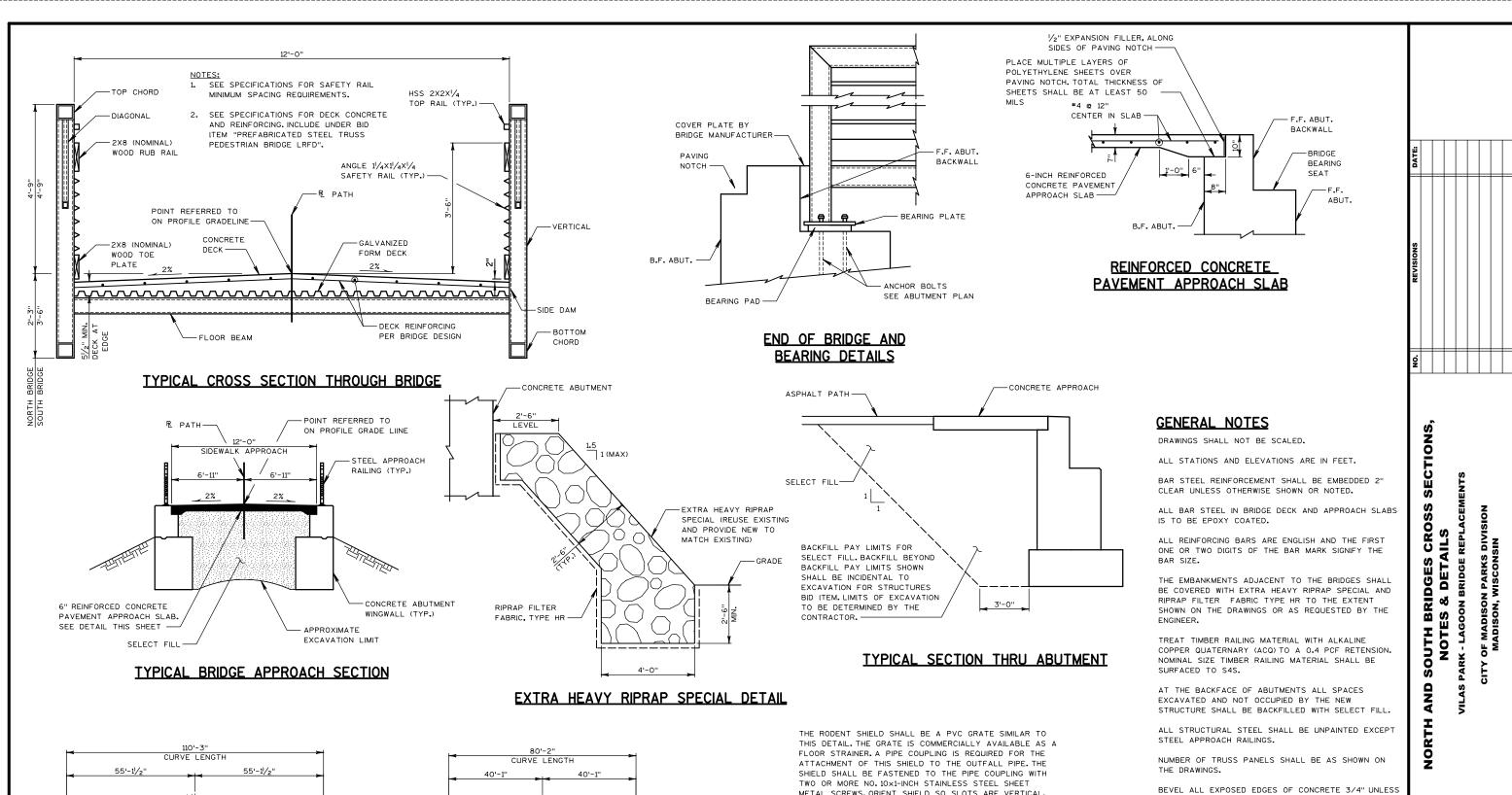












+5.00% 0 -5.00%

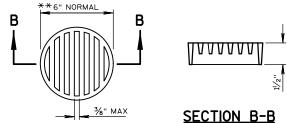
SOUTH BRIDGE

+5.00% 0-5.00%

NORTH BRIDGE

**NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT

METAL SCREWS. ORIENT SHIELD SO SLOTS ARE VERTICAL. RODENT SHIELD INCIDENTAL TO PIPE UNDERDRAIN BID ITEM.



RODENT SHIELD

INTO A PIPE COUPLING.

1020.103 ROJECT MGR.

ASSOCIATES'

9

ALL ELEVATIONS SHOWN ARE BASED ON NAVD88

DATUM.

COVER PLATES BETWEEN BRIDGE AND ABUTMENT BACKWALL TO BE PROVIDED BY BRIDGE MANUFACTURER.

THE SUPERSTRUCTURE SHALL BE ANCHORED TO THE FOUNDATIONS IN A MANNER TO:

PROVIDE PROTECTIVE SURFACE TREATMENT TO TOP SURFACE OF CONCRETE DECK AND APPROACHES AS

WELL AS TOP SURFACES OF ABUTMENT BODIES AND

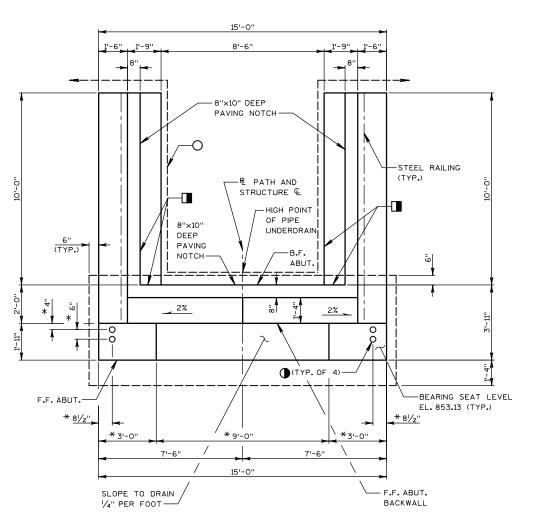
- PREVENT HORIZONTAL TRANSLATION OF THE SUPERSTRUCTURE PERPENDICULAR TO THE \P OF THE

- ALLOW THERMAL MOVEMENTS OF THE

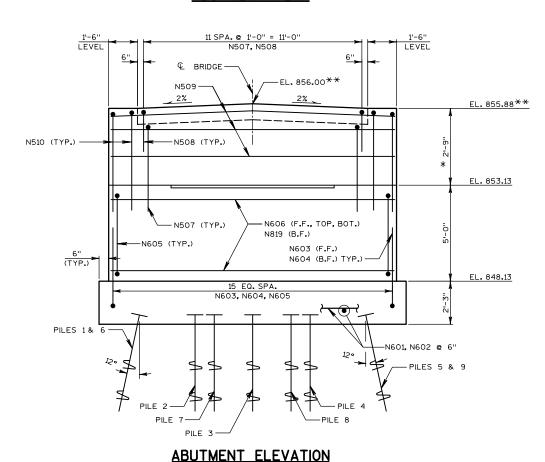
SHOWN OTHERWISE.

SUPERSTRUCTURE.

PROFILE GRADE LINE PATH



ABUTMENT PLAN



ABUTMENT PILE PLAN

R PATH

STRUCTUR

HELICAL TENSION PILES

F.F. ABUT.

NOTES

SEE SHEET 11 FOR REINFORCING DETAILS.

SEE SHEET 14 FOR RAILING DETAILS.

ABUTMENTS TO BE SUPPORTED BY HELICAL PILES. SEE FOUNDATION DATA THIS SHEET.

LEGEND

- E BACK ROW HELICAL

₱ FRONT ROW HELICAL

COMPRESSION PILES.

COMPRESSION PILES

- * DIMENSION OR ELEVATION TO BE VERIFIED OR SUPPLIED BY BRIDGE MANUFACTURER.
- O PIPE UNDERDRAIN 6" WRAPPED. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF UNDERDRAIN. SEE RODENT SHIELD DETAIL ON SHEET 9.
- 18" RUBBERIZED MEMBRANE WATERPROOFING PER BID ITEM 90014. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ** ELEVATION GIVEN AT F.F. OF ABUTMENT BACKWALL.
- (ASTM F1554 GRADE 36 GALVANIZED ANCHOR BOLT WITH (2) NUTS AND (1) WASHER EACH END, EMBED INTO CONCRETE 2'-0" (TO TOP OF TOP NUT.). BOLT DIAMETER AND PROJECTION HEIGHT BY BRIDGE MANUFACTURER. COST IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES" BID ITEM.

FOUNDATION DATA

HELICAL PILE GROUP SHALL BE DESIGNED FOR THE FOLLOWING 2 SERVICE LOAD CASES:

			L	VB	VF
LOAD	CASE	1	48 KIPS	120 KIPS	100 KIPS
LOAD	CASE	2	48 KIPS	98 KIPS	78 KIPS

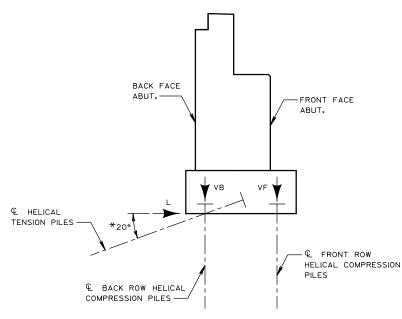
WHERE:

- L = TOTAL LATERAL SERVICE LOAD TO BE RESISTED BY PILES.
- VB = TOTAL VERTICAL SERVICE LOAD TO BE RESISTED BY BACK ROW OF PILES (DOES NOT INCLUDE VERTICAL LOAD INDUCED BY HELICAL TENSION PILES)
- VF = TOTAL VERTICAL SERVICE LOAD TO BE RESISTED BY FRONT ROW OF PILES.

PILES NOTES:

PILES 1, 5, 6, AND 9 SHALL BE BATTERED 12 DEGREES FROM VERTICAL ORIENTED AWAY FROM THE PATH $^{\rm R}$ TO RESIST LATERAL WIND LOADS APPLIED PERPENDICULAR TO THE PATH $^{\rm R}$.

PILES 10, 11, 12 AND 13 ARE TENSION PILES AND SHALL BE PRE-TENSIONED TO LIMIT AXIAL SERVICE DEFLECTION LOAD TO 0.5 INCHES.



*TO BE VERIFIED BT HELICAL PILE DESIGNER.

HELICAL PILE DESIGN LOADS

DETAILS - 1

LACEMENTS

JISION

ILAS PARK - LAGOON BRIDGE REPLACEMEN CITY OF MADISON PARKS DIVISION MADISON, WISCONSIN

ABUTMENT

NORTH BRIDGE

JOB NO. 1020.103 PROJECT MGR.

STRAND ASSOCIATES*

> SHEET 10

COAT

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QUANTITY

S. ABUT. N. ABUT.

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16

16

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14

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26

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32

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14

10

6

26

26

12

6

FOOTING - HORIZ.

FOOTING - HORIZ.

LOWER BODY - VERT. - F.F.

LOWER BODY - VERT. - B.F.

LOWER BODY - VERT.

LOWER BODY - HORIZ.

PAVING NOTCH - VERT.

BACKWALL - VERT. - ENDS

WINGS - LOWER BODY - VERT.

WINGS - LOWER - HORIZ. - B.F.

WINGS - LOWER - HORIZ. - F.F.

WINGS - LOWER - HORIZ. - TOP

WINGS - UPPER - VERT. - PAVING NOTCH

WINGS - UPPER - HORIZ. - PAVING NOTCH

WINGS - UPPER - VERT.

WINGS - UPPER - HORIZ.

LOWER BODY - HORIZ.

RODENT SHIELD AT ENDS OF UNDERDRAIN, SEE RODENT SHIELD DETAIL ON SHEET 9.

18" RUBBERIZED MEMBRANE WATERPROOFING PER BID ITEM 90014. SEAL ALL

PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER PAVING NOTCH. TOTAL

HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

THICKNESS OF SHEETS SHALL BE AT LEAST 0.05".

** ELEVATION GIVEN AT F.F. ABUT. BACKWALL.

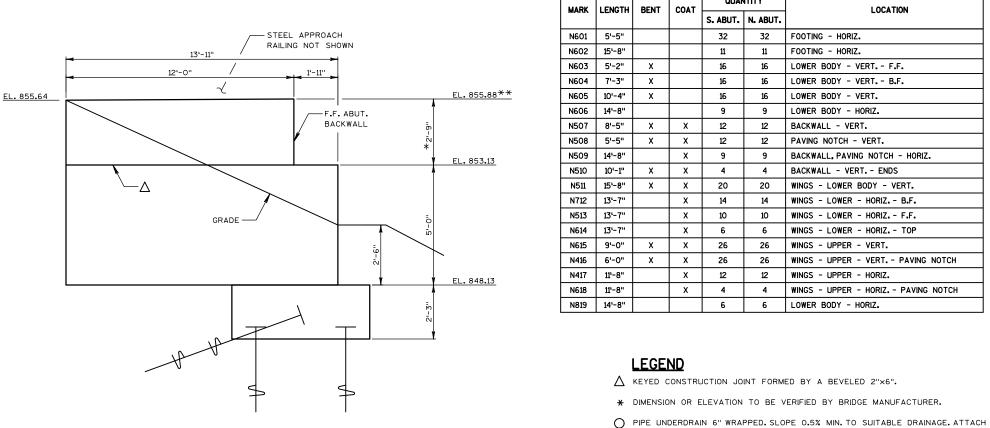
BACKWALL, PAVING NOTCH - HORIZ.

BACKWALL - VERT.

LOCATION

ASSOCIATES'

11



TYPICAL WING ELEVATION

- STEEL APPROACH RAILING NOT SHOWN 1/2" FILLER, ALONG SIDES OF PAVING NOTCH N618 3/4" BEVEL-REINFORCED CONCRETE EL. VARIES PAVEMENT APPROACH SLAB N416 F.F. - N417 (TYP.) N615 Δ. EL. 853.13 N511 GRADE-N614 - N712 **V//////** (TYP.) – B.F. (0)EL. 848.13

— ½" FILLER, ALONG SIDES

PROFILE GRADE LINE

SLOPE TOP OF ABUTMENT

— ¾" BEVEL

-BERM

FRONT ROW HELICAL

COMPRESSION PILES

FRONT-TO-BACK TO MATCH

OF PAVING NOTCH

EL. VARIES

-F.F. ABUT.

BACKWALL

1'-11"

N509

(TYP.)

KNEGE

N601-N602 (TYP.) 5'-9"

(TYP.)

TYPICAL ABUTMENT BODY SECTION

-N509 (TYP.)

- REINFORCED

CONCRETE PAVEMENT

8"×10" PAVING

•

N508 -N507 -

Δ-

APPROACH SLAB

NOTCH

EL. 853.13

N819 (TYP.) -

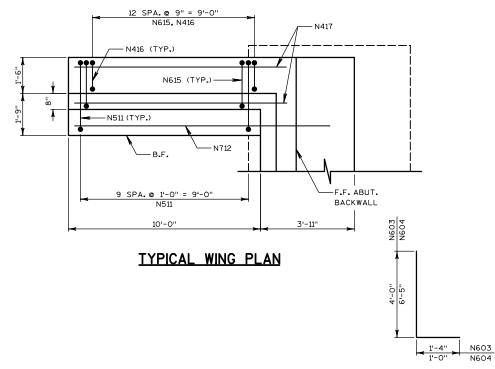
HELICAL TENSION

PILES

BACK ROW HELICAL COMPRESSION PILES

EL. 848.13

TYPICAL ABUTMENT WING SECTION



N508 N510 1'-8" 1'-10' N615 N416 1'-2"

N507. N508. N510. N615. N416

N511

135° STD. HOOKS-

2'-11"

N603. N604

N605

BRIDGE NORTH

ABUTMENT PILE PLAN

NOTES

SEE SHEET 13 FOR REINFORCING DETAILS.

SEE SHEET 14 FOR RAILING DETAILS.

ABUTMENTS TO BE SUPPORTED BY HELICAL PILES. SEE FOUNDATION DATA THIS SHEET.

LEGEND

- * DIMENSION OR ELEVATION TO BE VERIFIED OR SUPPLIED BY BRIDGE MANUFACTURER.
- O PIPE UNDERDRAIN 6" WRAPPED. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE, ATTACH RODENT SHIELD AT ENDS OF UNDERDRAIN, SEE RODENT SHIELD DETAIL ON SHEET 9.
- 18" RUBBERIZED MEMBRANE WATERPROOFING PER BID ITEM 90014. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ** ELEVATION GIVEN AT F.F. OF ABUTMENT BACKWALL.
- (ASTM F1554 GRADE 36 GALVANIZED ANCHOR BOLT WITH (2) NUTS AND (1) WASHER EACH END. EMBED INTO CONCRETE 2'-0" (TO TOP OF NUT.). BOLT DIAMETER AND PROJECTION HEIGHT BY BRIDGE MANUFACTURER. COST IS INCIDENTAL TO "CONCRETE MASONRY BRIDGES" BID ITEM.

FOUNDATION DATA

HELICAL PILE GROUP SHALL BE DESIGNED FOR THE FOLLOWING 2 SERVICE LOAD CASES:

		L	VB	VF
LOAD CAS	E 1	61 KIPS	148 KIPS	124 KIPS
LOAD CAS	E 2	61 KIPS	120 KIPS	93 KIPS

€ FRONT ROW HELICAL

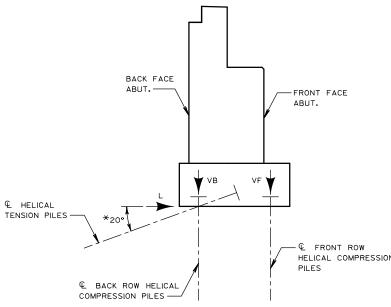
COMPRESSION PILES.

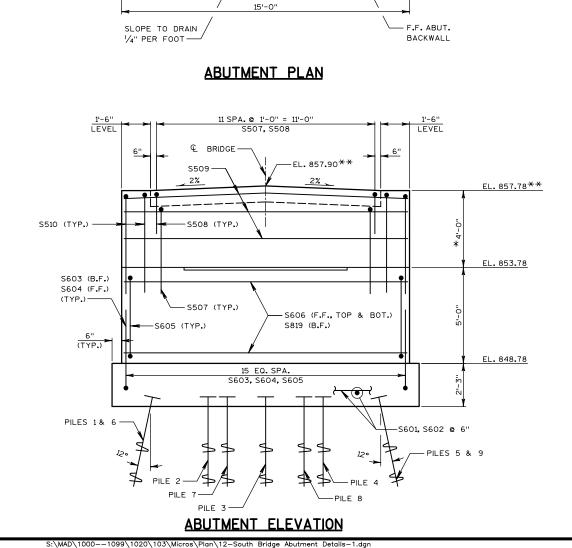
- L = TOTAL LATERAL SERVICE LOAD TO BE RESISTED BY PILES.
- VB = TOTAL VERTICAL SERVICE LOAD TO BE RESISTED BY BACK ROW OF PILES (DOES NOT INCLUDE VERTICAL LOAD INDUCED BY HELICAL TENSION PILES)
- VF = TOTAL VERTICAL SERVICE LOAD TO BE RESISTED BY FRONT ROW OF PILES.

PILES NOTES:

PILES 1, 5, 6, AND 9 SHALL BE BATTERED 12 DEGREES FROM VERTICAL ORIENTED AWAY FROM THE PATH R TO RESIST LATERAL WIND LOADS APPLIED PERPENDICULAR TO THE PATH R.

PILES 10, 11, 12 AND 13 ARE TENSION PILES AND SHALL BE PRE-TENSIONED TO LIMIT AXIAL SERVICE DEFLECTION LOAD TO 0.5 INCHES.





15'-0" 8'-6"

8"×10" DEEP PAVING NOTCH

DEEP

__ 2%

7'-6"

(TYP.)

F.F. ABUT.

* 81/2"_

PAVING

NOTCH-

- R PATH AND

STRUCTURE &

-HIGH POINT OF PIPE

UNDERDRAIN

ABUT.

(TYP. OF 4)-

7'-6"

2%

-STEEL RAILING

-BEARING SEAT LEVEL

EL. 853.78 (TYP.)

(TYP.)

* 81/2"

HELICAL COMPRESSION

*TO BE VERIFIED BT HELICAL PILE DESIGNER.

HELICAL PILE DESIGN LOADS

OF MADISON PARKS DIVISION MADISON, WISCONSIN LAGOON BRIDGE

1020.103

ROJECT MGR.

STRAND

ASSOCIATES[®]

12

DETAILS

ABUTMENT

BRIDGE

SOUTH

UNCOATED: 3,270 LBS



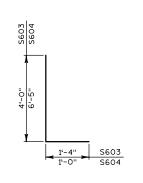
SHEET 13

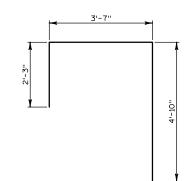
SOUTH BRIDGE ABUTMENT BILL OF BARS

COATED: 3.910 LBS QUANTITY MARK LENGTH BENT COAT LOCATION S. ABUT. N. ABUT. S601 32 32 FOOTING - HORIZ. 5'-5" S602 15'-8" FOOTING - HORIZ. 11 11 S603 5'-2" 16 LOWER BODY - VERT. - F.F. S604 7'-3" 16 LOWER BODY - VERT. - B.F. S605 10'-4" 16 16 LOWER BODY - VERT. S606 14'-8" 9 LOWER BODY - HORIZ. S507 10'-11" Х 12 12 BACKWALL - VERT. S508 5'-5" Х 12 PAVING NOTCH - VERT. S509 14'-8" Х 9 BACKWALL, PAVING NOTCH - HORIZ. S510 12'-7" BACKWALL - VERT. - ENDS Х S511 15'-8" Х 20 WINGS - LOWER BODY - VERT. S712 13'-7" Х WINGS - LOWER - HORIZ. - B.F. S513 13'-7" Х 10 10 WINGS - LOWER - HORIZ. - F.F. S614 13'-7" х WINGS - LOWER - HORIZ. - TOP 6 S615 Х 11'-7" 26 26 WINGS - UPPER - VERT. S416 6'-0" Χ 26 26 WINGS - UPPER - VERT. - PAVING NOTCH S417 11'-8" 12 12 WINGS - UPPER - HORIZ. Х S618 11'-8" WINGS - UPPER - HORIZ. - PAVING NOTCH Х LOWER BODY - HORIZ.

\$819 14'-8" **LEGEND**

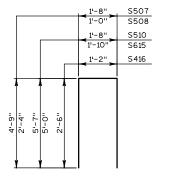
- \triangle keyed construction joint formed by a beveled 2"x6".
- * DIMENSION OR ELEVATION TO BE VERIFIED BY BRIDGE MANUFACTURER.
- O PIPE UNDERDRAIN 6" WRAPPED. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF UNDERDRAIN. SEE RODENT SHIELD DETAIL ON SHEET 9.
- 18" RUBBERIZED MEMBRANE WATERPROOFING PER BID ITEM 90014. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER PAVING NOTCH. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.05".
- ** ELEVATION GIVEN AT F.F. ABUT. BACKWALL.

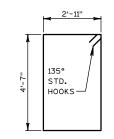




S605

S603. S604





S511

\$507, \$508, \$510, \$615, \$416

4:21:13 PM

TYPICAL ABUTMENT WING SECTION

- REINFORCED

CONCRETE PAVEMENT

NOTCH

EL. 853.78

HELICAL

TENSION PILES

BACK ROW HELICAL COMPRESSION PILES

8"×10" PAVING

S507-

Δ-

S604-

B.F.-

APPROACH SLAB

1/2" FILLER, ALONG SIDES

PROFILE GRADE LINE

- 5605

-S603

-S602 (TYP.)

FRONT ROW HELICAL

COMPRESSION PILES

REINFORCED CONCRETE

— S417 (TYP.) — S615

- S511

(0)

- S614

- S712 (TYP.)

PAVEMENT APPROACH SLAB

-SLOPE TOP OF ABUTMENT

FRONT-TO-BACK TO MATCH

— ¾" BEVEL

OF PAVING NOTCH

EL. VARIES

-S509 (TYP.)

-F.F. ABUT.

BACKWALL

1'-11"

·S509

(TYP.)

∠S606

(TYP.)

TYPICAL ABUTMENT BODY SECTION

S601-

S618

EL. VARIES

EL. 853.78

Y/\\Y/

S513

EL. 848.78

GRADE-

3/4" BEVEL-

12 SPA. @ 9" = 9'-0" S615, S416 S416 (TYP.) S615 (TYP.) B.F. 9 SPA. @ 1'-0" = 9'-0" S511 10'-0" 3'-11"

TYPICAL WING ELEVATION

13'-11"

GRADE

1'-11"

EL.857.78**

EL. 853.78

EL. 848.78

12'-0"

STEEL APPROACH

EL. 857.54

-BERM

RAILING NOT SHOWN

TYPICAL WING PLAN

S:\MAD\1000--1099\1020\103\Micros\Plan\13-South Bridge Abutment Details-2.dgn

SOUTH BRIDGE ABUTIV

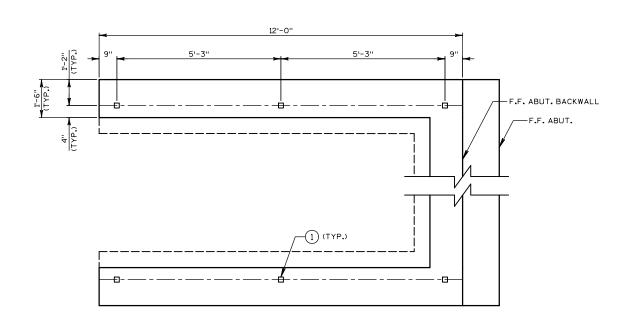
APPROACH

STEEL

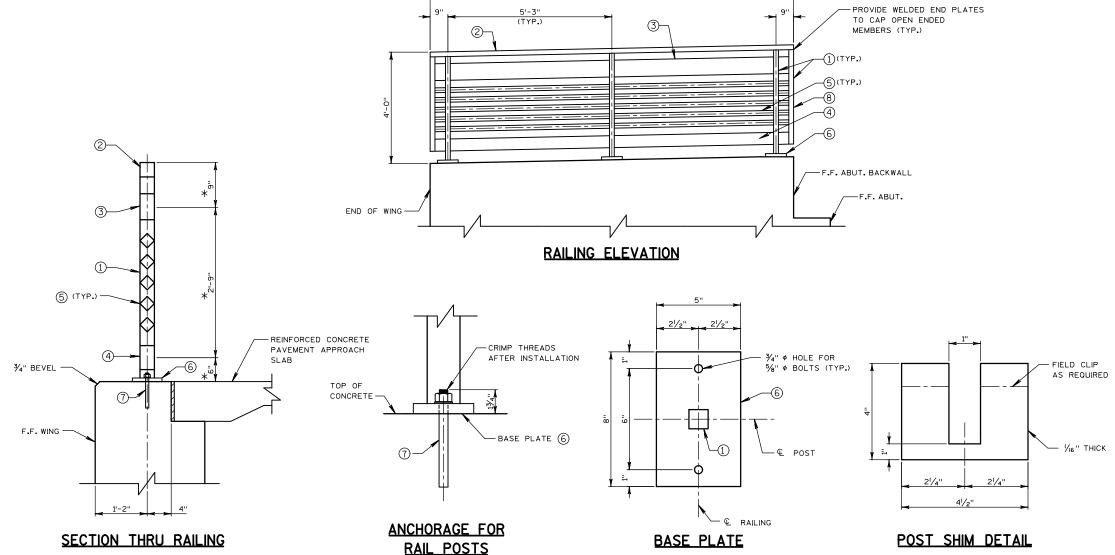
ROJECT MGR.

ASSOCIATES'

14



L RAIL POST SPACING PLAN



NOTES

BID ITEM SHALL BE "RAILING STEEL GALVANIZED PEDESTRIAN" WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN AS WELL AS CAULKING AND PAINTING.

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. THE RAILING SHALL BE PAINTED

SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

RAIL SHALL PRODUCE MAXIMUM OPENINGS OF LESS THAN 4".

ASTM A500 GRADE B.NO.6 SHALL CONFORM TO ASTM A709 GRADE 36.

CUT BOTTOM OF POSTS TO MAKE THEM VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

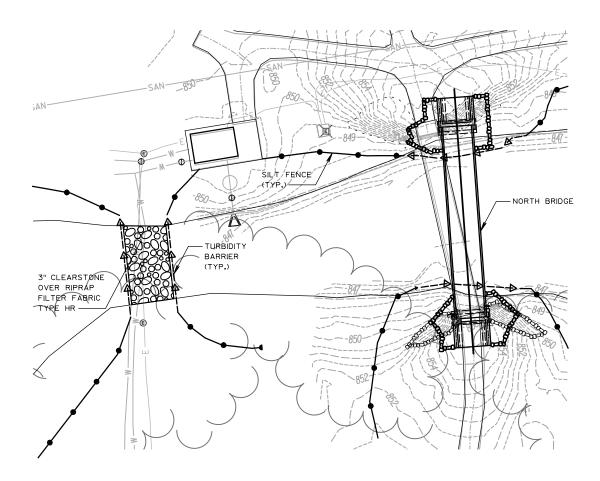
CAULK AROUND PERIMETER OF BASE PLATES, NO. 6, AND FILL BOLT HOLE OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING BROWN NON-BITUMINOUS JOINT SEALER. COLOR OF BROWN CAULK SHALL MATCH PAINTED RAILING.

RAILING SHALL BE FABRICATED IN FULL LENGTHS SUCH THAT NO FIELD SPLICING IS REQUIRED.

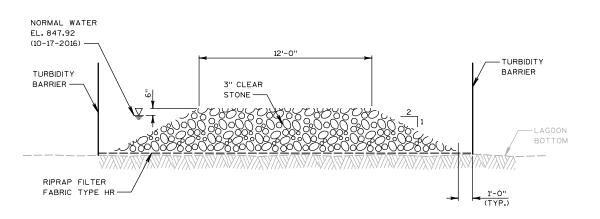
VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATED GALVANIZING AND DRAINAGE.

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

- 1 HSS 2"x2"x1/4" STEEL POST. CUT BOTTOM OF POST TO MATCH TOP OF CONCRETE, PLACE POST VERTICAL.
- 2) HSS 2"x2"x1/4" STEEL TOP RAIL. WELD TO NO. 1.
- (3) HSS 6"x2"x1/4" STEEL RUB RAIL. WELD TO NO. 1.
- (4) HSS 4"x2"x1/4" STEEL BOTTOM RAIL. WELD TO NO. 1.
- (5) HSS $1^1/4"\times 1^1/4"\times \%_6"$ STEEL SAFTEY RAIL. WELD TO NO. 1. SPACE EVENLY AND ALIGN WITH PREFABRICATED BRIDGE SAFETY RAILS.
- 6 PLATE $\frac{3}{4}$ "×5"×8" WITH $\frac{3}{4}$ " DIA. HOLES FOR ANCHOR BOLTS NO. 7. WELD TO NO. 1 AS SHOWN.
- 7 %" DIA. x 9" LONG 316 STAINLESS STEEL TYPE S EPOXY MASONRY ANCHORS WITH NUT AND WASHERS OF SAME ALLOY GROUP. MIN. PULLOUT CAPACITY OF 13 KIPS. EMBED MIN. 7".
- 8 PROVIDE 4" MAX. GAP BETWEEN BRIDGE RAILING POST AND ABUTMENT RAILING END POST.
- * ALIGN BOTTOM RAIL, RUB RAIL, SAFETY RAIL, AND TOP RAIL WITH SIMILAR FABRICATED BRIDGE RAILING ELEMENTS.



TEMP FORD CROSSING PLAN

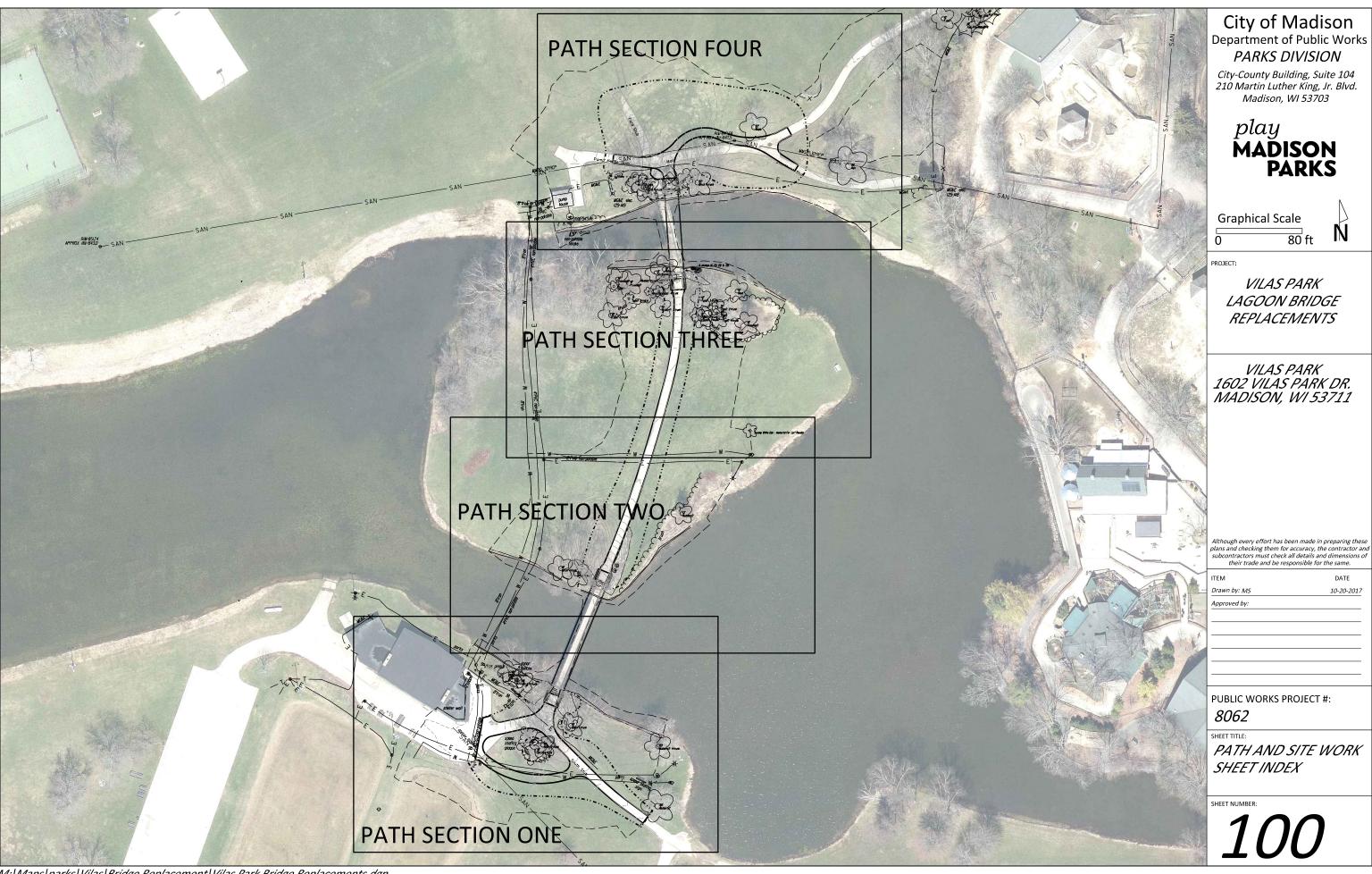


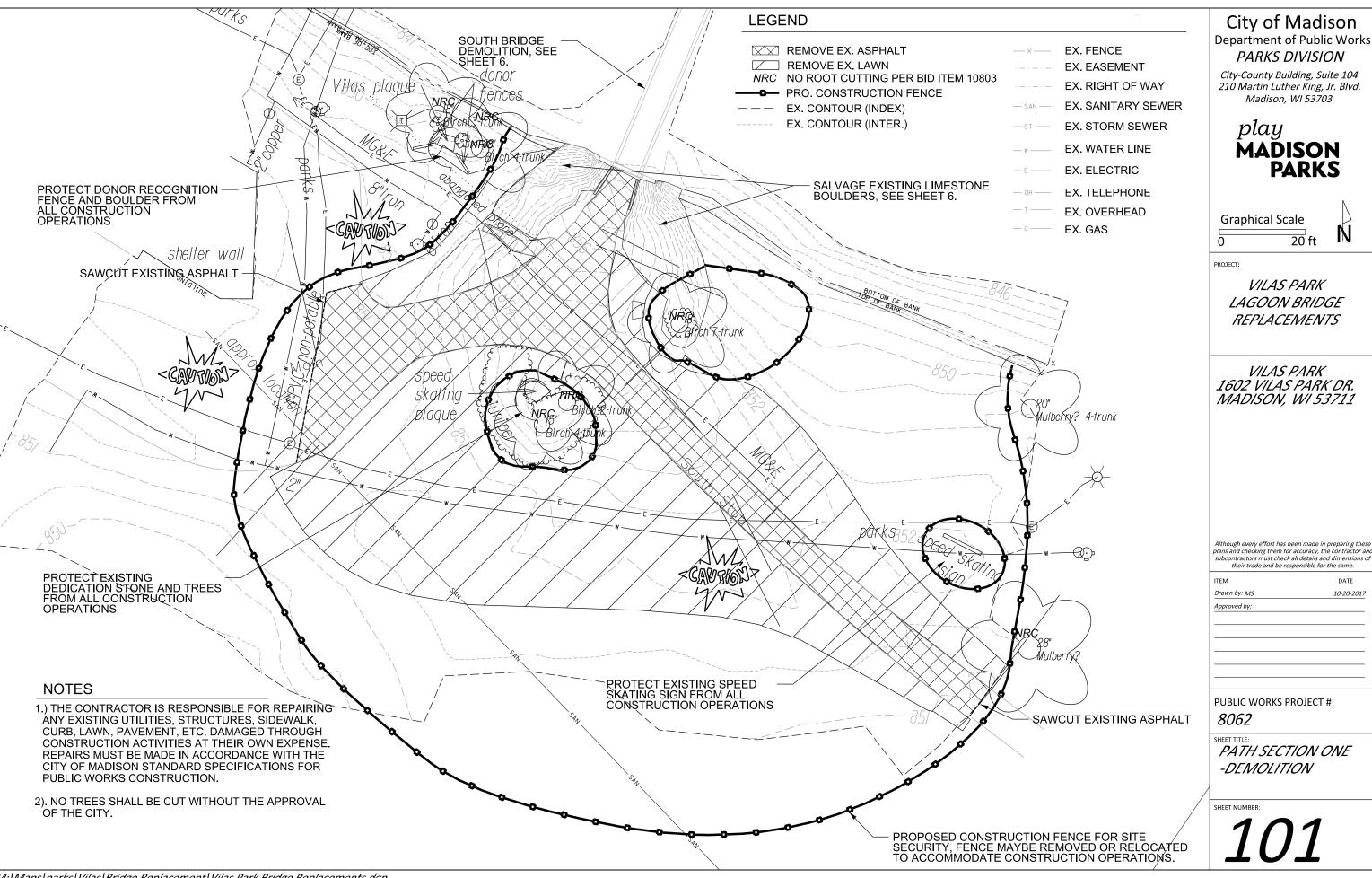
TYPICAL SECTION

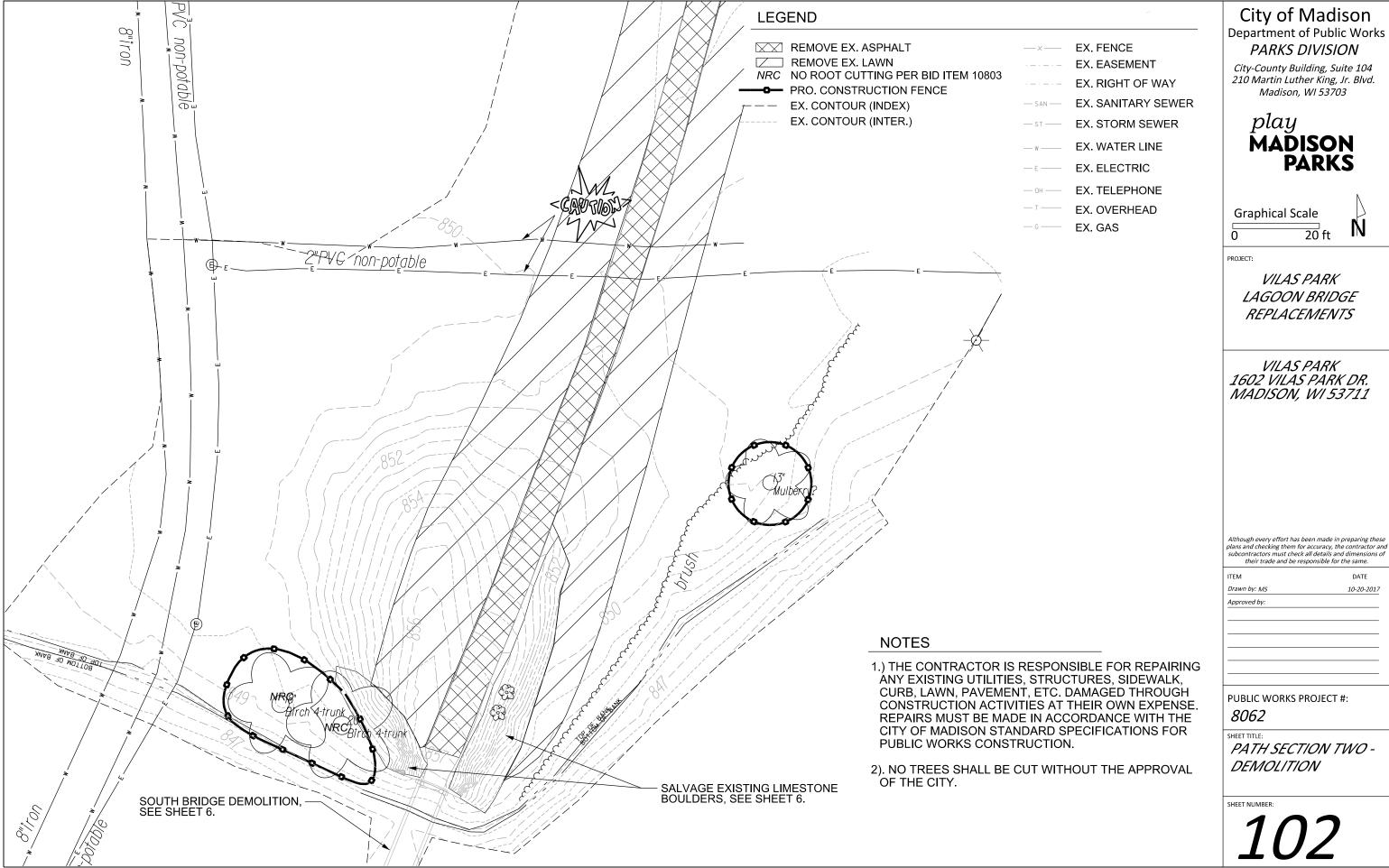


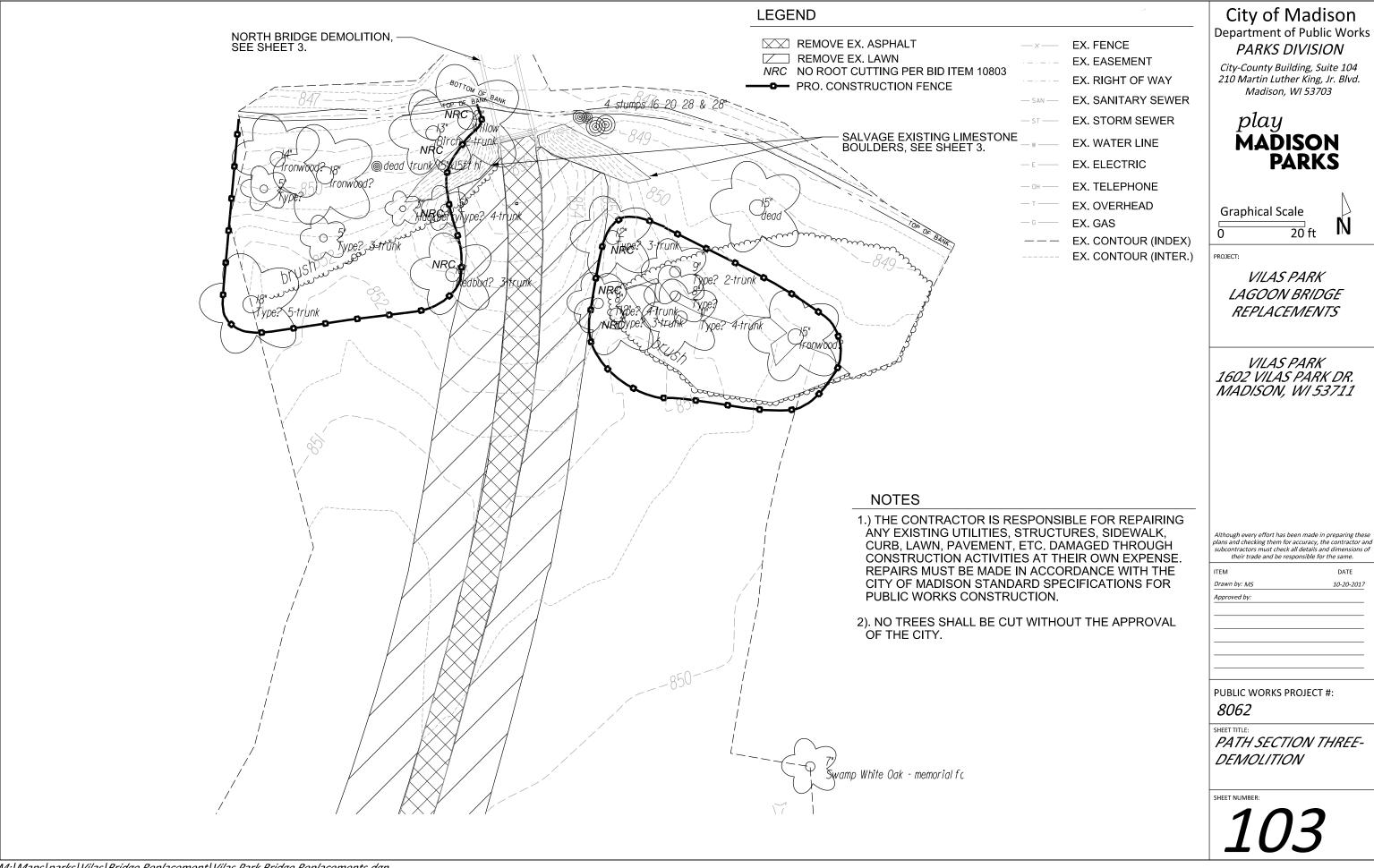
1020.103 PROJECT MGR.

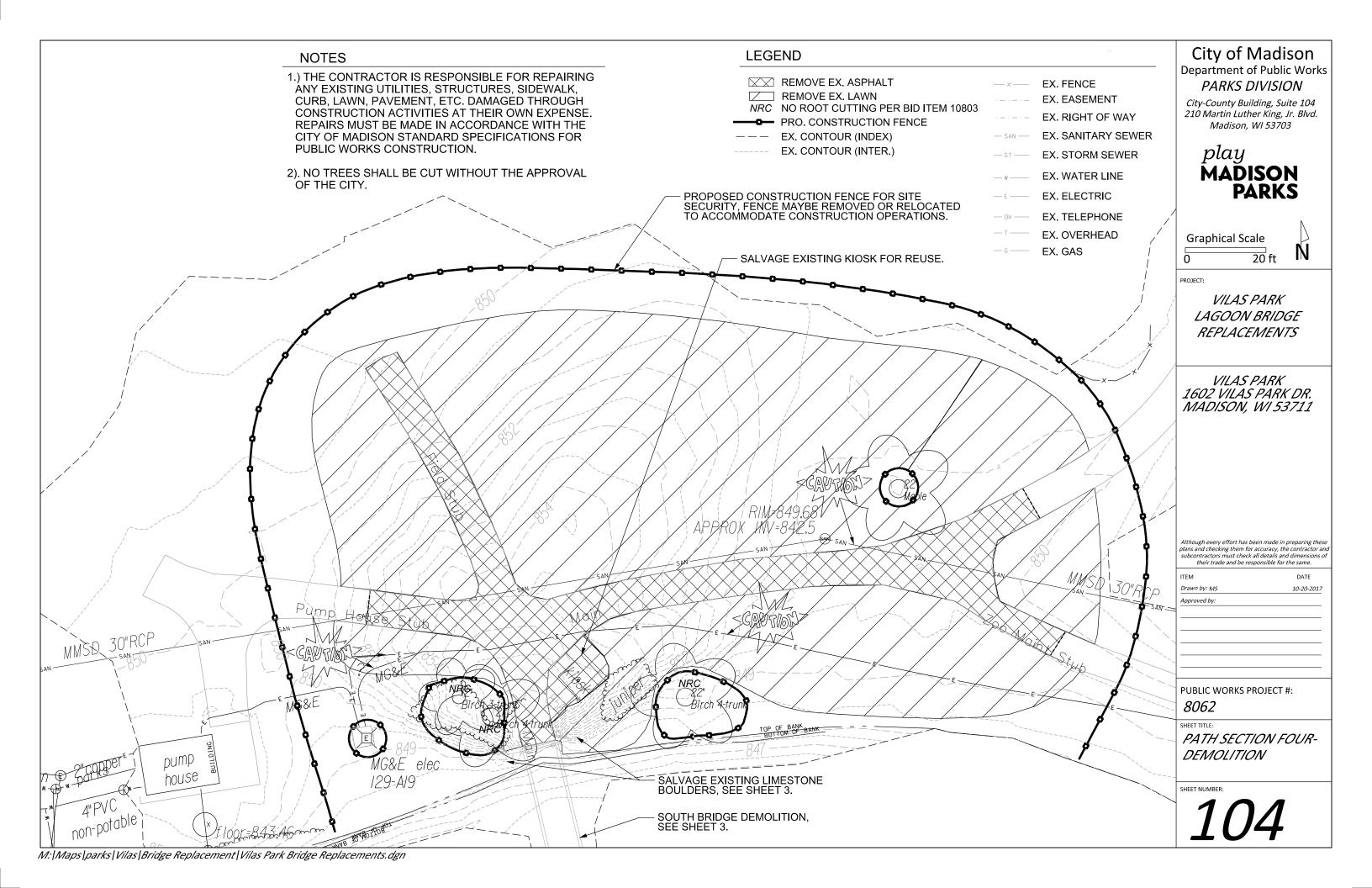
ASSOCIATES®

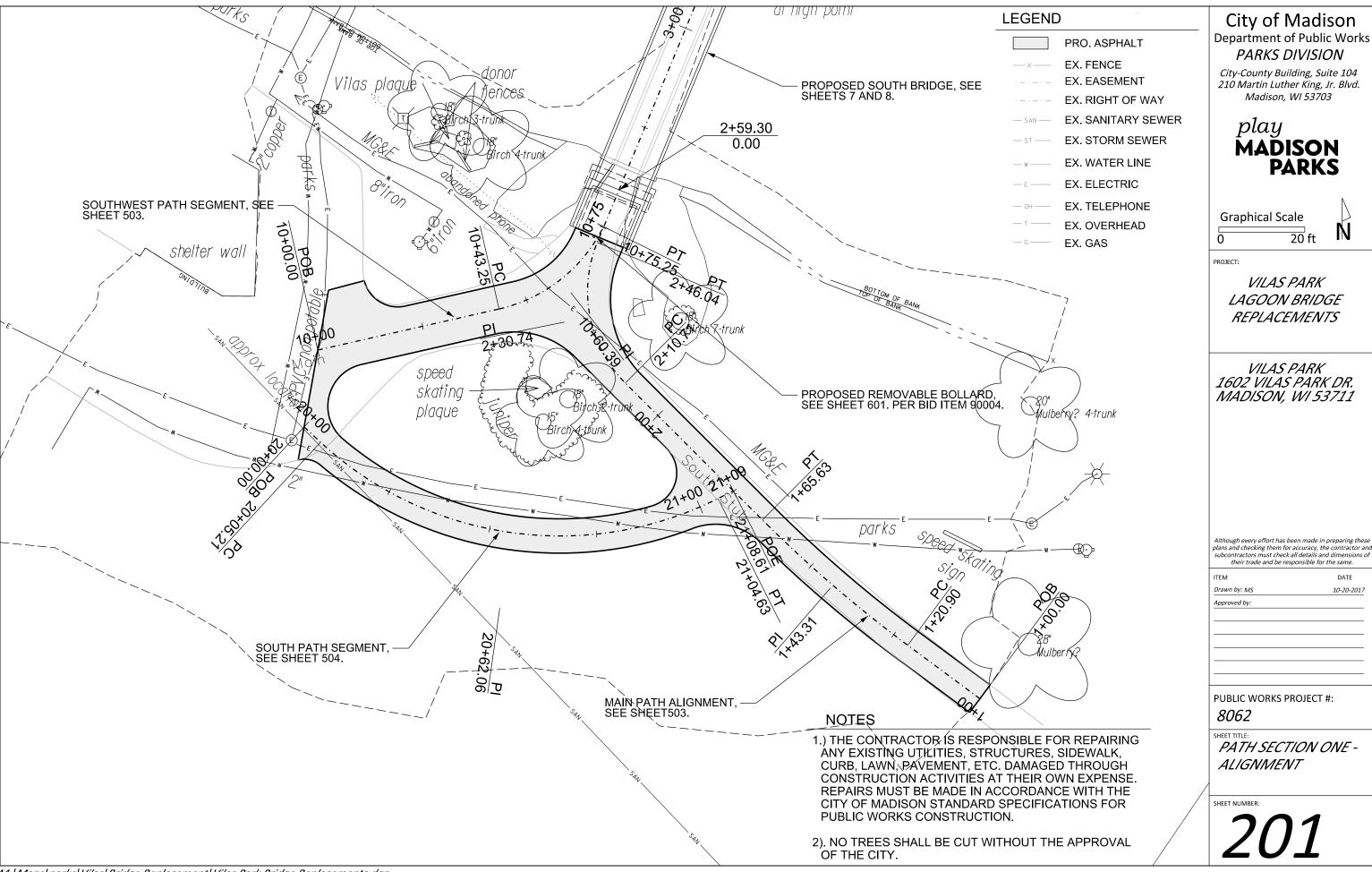


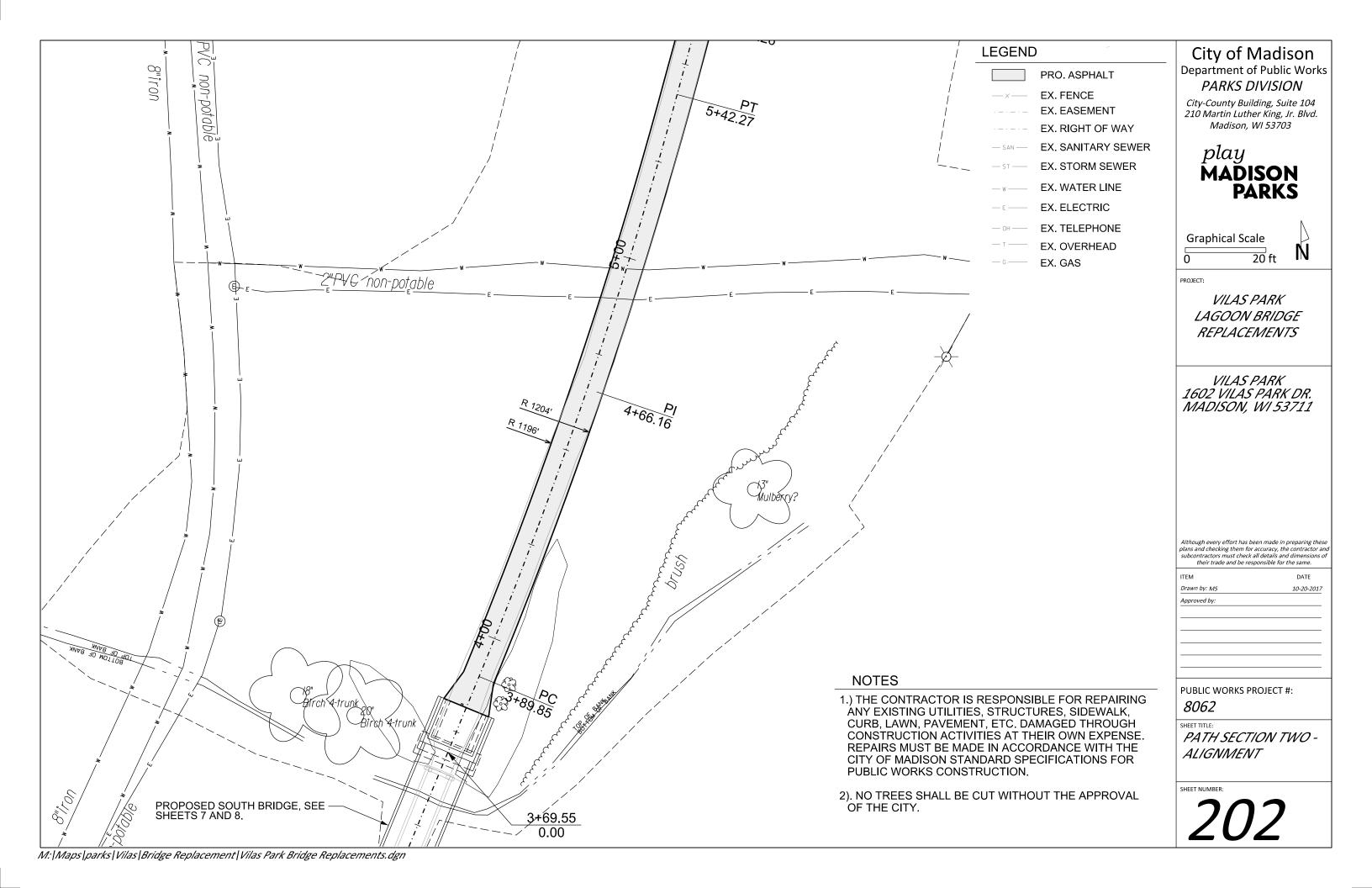


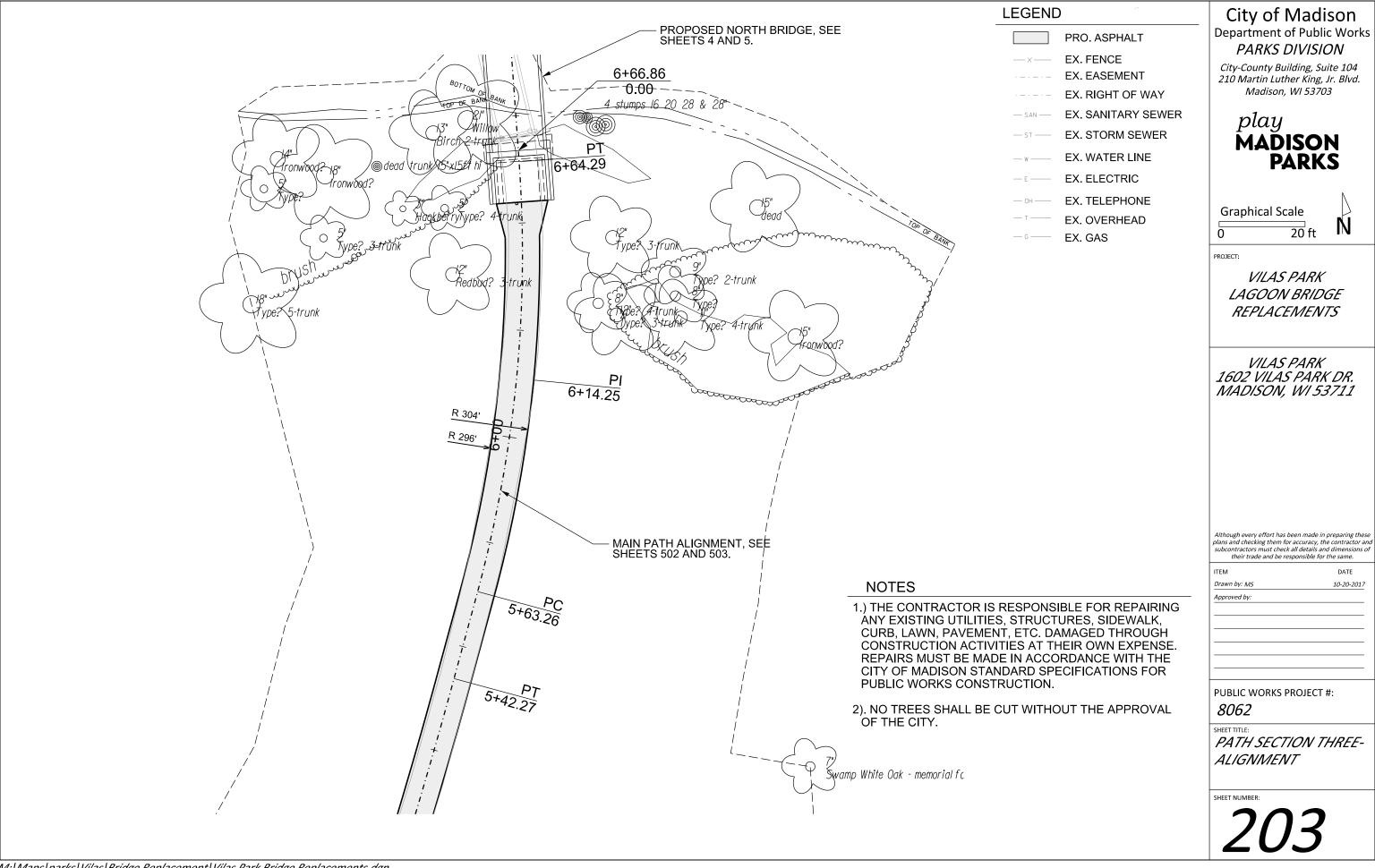




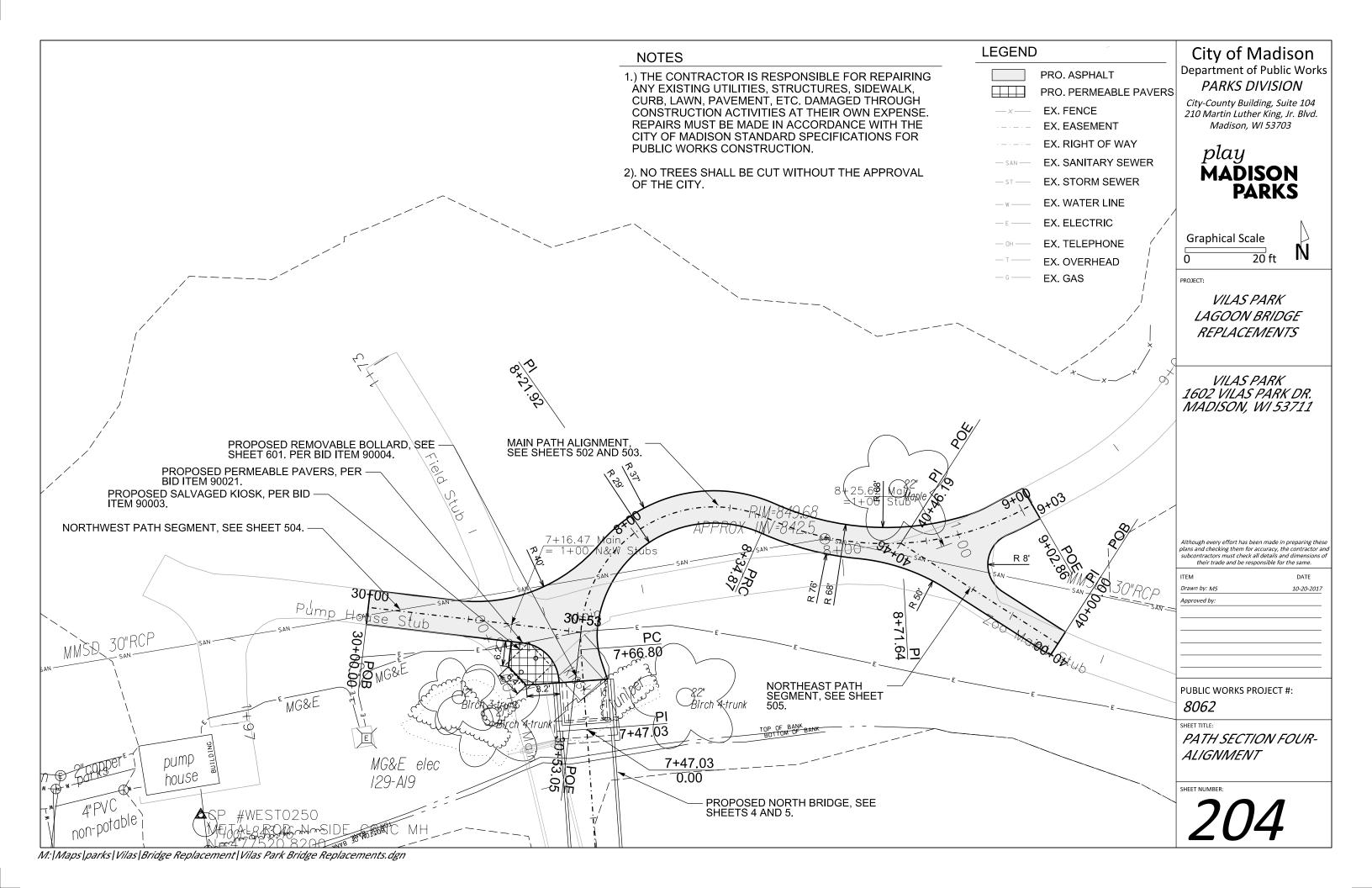


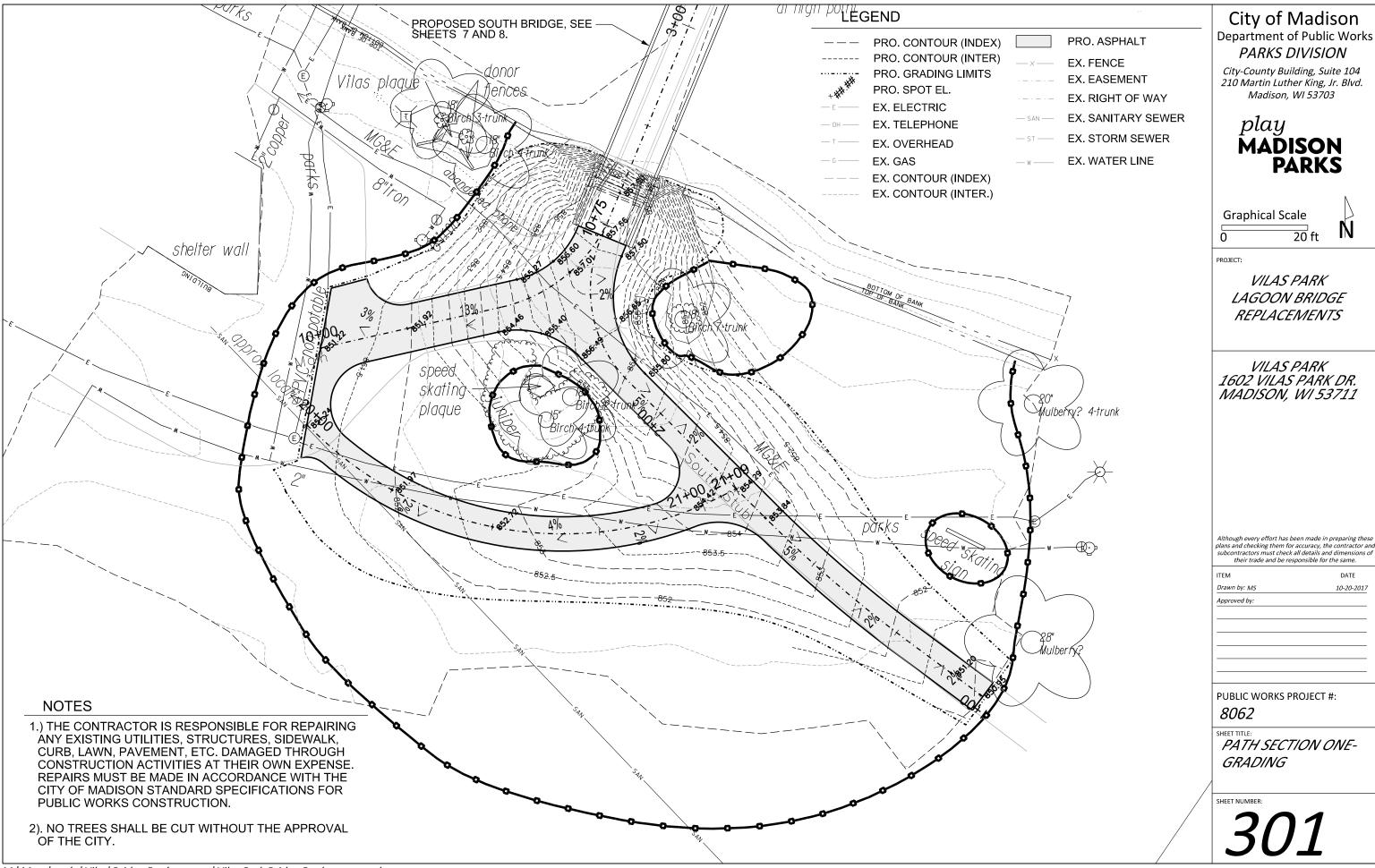


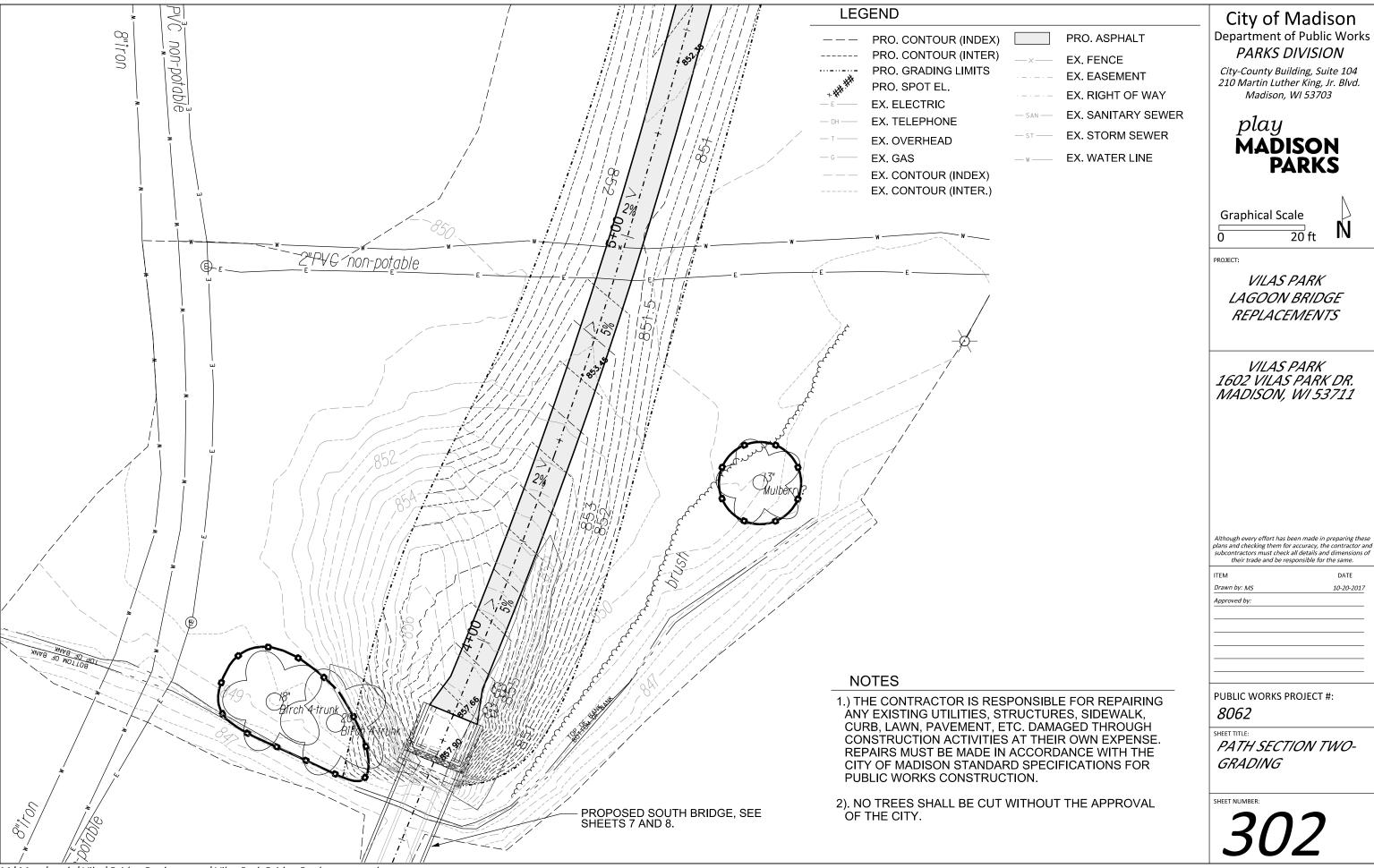


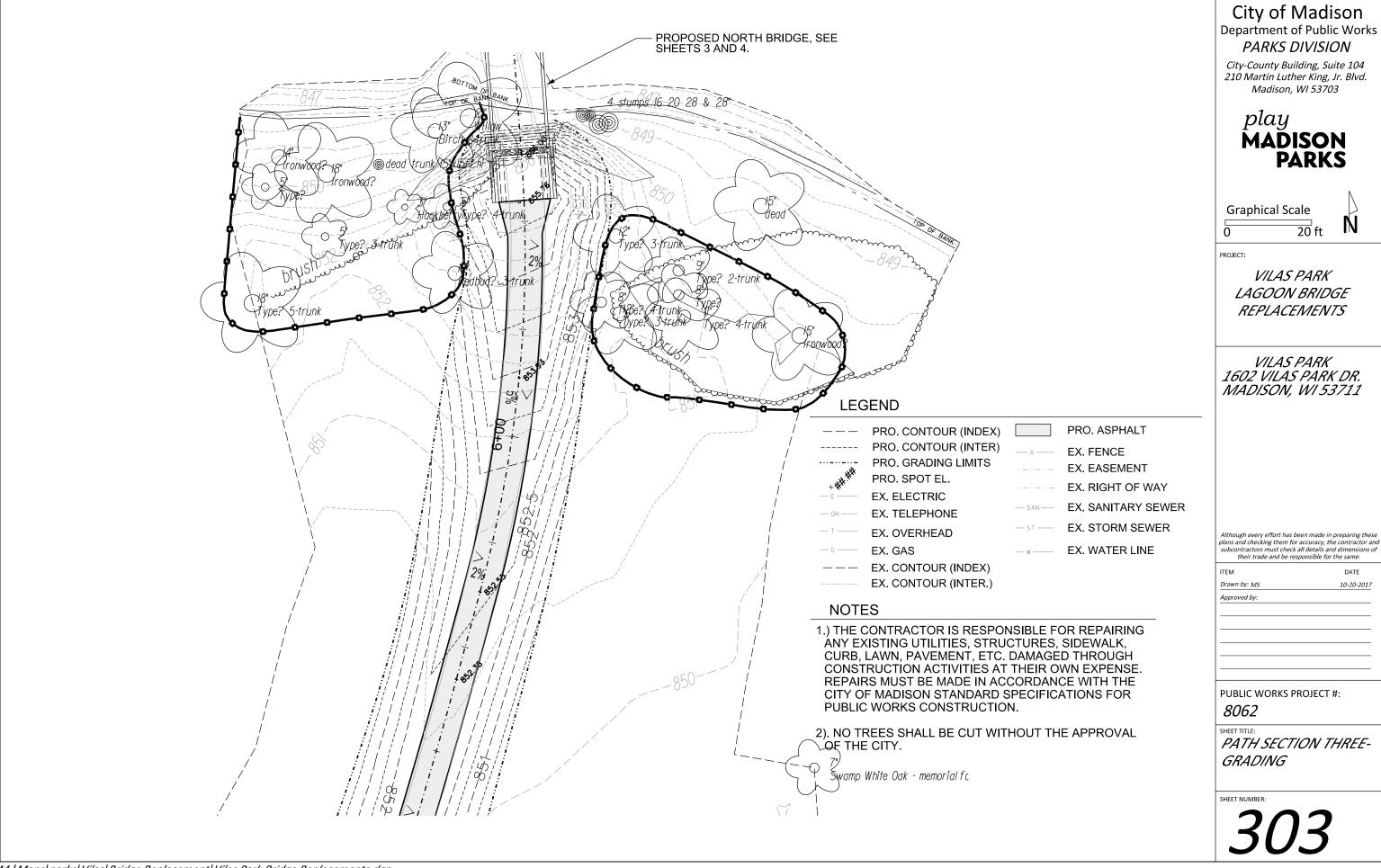


ITEM	DATE					
Drawn by: MS	10-20-2017					
Approved by:						
						

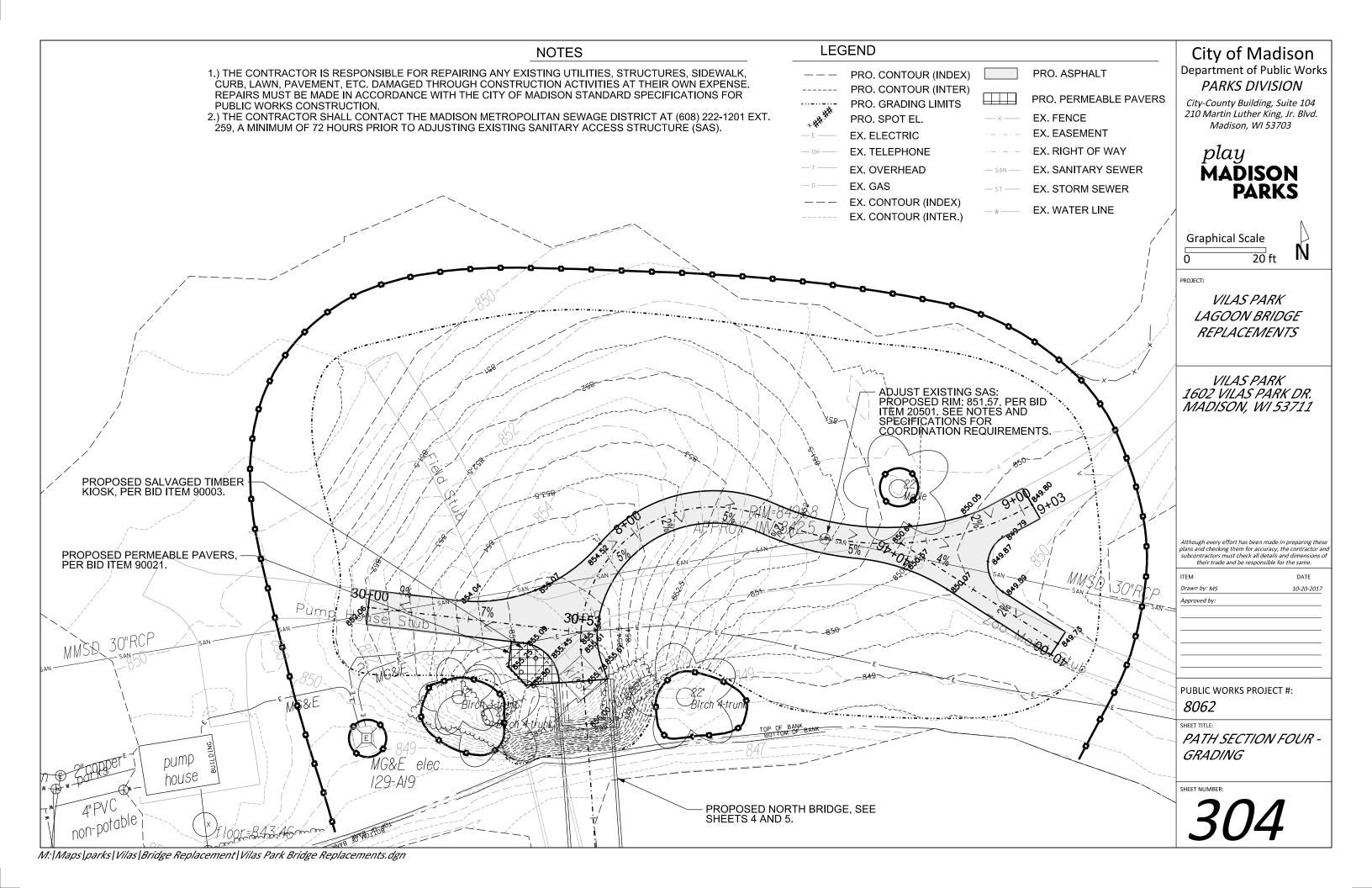


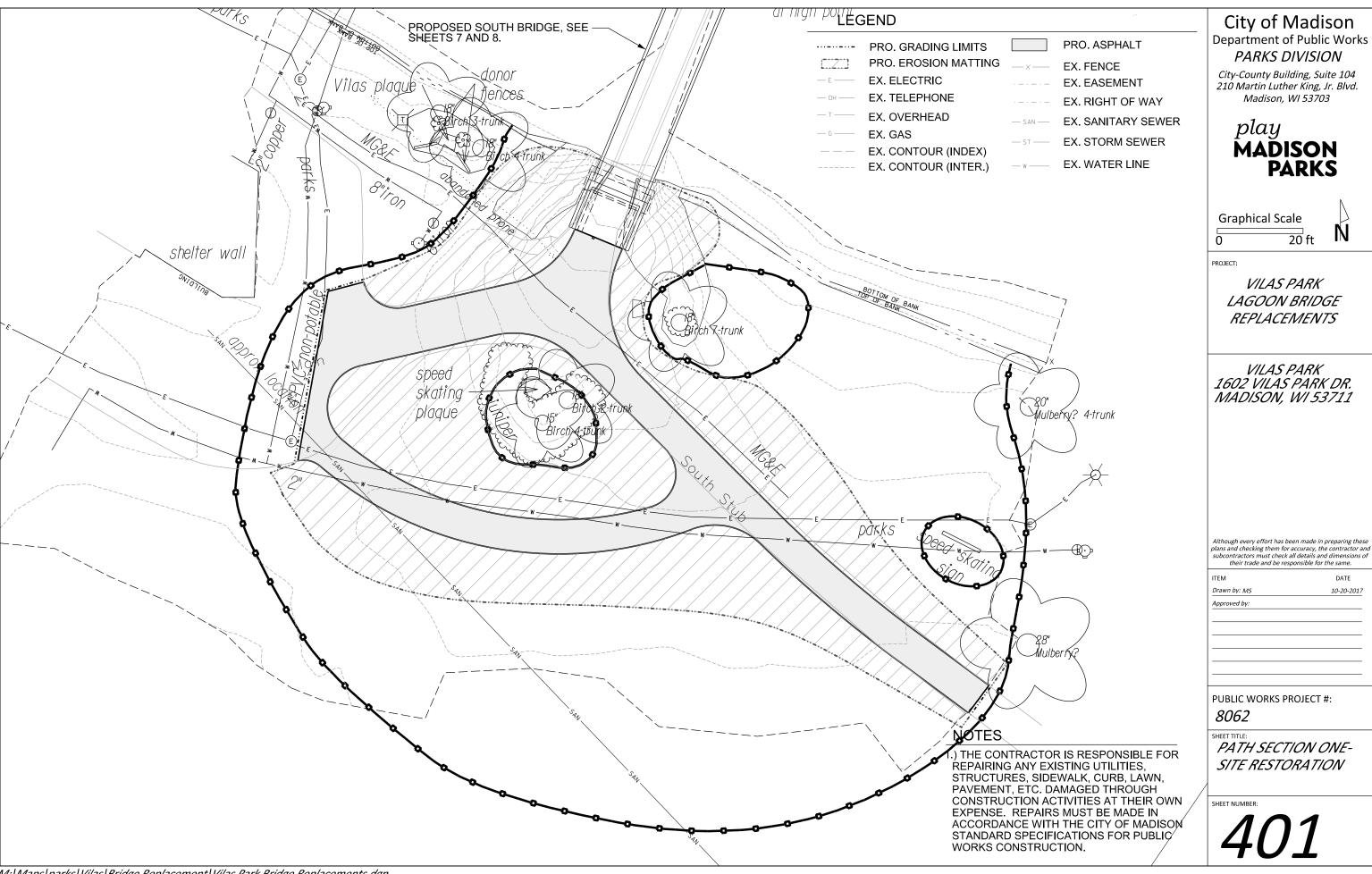


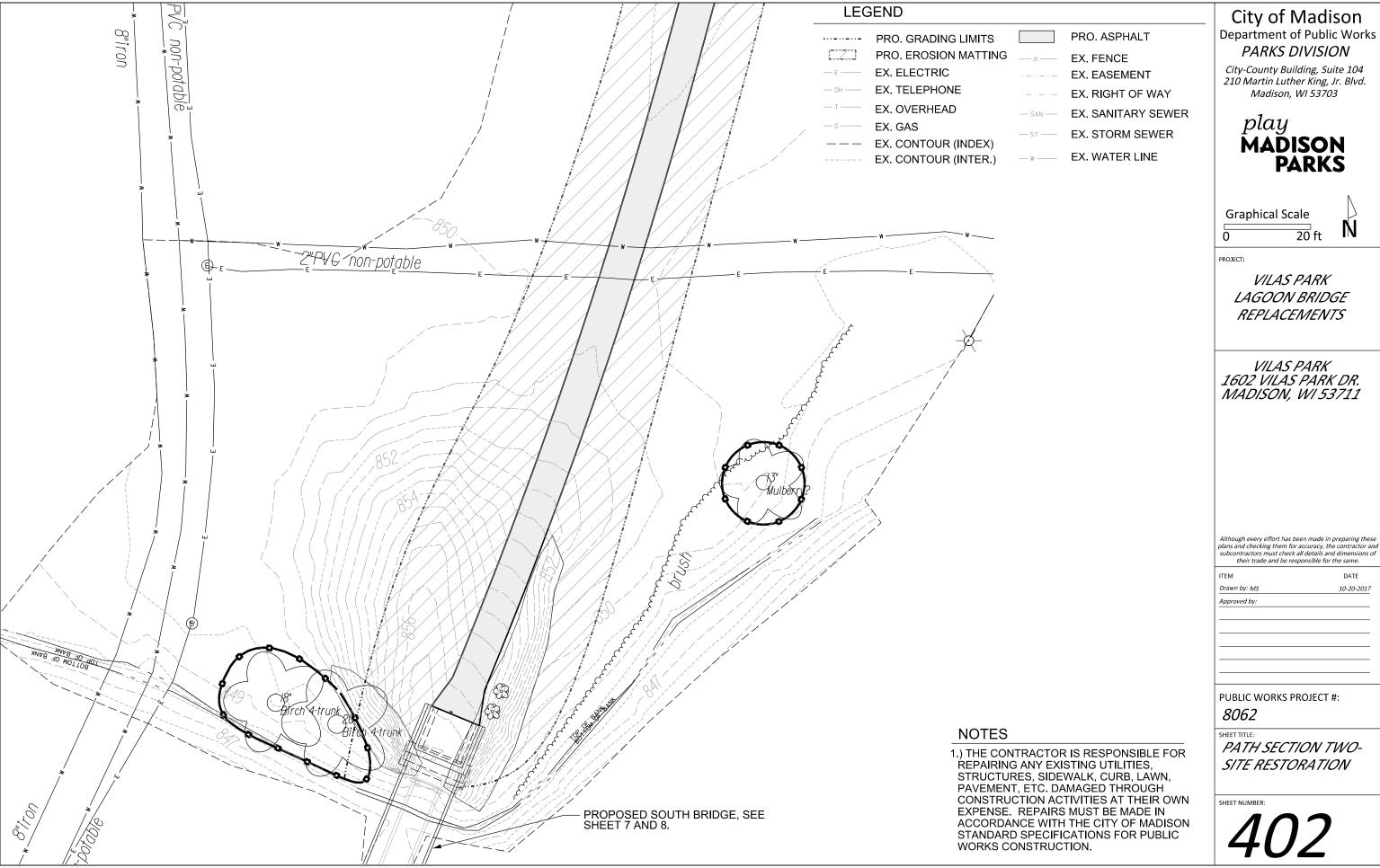


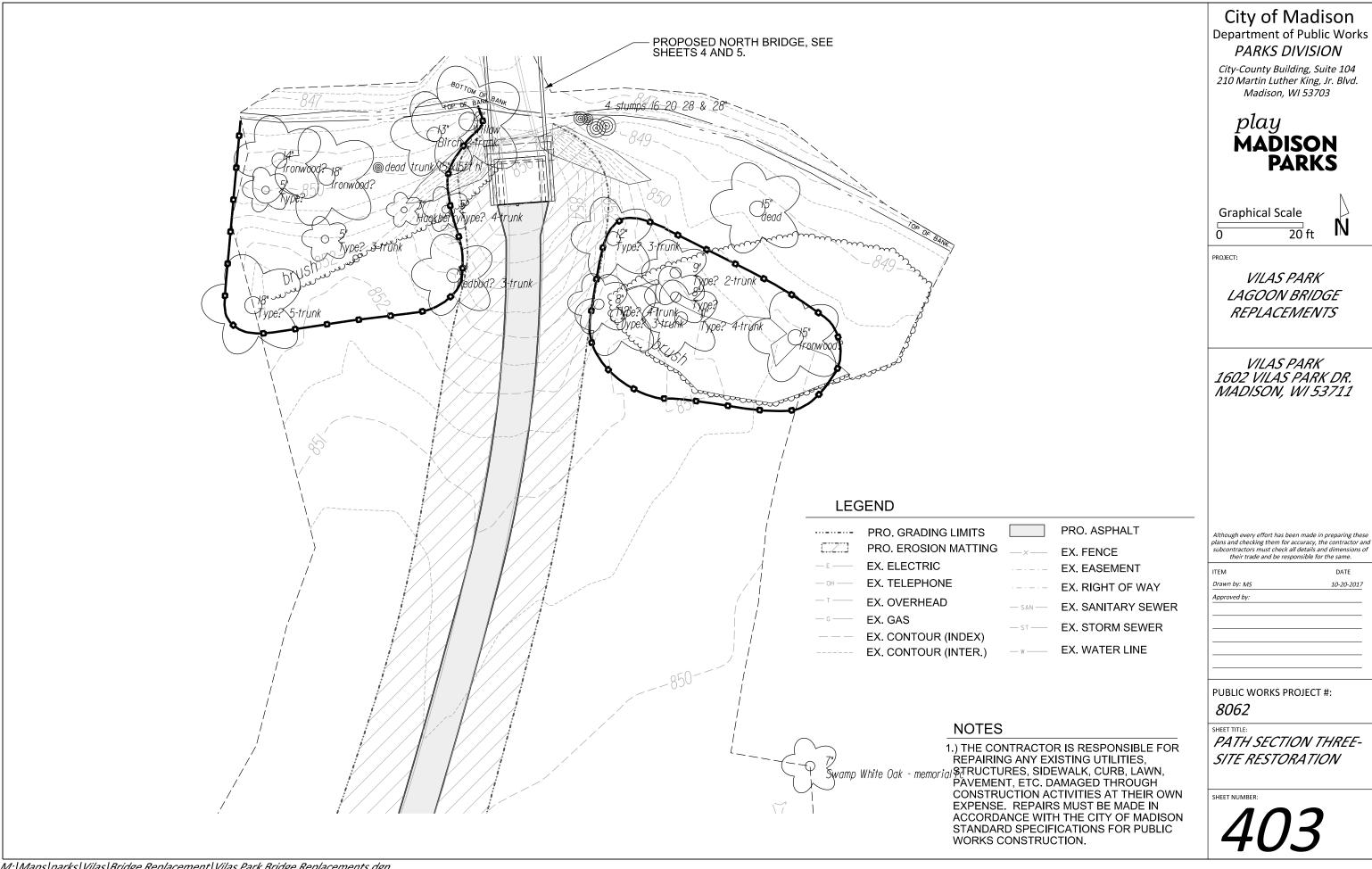


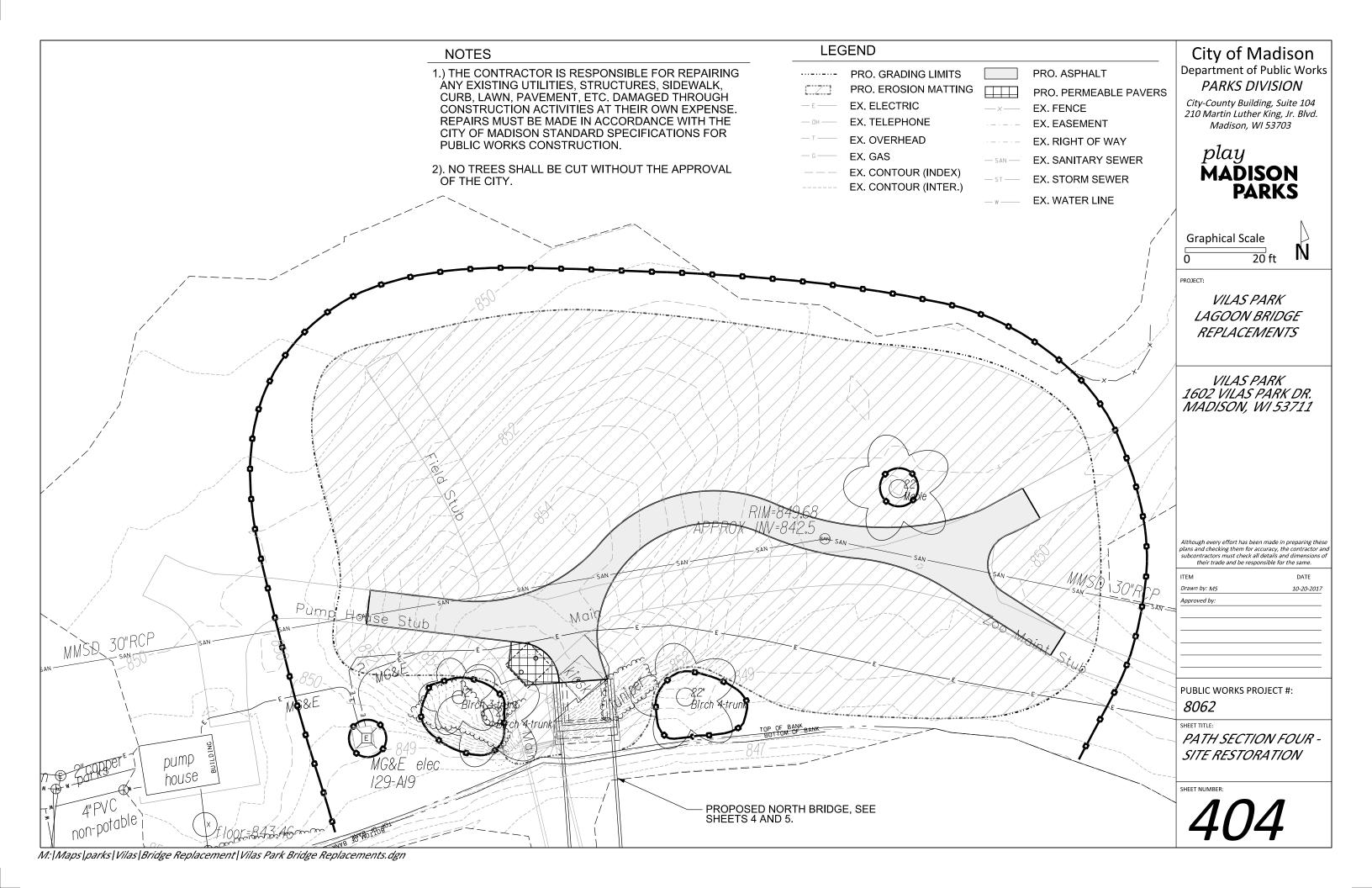
10-20-2017

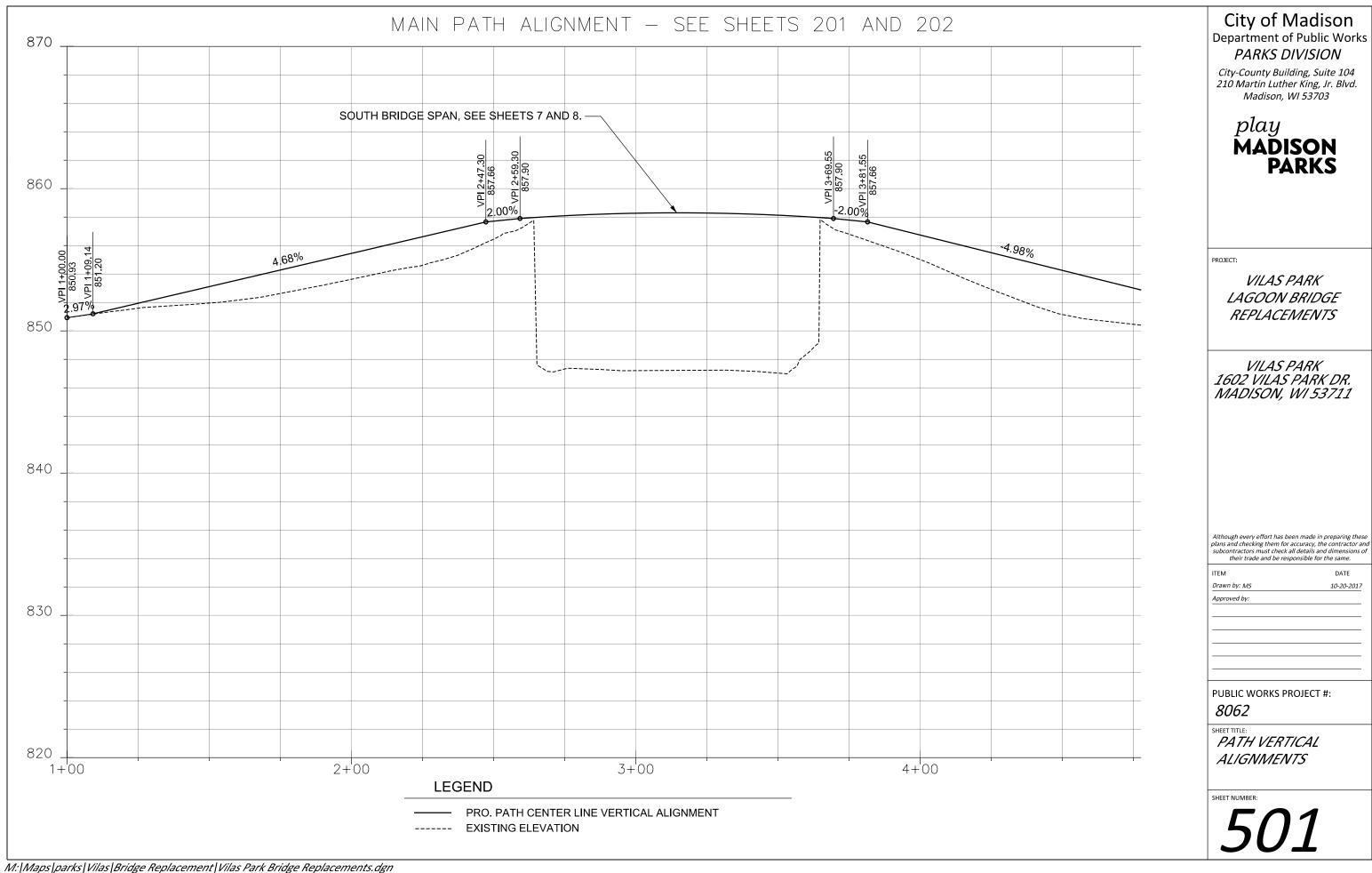


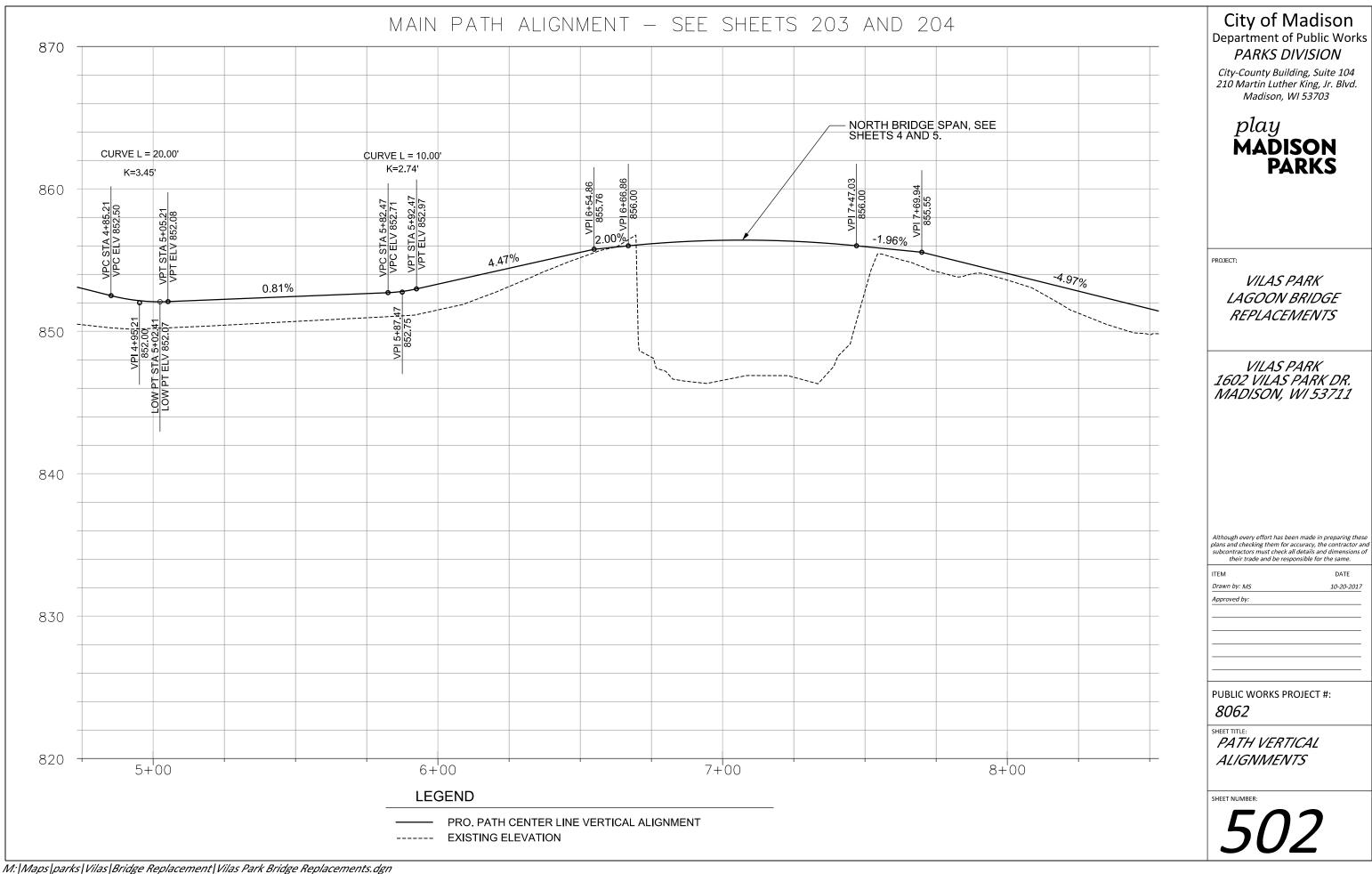


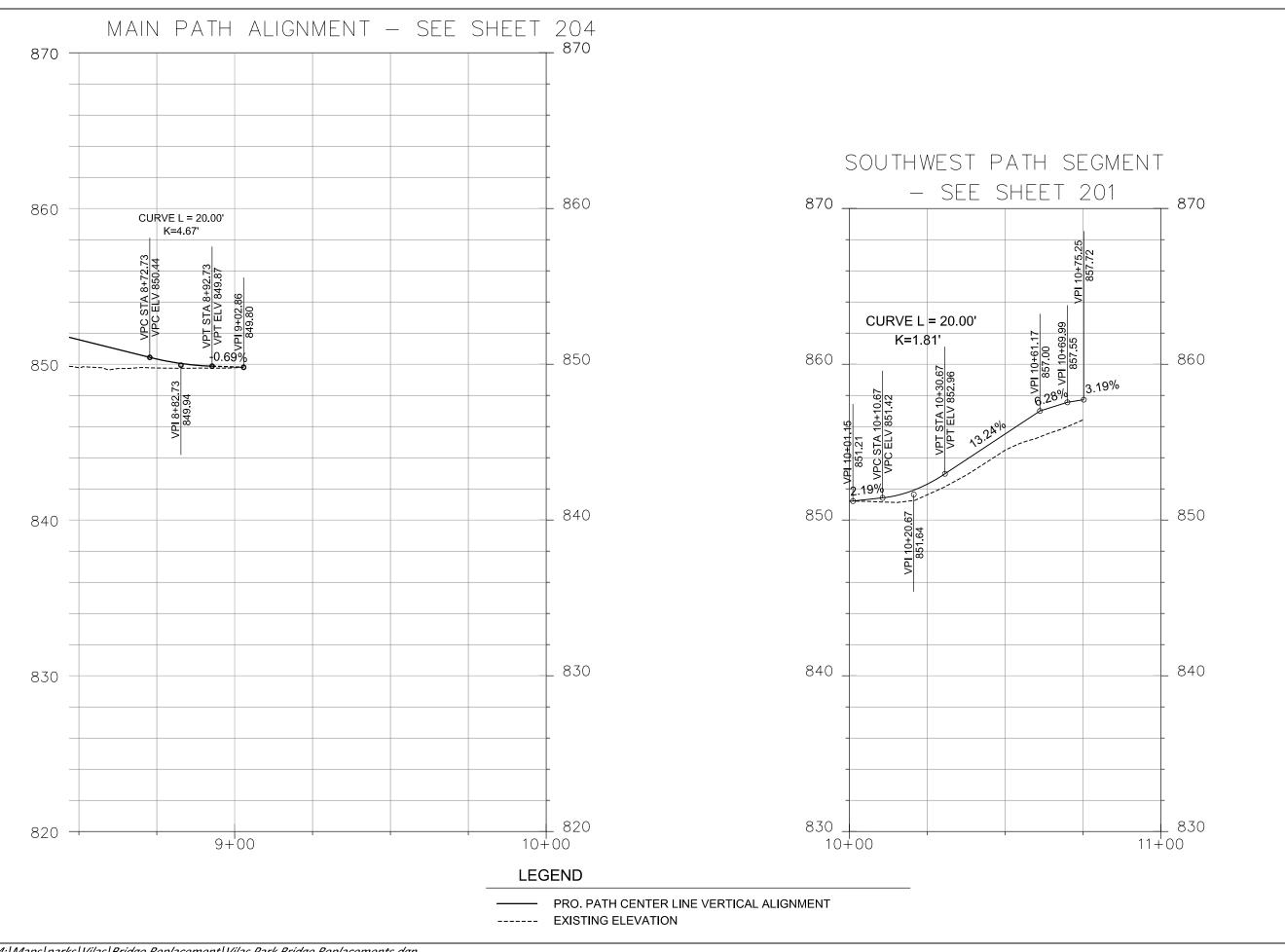












City of Madison Department of Public Works **PARKS DIVISION**

City-County Building, Suite 104 210 Martin Luther King, Jr. Blvd. Madison, WI 53703

> play MADISON PARKS

PROJECT:

VILAS PARK LAGOON BRIDGE REPLACEMENTS

VILAS PARK 1602 VILAS PARK DR. MADISON, WI 53711

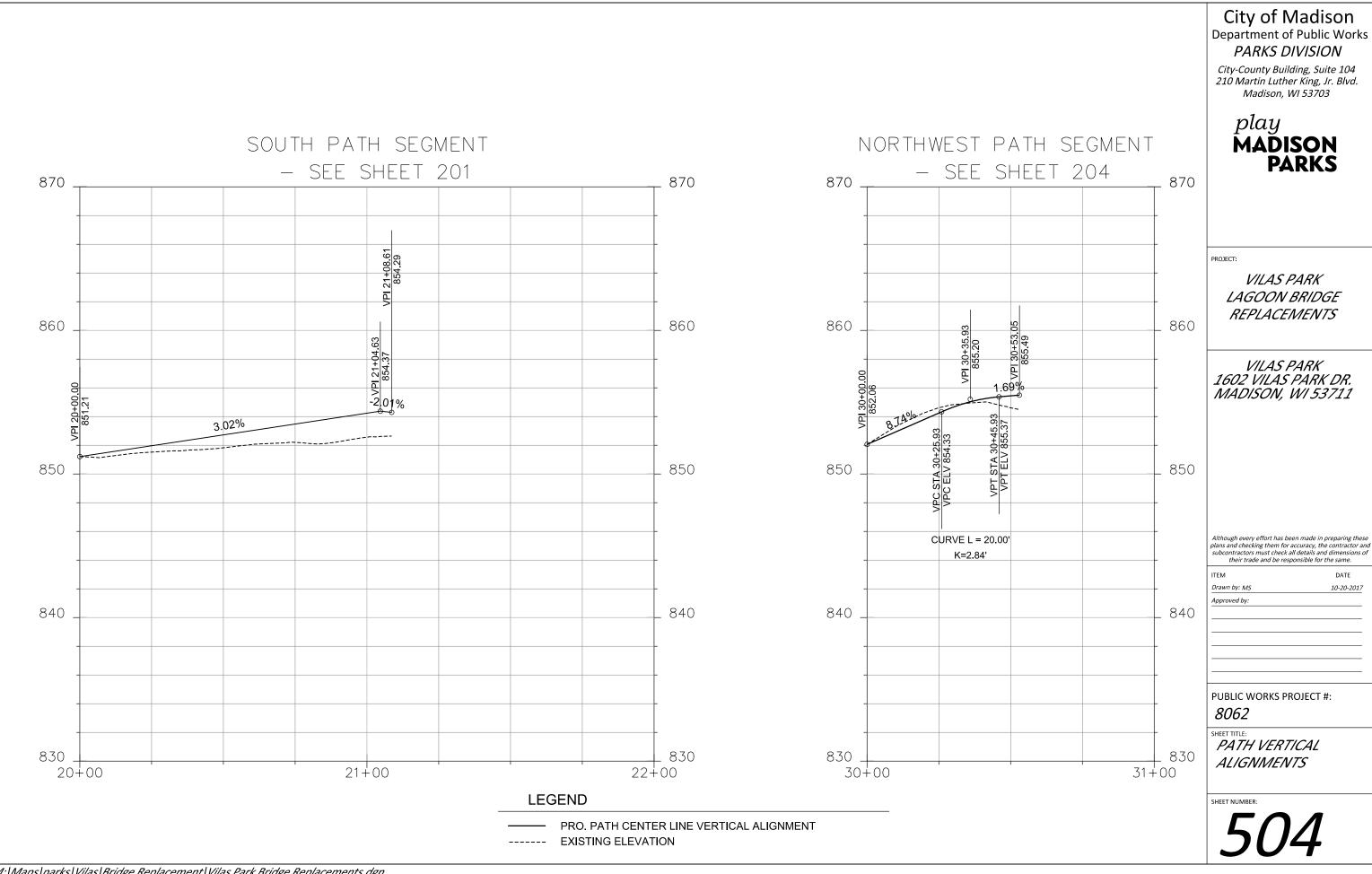
Although every effort has been made in preparing these plans and checking them for accuracy, the contractor and subcontractors must check all details and dimensions of their trade and be responsible for the same.

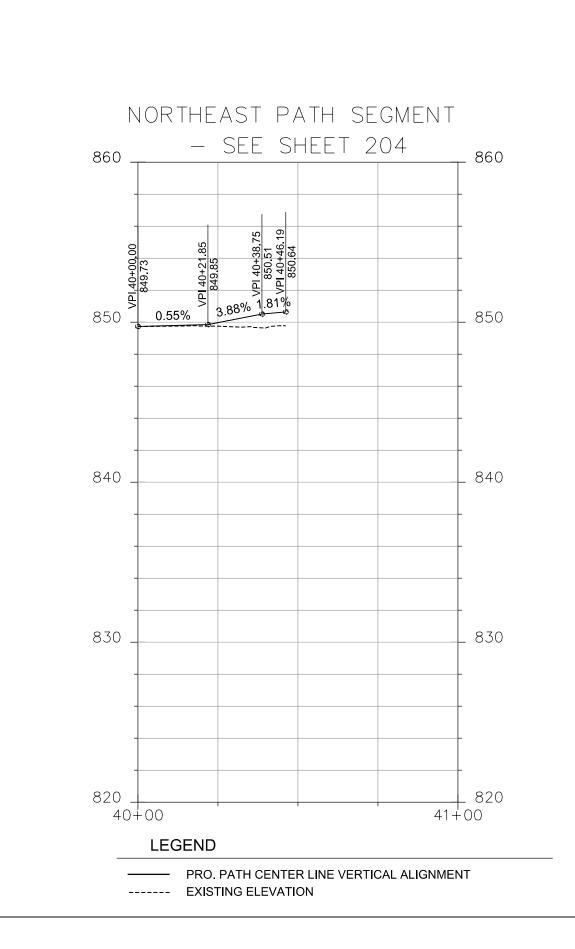
ITEM 10-20-2017 Drawn by: MS

PUBLIC WORKS PROJECT #:

8062

PATH VERTICAL **ALIGNMENTS**





City of Madison Department of Public Works PARKS DIVISION

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play MADISON PARKS

PROJECT:

VILAS PARK LAGOON BRIDGE REPLACEMENTS

VILAS PARK 1602 VILAS PARK DR. MADISON, WI 53711

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ITEM DATE

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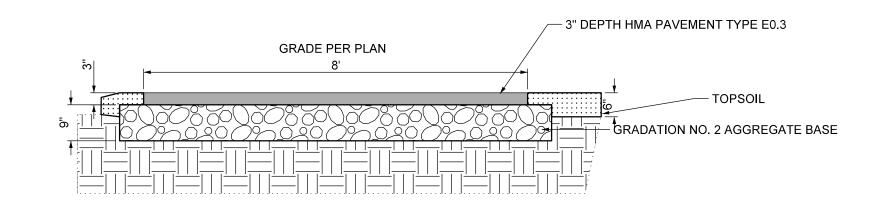
Approved by:

PUBLIC WORKS PROJECT #: 8062

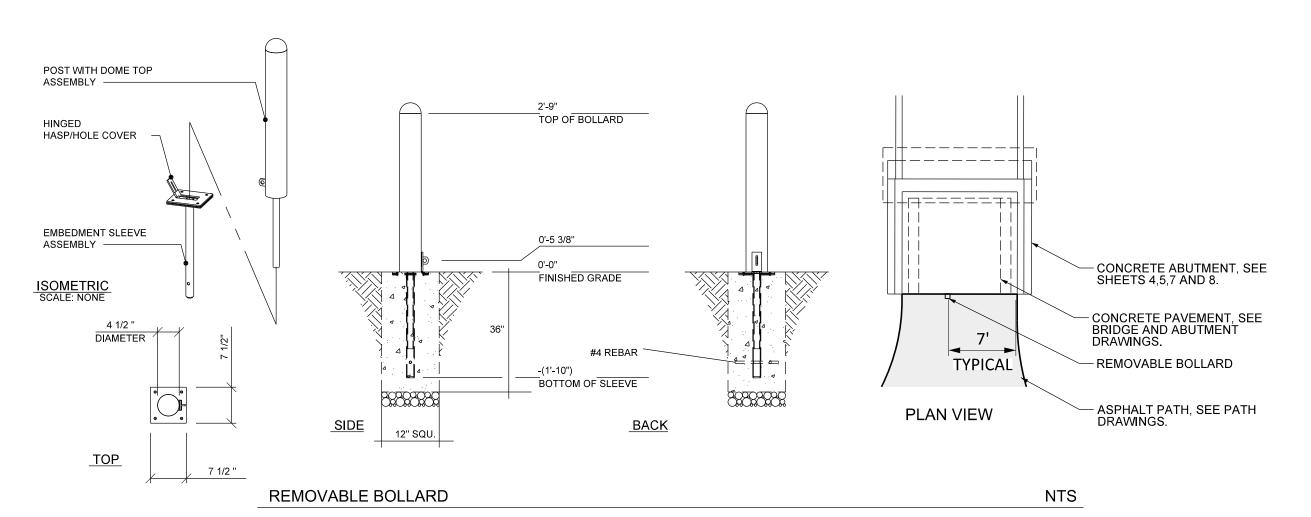
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PATH VERTICAL ALIGNMENTS

SHEET NUMBE



ASPHALT PATH PAVING - TYP.



City of Madison Department of Public Works PARKS DIVISION

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play
MADISON
PARKS

PROJECT:

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VILAS PARK LAGOON BRIDGE REPLACEMENTS

VILAS PARK 1602 VILAS PARK DR. MADISON, WI 53711

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ITEM DATE

Drawn by: MS 10-20-2017

Approved by:

PUBLIC WORKS PROJECT #: 8062

PATH AND BOLLARD
DETAILS

SHEET NUMB

	Vilas Park- L	agoon Bridge Replace	ements						
	Path Quantit	y Calculations							
	City of Madison,	WI Public Works Contract	8062						
	Date Revised:	11/8/2017							
	Notes:								
	Positive volumes	are cuts, negative volumes a	are fills.						
	Not all parts of a	Il surface models (Digital Ter	rain Models) are used for com	putations or i	ntended for	actual co	nstruction		
South Land	ding Comps								

Sort	Grp	Material	ltem	From Surface Model	To Surface Model	area (sq ft)	depth (ft)	Unfac- tored volume (cu ft)	Unfac- tored volume (cu yd)	Expan- sion Factor (%)	(Uncom- pacted) Volume (cu yd)	
0077	Grass to Grass	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	5780	0.50	2890				
	Orass to Orass	Topson Excavate	Cut subsoil to proposed	11/0	TI/a	3700	0.50	2000	107.0	0 70	107.0	I
	Grass to Grass	Subsoil Excavate	subgrade	Ex-6in	Pro-6in	5780	varies	5	0.2	0%	0.2	I
	Grado to Grado	Cabcon Excavato	Fill subsoil to proposed	LX OIII	110 0111	0,00	Variou		0.2	0 70	0.2	1
	Grass to Grass	Subsoil Place	subgrade	Ex-6in	Pro-6in	5780	varies	-3423	-126.8	0%	-126.8	
	Grass to Grass	Topsoil Place	Place 6in topsoil	n/a	n/a	5780	-0.50	-2890	-107.0	0%		
		T O D O O O O O O O O O O O O O O O O O		1.0 %	7.0.5	0.00	5.00				10110	l
	Grass to Asphalt	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	997	0.50	499	18.5	0%	18.5	
			Cut subsoil to proposed									
	Grass to Asphalt	Subsoil Excavate	subgrade	Ex-6in	Pro-12in	997	varies	33	1.2	0%	1.2	
			Fill subsoil to proposed									ı—
	Grass to Asphalt	Subsoil Place	subgrade	Ex-6in	Pro-12in	997	varies	-610	-22.6	0%	-22.6	l
		Gravel (for Pavement)	Place 9in gravel base out to									├
	Grass to Asphalt	Place	6in from pavement edge	n/a	n/a	997	-0.75	-748	-27.7	0%	-27.7	il .
	Grass to Asphalt	Asphalt Place	Place 3in asphalt	n/a	n/a	997	-0.25	-249	-9.2	0%	-9.2	il i
	Asphalt to											
	Asphalt	Asphalt Excavate	Excavate 8in asphalt	n/a	n/a	2294	0.67	1530	56.7	0%	56.7	
	Asphalt to		Cut subsoil to proposed									
	Asphalt	Subsoil Excavate	subgrade	Ex-8in	Pro-12in	2294	varies	102	3.8	0%	3.8	
	Asphalt to		Fill subsoil to proposed									il i
	Asphalt	Subsoil Place	subgrade	Ex-8in	Pro-12in	2294	varies	-1776	-65.8	0%	-65.8	l
	Asphalt to	Gravel (for Pavement)	Place 9in gravel base out to									
	Asphalt	Place	6in from pavement edge	n/a	n/a	2294	-0.75	-1721	-63.7	0%	-63.7	<u> </u>
	Asphalt to											!
	Asphalt	Asphalt Place	Place 3in asphalt	n/a	n/a	2294	-0.25	-574	-21.2	0%	-21.2	
	Asphalt to Lawn	Asphalt Excavate	Excavate 8in asphalt	n/a	n/a	281	0.67	187	6.9	0%	6.9	
			Cut subsoil to proposed									ı
	Asphalt to Lawn	Subsoil Excavate	subgrade	Ex-8in	Pro-6in	281	varies	0	0.0	0%	0.0	
			Fill subsoil to proposed									
	Asphalt to Lawn		subgrade	Ex-6in	Pro-6in	281	varies	-271	-10.1	0%		ı
	Asphalt to Lawn	Topsoil Place	Place 6in topsoil	n/a	n/a	281	-0.50	-140	-5.2	0%	-5.2	1
	Proposed											

land Comp	s										
Sort	Grp	Material	ltem	From Surface Model	To Surface Model	area (sq ft)	depth (ft)	Unfac- tored volume (cu ft)	Unfac- tored volume (cu yd)	Expan- sion Factor (%)	Factored (Uncom- pacted) Volume (cu yd)
	Grass to Grass	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	7290	0.50	3645	135.0	0%	135.
			Cut subsoil to proposed								
	Grass to Grass	Subsoil Excavate	subgrade	Ex-6in	Pro-6in	7290	varies	140	5.2	0%	5.
			Fill subsoil to proposed								
	Grass to Grass	Subsoil Place	subgrade	Ex-6in	Pro-6in	7290	varies	-7802	-289.0	0%	-289.
	Grass to Grass	Topsoil Place	Place 6in topsoil	n/a	n/a	7290	-0.50	-3645	-135.0	0%	-135.0
	Grass to Asphalt	Topsoil Excavate	Strip 6in topsoil	n/a	n/a		0.50	0	0.0	0%	0.0
	Orass to repriate	Topoon Exoavate	Cut subsoil to proposed	11/4	11/4		0.00	Ü	0.0	0.70	0.,
	Grass to Asphalt	Subsoil Excavate	subgrade	Ex-6in	Pro-12in		varies		0.0	0%	0.0
	Grade to 7 topridit	Cabcon Excavato	Fill subsoil to proposed	EX OIII	110 12		Variou		0.0	0 70	· · ·
	Grass to Asphalt	Subsoil Place	subgrade	Ex-6in	Pro-12in		varies		0.0	0%	0.
		Gravel (for Pavement)	Place 9in gravel base out to								
	Grass to Asphalt	, ,	6in from pavement edge	n/a	n/a		-0.75	0	0.0	0%	0.0
	Grass to Asphalt	Asphalt Place	Place 3in asphalt	n/a	n/a		-0.25	0	0.0	0%	0.0
	Asphalt to			1.							
	Asphalt	Asphalt Excavate	Excavate 8in asphalt	n/a	n/a	2491	0.67	1661	61.5	0%	61.
	Asphalt to		Cut subsoil to proposed	- 0:							
_	Asphalt	Subsoil Excavate	subgrade	Ex-8in	Pro-12in	2491	varies	0	0.0	0%	0.0
	Asphalt to	0 1 75	Fill subsoil to proposed	E 0:	D 40:	0404		00.45	440.4	00/	440
-	Asphalt	Subsoil Place	subgrade Place 9in gravel base out to	Ex-8in	Pro-12in	2491	varies	-3945	-146.1	0%	-146.
	Asphalt to Asphalt	Gravel (for Pavement) Place	6in from pavement edge	2/2	2/2	2491	-0.75	-1868	-69.2	0%	-69.3
	Asphalt to	Place	om from pavement edge	n/a	n/a	2491	-0.75	-1000	-09.2	0%	-09.4
	Asphalt	Asphalt Place	Place 3in asphalt	n/a	n/a	2491	-0.25	-623	-23.1	0%	-23.
	<u> </u>	Asphalt Excavate	Excavate 8in asphalt	n/a	n/a	2401	0.67	0	0.0		0.0
	7 topridit to Edwir	7 topridit Exodutate	Cut subsoil to proposed	170	TIV C		0.01	0	0.0	070	0.
	Asphalt to Lawn	Subsoil Excavate	subgrade	Ex-8in	Pro-6in		varies		0.0	0%	0.
	i i		Fill subsoil to proposed								
	Asphalt to Lawn	Subsoil Place	subgrade	Ex-6in	Pro-6in		varies		0.0	0%	0.0
	Asphalt to Lawn	Topsoil Place	Place 6in topsoil	n/a	n/a		-0.50	0	0.0	0%	0.0

7												
		_			From Surface	To Surface	area	depth	Unfac- tored volume	Unfac- tored volume	Expan- sion Factor	Factored (Uncom- pacted) Volume
╂	Sort	Grp	Material	Item	Model	Model	(sq ft)	(ft)	(cu ft)	(cu yd)	(%)	(cu yd)
oll-		Grass to Grass	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	12883	0.50	6441	238.6	0%	238.6
		0 4- 0	O., b : 1	Cut subsoil to proposed	F., 6:-	D C:	40000		7.47	07.7	00/	07.7
2		Grass to Grass	Subsoil Excavate	subgrade	Ex-6in	Pro-6in	12883	varies	747	27.7	0%	27.7
7		Grass to Grass	Subsoil Place	Fill subsoil to proposed	Ex-6in	Pro-6in	12883	varies	-3784	-140.1	0%	-140.1
8			Topsoil Place	subgrade Place 6in topsoil	n/a	n/a	12883	-0.50	-3784 -6441	-140.1	0%	-140.1
0		Grass to Grass	Topsoli Place	Place offitopsoil	n/a	n/a	12003	-0.50	-0441	-238.0	0%	-238.6
		Grass to Asphalt	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	758	0.50	379	14.0	0%	14.0
5				Cut subsoil to proposed								
ᆘ		Grass to Asphalt	Subsoil Excavate	subgrade	Ex-6in	Pro-12in	758	varies	26	0.9	0%	0.9
2		Grass to Asphalt	Subsoil Place	Fill subsoil to proposed subgrade	Ex-6in	Pro-12in	758	varies	-472	-17.5	0%	-17.5
ااء		·	Gravel (for Pavement)	Place 9in gravel base out to								
6		Grass to Asphalt	Place	6in from pavement edge	n/a	n/a	758	-0.75	-568	-21.0	0%	-21.0
7		Grass to Asphalt	Asphalt Place	Place 3in asphalt	n/a	n/a	758	-0.25	-189	-7.0	0%	-7.0
2		Asphalt to Asphalt	Asphalt Excavate	Excavate 8in asphalt	n/a	n/a	1407	0.67	938	34.7	0%	34.7
7		Asphalt to Asphalt	Subsoil Excavate	Cut subsoil to proposed subgrade	Ex-8in	Pro-12in	1407	varies	332	12.3	0%	12.3
8		Asphalt to Asphalt	Subsoil Place	Fill subsoil to proposed subgrade	Ex-8in	Pro-12in	1407	varies	-220	-8.1	0%	-8.1
8		Asphalt to Asphalt	Gravel (for Pavement) Place	Place 9in gravel base out to 6in from payement edge	n/a	n/a	1407	-0.75	-1055	-39.1	0%	-39.1
		Asphalt to	Asphalt Place	Place 3in asphalt	n/a	n/a	1407	-0.25	-352	-13.0	0%	-13.0
7			Asphalt Excavate	Excavate 8in asphalt	n/a	n/a	2851	0.67	1902	70.4	0%	70.4
2			Subsoil Excavate	Cut subsoil to proposed subgrade	Ex-8in	Pro-6in	2851	varies	295	10.9	0%	10.9
2 9 -		Asphall to Lawn	SUDSUIT EXCAVATE		LX-OIII	F10-0111	2001	varies	295	10.9	0%	10.9
		Asphalt to Lawn	Subsoil Place	Fill subsoil to proposed subgrade	Ex-6in	Pro-6in	2851	varies	-1656	-61.3	0%	-61.3
0		Asphalt to Lawn		Place 6in topsoil	n/a	n/a	2851	-0.50	-1426	-52.8	0%	-52.8

Computation Summary			
Positive volumes are cuts (m	aterial available), negative volumes are fi	lls (mate	rial needed)
	Sum of Unfac-tored volume (cu yd)		
Asphalt Place	-73.6		
Gravel (for Pavement) Place	-220.7		
Subsoil Excavate	62.2		
Subsoil Place	-887.3		
Topsoil Excavate	513.1		
Topsoil Place	-538.6		
Asphalt Excavate	230.3		
(blank)			
Material	0.0		
Grand Total	-914.6		
Reorganized into bid table	items		
•		Units	
Bid Item	Quantity	CY	Relation to Table Above
			=Subsoil Excavate + Topsoil
20101 Excavation Cut	806	CY	Excavate+Asphalt Excavate
20201 Fill	-825	CY	= Subsoil Excavate - Subsoil Place
20221 Topsoil	-3225	SY	= Topsoil Place/.167 (depth)
40102 Crushed Aggregate			
Base Course Gradation No.			
2 & 3	-441.5	TONS	= (Gravel Place) * 2.0 ton/cubic yard
40201 3" Depth HMA			
Pavement Type E-0.3	-158.9	TONS	= Asphalt Place * 2.16 ton/cubic yard

City of Madison Department of Public Works PARKS DIVISION

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play MADISON PARKS

PROJECT:

VILAS PARK LAGOON BRIDGE REPLACEMENTS

VILAS PARK 1602 VILAS PARK DR. MADISON, WI 53711

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ITEM	DATE
Drawn by: MS	10-20-2017
Approved by:	
	_

PUBLIC WORKS PROJECT #: 8062

PATH QUANTITY
CALCULATIONS

SHEET NUMB