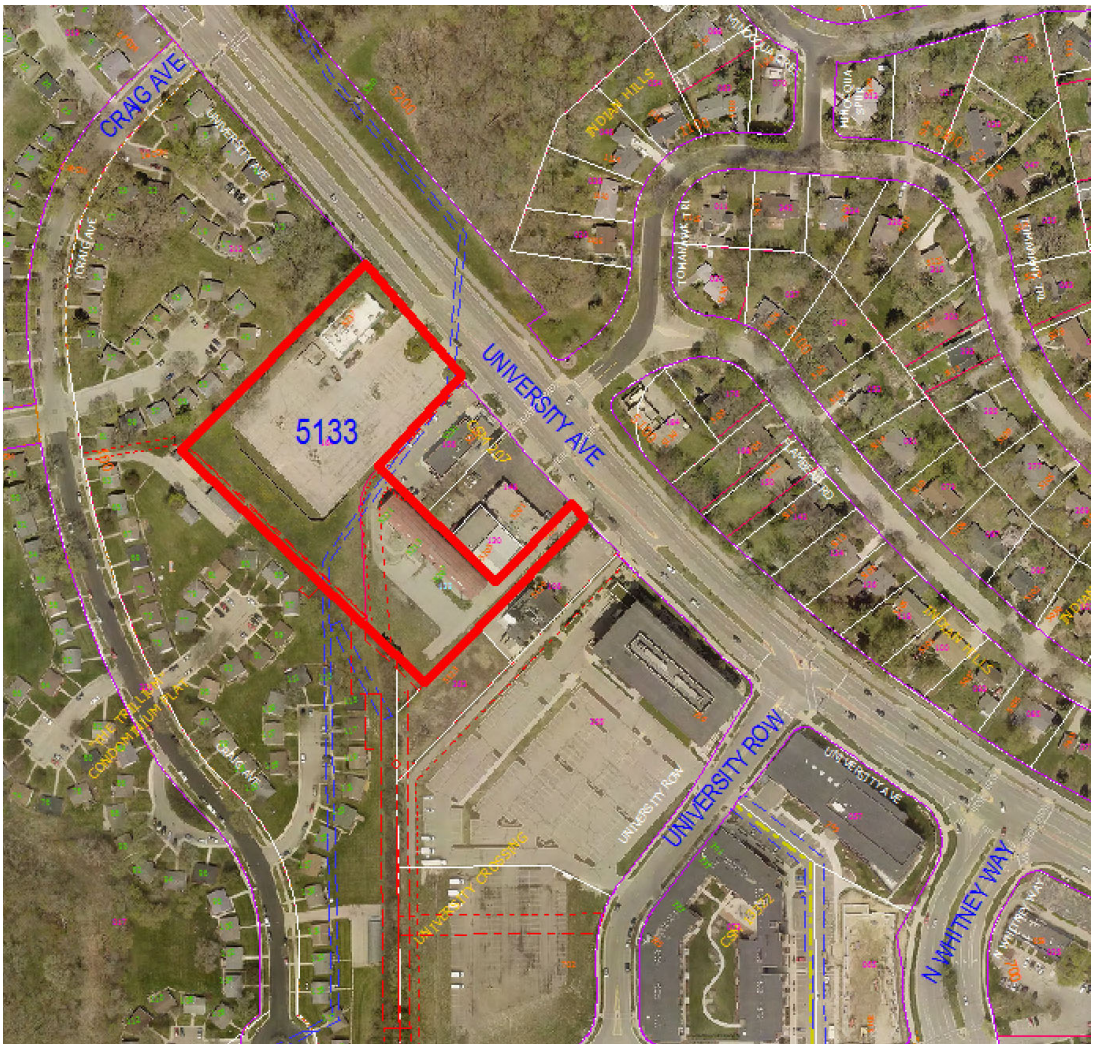
5133 University Avenue
Addendum No. 1, Contract 9021
MUNIS 13464
Developer: Degen & Associates, LLC



Summary of Improvements:

- Actual field conditions at the location that the proposed private sanitary sewer lateral for Buildings A/B do not provide adequate clearances to allow the original planned construction method of jack & bore under the existing public storm sewer box culvert.

- The Developer has reviewed three different options to resolve the conflict issue with City Engineering Staff and have requested to proceed with their Options 1 of partial deconstruction and repair of the existing public storm box culvert to facilitate the installation of the private sewer service lateral for Buildings A/B.

- City Engineering staff are agreeable to allowing Option 1 pending completion of Addendum No. 1 to contract 9021.

Madison Regional Office
161 Horizon Drive, Suite 101
Verona, WI 53593
608.848.5060

Memorandum

To:	Timothy Troester, P.E. (City of Madison)
From:	Carley Jones, P.E. (JSD Professional Services, Inc.)
Re:	5133 University Avenue (Contract 9021) – Box Culvert Conflict
JSD Project #:	07-2912
Date:	January 5, 2022
cc:	Tom Degen, Justin Frahm (JSD), Mark Brusberg, P.E. (Steven's), Susan Lasecki, P.E. (Ionic)

On December 20, 2021, a meeting was held to discuss options for a conflict with the existing box culvert that had been discovered in the field on the 5133 University Avenue project. Attendance to the meeting included Timothy Troester, Gregory Fries, Justin Frahm, Tom Degen, and Carley Jones. The conflict was discussed as the shared, private sanitary connection for Buildings A/B has less vertical clearance to the bottom of the storm box culvert based on field survey verification via excavation than the original assumption per as-built drawings and storm box culvert information.

A few options were discussed in the meeting as outlined below:

OPTION 1 – Keep Proposed Sanitary Lateral Alignment with Gravity Flow

- Vertical elevation clearance originally assumed at ~12"; field survey verified at ~4" with both sides of the storm box culvert excavated;
- Based on limited clearance, City approved contractor is unable to execute original means and methods to allow for jack and bore of new private sanitary lateral under storm box culvert
- Will require open cut and replacement of portion of existing box culvert

OPTION 2 – Re-route lateral to SAN-6, Upsize and Correct Public Sewer to 12", Keep Gravity Flow

- Will require open cut of existing box culvert; bottom of storm box invert as-built field condition is not known (unexcavated)
- Based on san-6 & san-4 elevations, very limited to zero clearance elevation of sanitary connection under storm box culvert
- Requires additional public ROW work, traffic control and restoration in University Ave and MOKA driveway
- Requires bypass pumping of upstream sanitary connection to adjacent west residential properties

OPTION 3 – Add Lift Station to Pump Sanitary Lateral

- Maintain proposed lateral crossing location at a lower elevation under storm box
- Drill or Jack and Bore at lower elevation with clearance to box culvert and pump up to SAN-2 on East side of Culvert
- Requires on-site lift station

OPTION 3A – Pump lower parking levels, but gravity flow upper floors

- Maintain proposed lateral crossing location at a lower elevation under storm box
- Drill or Jack and Bore at lower elevation with clearance to box culvert and pump up to SAN-2 on East side of Culvert
- Requires on-site lift station

The city and JSD reviewed significant concerns with OPTION 2 in re-routing the lateral to SAN-6 as this would require significant additional work in the University Avenue right-of-way including traffic control, lane closures as well as correcting a back-pitched condition on the existing sanitary main under the box culvert at that location.

The owner has concerns with long term maintenance of a lift station as shown in OPTION 3 and 3A.

As stated in the email from 12/20/2021 from Tim Troester (Attachment 8), this memo is to serve as the "memo or letter from the Developer or Developer's Engineer on what their preferred option is." The construction team and owner prefer and have decided to move forward with OPTION 1; which includes removal of a section of the box culvert, installation of the sanitary lateral at a slope of 0.4% along original proposed alignment, and the replacement of a section of the box culvert. This option will install the proposed sanitary lateral as originally indicated on the city-approved plans. See attachments for detail of the removal and replacement of the box culvert.

Please see attachments for detail for Storm Box Culvert Removal and Replacement:

1. Design Memo (Structural Engineer)
2. Utility Plan Markup
3. Box Culvert Cross Section – Removal and Replacement
4. University Avenue Storm Culvert – Sanitary Install Plan
5. Box Culvert Cross Section – Vertical Clearance
6. Plan Markup – Options from meeting (12-20-2021)
7. Meeting Minutes (12-20-2021)
8. Email from Tim Troester (12-20-2021)

ATTACHMENT 1 – DESIGN MEMO (STRUCTURAL ENGINEER)

DESIGN MEMO

Project Name:	University Ave Culvert 5273, 5265 & 5257 University Ave Madison, Wisconsin
Ionic Project Number:	21-038
Date:	1/5/2021
Submitted by:	Susan Lasecki, Ionic Structures and Design, LLC
Submitted to:	Mr. Tom Degen, Degen & Associates

DISCUSSION

The proposed 8" sanitary line on the University Ave Apartment building project is to be installed beneath the existing box culvert. The elevation of the proposed sanitary line with respect to the existing box culvert based on the existing construction documents is not as anticipated.

The location of the sanitary line and box culvert are shown in Figure A.

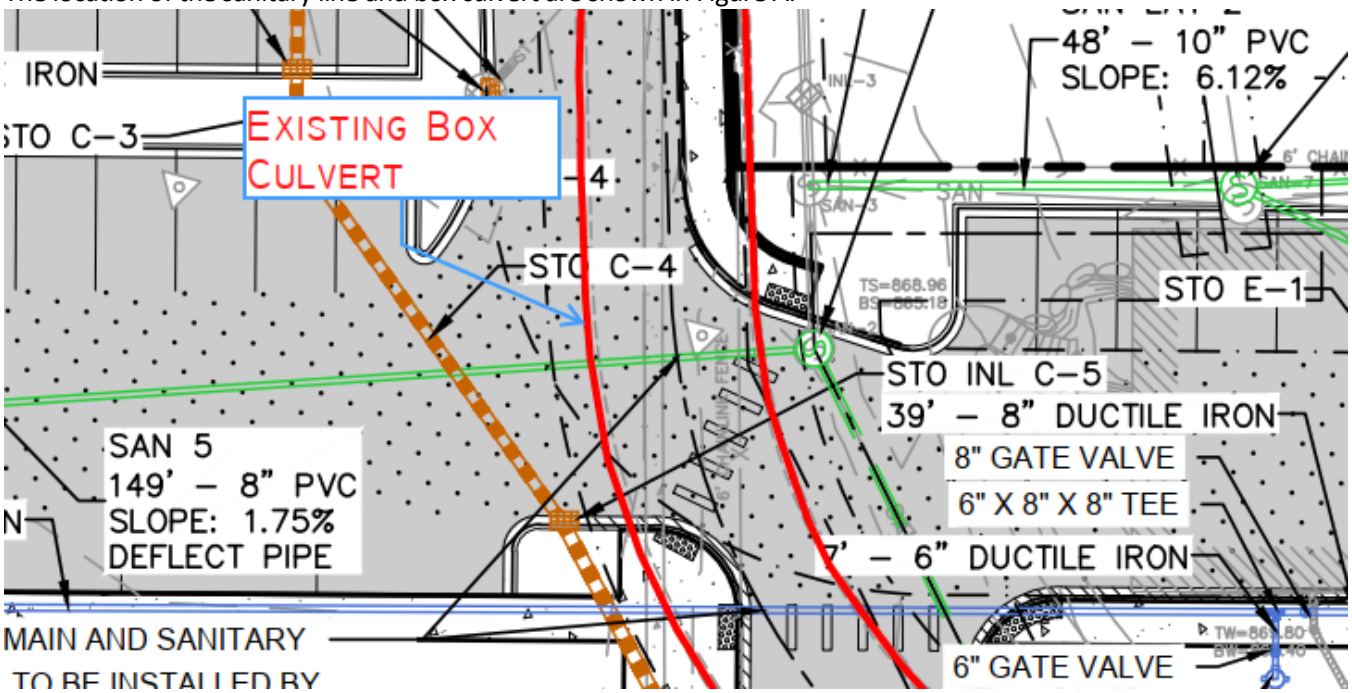


Figure A: Partial site plan showing location of sanitary line and existing box culvert.
Site plan provided by JSD Professional Services

The new sanitary line must be installed just below the box culvert which has changed the proposed method of installation. The design and construction team have worked together to determine the method of installing this sanitary line that will minimize the structural repairs needed to the culvert, create a safe working condition and minimize the amount of time that the culvert would be out of service. The design team and contractor propose the following approach:

- Saw cut and remove a portion of the existing precast concrete culvert lid.
- Sawcut and remove a portion of the base slab to within approximately one foot of the existing culvert walls.
- Excavate and remove the soil within the area of the sanitary line as needed for the installation of the pipe.
- Install the sanitary line.
- Fill in the remaining excavated area with controlled low strength material (CLSM concrete fill).
- Drill and dowel bars into the existing base slab along the perimeter of the opening.
- Place reinforcement in infill area.
- Place bentonite (or equivalent) waterstop at joint between the infill area and the existing concrete slab.
- Cast new concrete in infill area.
- Reinstall precast cap and anchor to existing walls with a mortar bed and drilled and epoxied dowels.

A section illustrating the proposed approach has been provided in Figure B, below. This section is taken from the original construction documents as prepared by Mead and Hunt, dated October 1963.

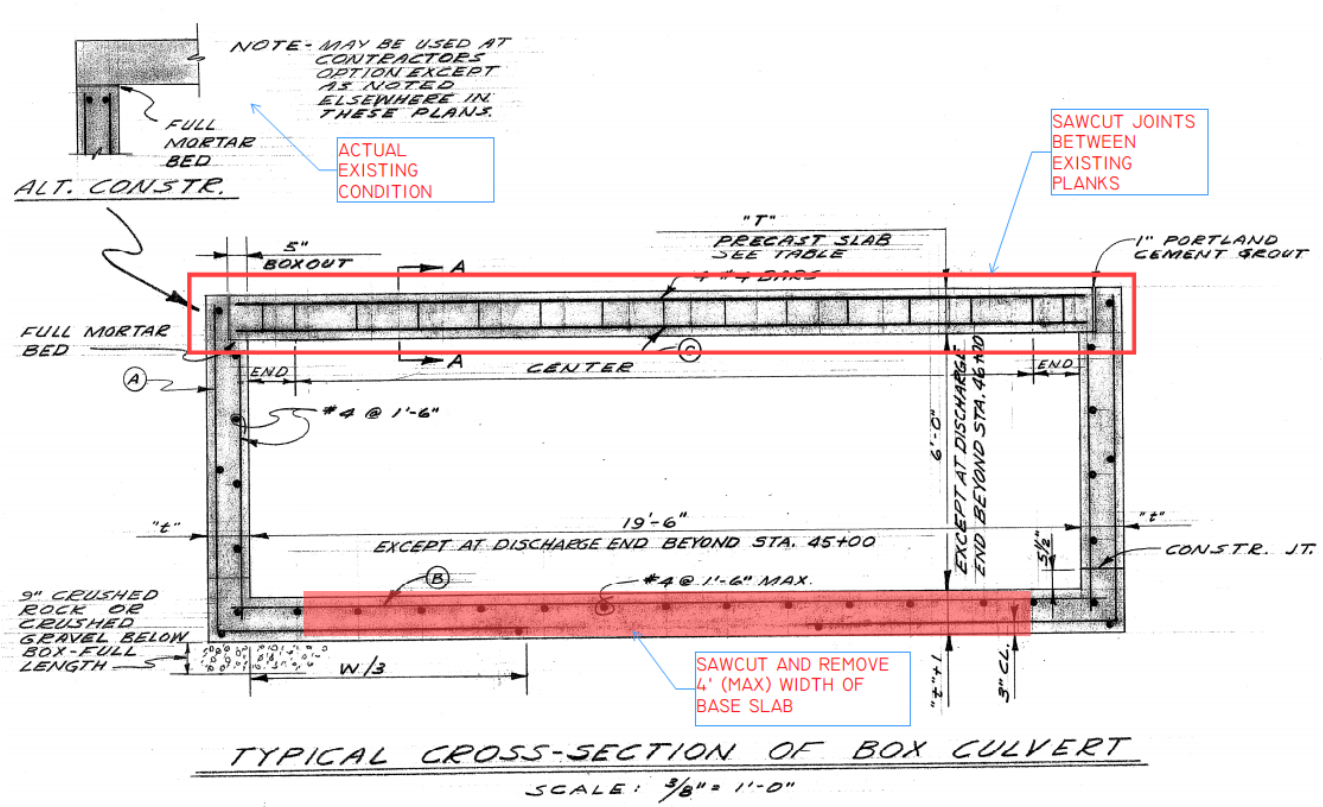


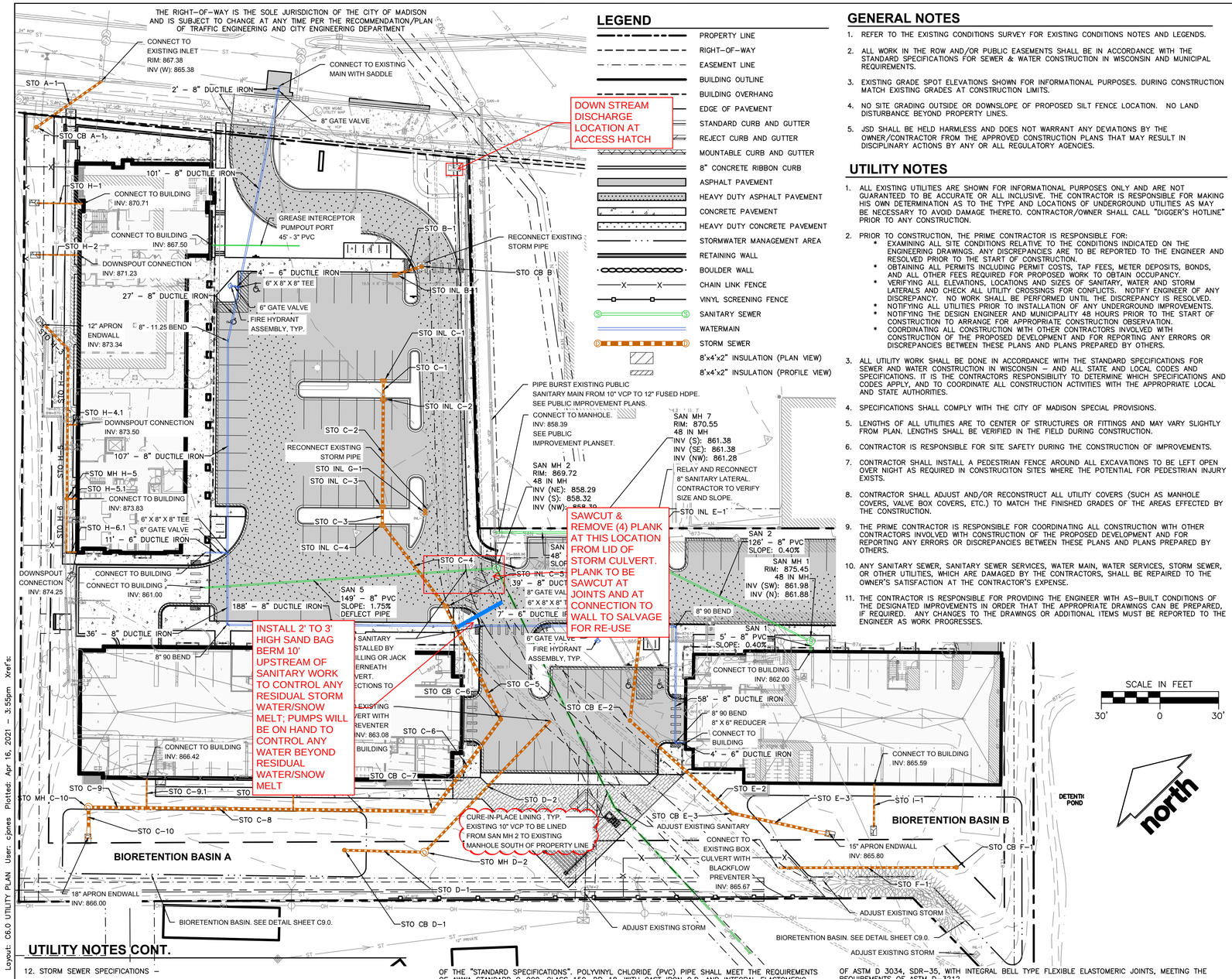
Figure B: Proposed partial demolition of existing box culvert.

This approach should limit the extent of demolition needed to install the sanitary line and limit the amount of time the culvert is unable to be in service.

Please feel free to contact me with any question or concerns regarding the content of this memo.

Susan Lasecki, P.E.

ATTACHMENT 2 – PLAN MARKUP



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING OUTLINE
- BUILDING OVERHANG
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- MOUNTABLE CURB AND GUTTER
- 8" CONCRETE RIBBON CURB
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- STORMWATER MANAGEMENT AREA
- RETAINING WALL
- BOULDER WALL
- CHAIN LINK FENCE
- VINYL SCREENING FENCE
- SANITARY SEWER
- WATERMAIN
- STORM SEWER
- 8'x4'x2" INSULATION (PLAN VIEW)
- 8'x4'x2" INSULATION (PROFILE VIEW)

GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE ROW AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN AND MUNICIPAL REQUIREMENTS.
3. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
4. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.

UTILITY NOTES

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
   - EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING ALL ELEVATIONS, LOCATIONS AND SIZES OF SANITARY, WATER AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
   - COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN — AND ALL STATE AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.
4. SPECIFICATIONS SHALL COMPLY WITH THE CITY OF MADISON SPECIAL PROVISIONS.
5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED IN CONSTRUCITON SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.
8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
9. THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
10. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.

PROPOSED STRUCTURES TABLE

LABEL	RIM EL. (FT)	INVERT EL. (FT)	DEPTH (FT)	STRUCTURE DESC.	FRAME & GRATE
STO CB A-1	869.17	E INV: 865.79 (12")	3.4	36 IN MH (FLAT)	R-2050 TYPE D
*STO CB B	870.82	NW INV: 862.66 (12") E INV: 862.16 (18")	8.7	48 IN MH (FLAT)	R-2050 TYPE D
*STO CB C-6	871.00	N INV: 866.78 (18") W INV: 866.68 (18")	4.3	48 IN MH (FLAT)	R-2050 TYPE D
STO CB C-7	870.94	E INV: 866.56 (18") NW INV: 866.46 (18")	4.5	48 IN MH (FLAT)	R-2510 TYPE A
STO CB D-1	867.80	SE INV: 863.55 (12")	4.2	36 IN MH (FLAT)	R-2050 TYPE D
*STO CB E-2	871.26	NE INV: 866.29 (15") S INV: 866.19 (15")	5.1	48 IN MH (FLAT)	R-2050 TYPE D
STO CB E-3	871.29	N INV: 865.98 (15") SE INV: 865.88 (15")	5.4	48 IN MH (FLAT)	R-2510 TYPE A
STO CB F-1	868.30	NW INV: 865.80 (12")	2.5	36 IN MH (FLAT)	R-2050 TYPE D
*STO INL B-1	870.72	SE INV: 862.94 (12")	7.8	2 x 3 INLET	R-3067 TYPE L
*STO INL C-1	871.63	SW INV: 867.87 (12")	3.8	2 x 3 INLET	R-3067 TYPE L
*STO INL C-2	871.87	NE INV: 867.85 (12") SW INV: 867.60 (15")	4.3	2 x 3 INLET	R-3067 TYPE L
*STO INL C-3	871.50	NE INV: 867.49 (15") SW INV: 867.39 (15")	4.1	2 x 3 INLET	R-3067 TYPE L
*STO INL C-4	872.77	NE INV: 867.37 (15") S INV: 867.27 (15")	5.5	2 x 3 INLET	R-3067 TYPE L
*STO INL C-5	871.92	N INV: 867.16 (15") S INV: 866.91 (18")	5.0	2 x 3 INLET	R-3067 TYPE L
*STO INL E-1	870.20	SW INV: 866.47 (15")	3.7	2 x 3 INLET	R-3067 TYPE L
STO INL G-1	871.70	E INV: 863.79 (10")	7.9	2 x 3 INLET	R-3067 TYPE L
STO MH C-10	869.26	SE INV: 866.11 (18") SW INV: 866.02 (18")	3.2	48 IN MH (FLAT)	R-1550 SOLID LID
STO MH D-2	869.81	NW INV: 863.41 (12") E INV: 863.31 (12")	6.5	48 IN MH (FLAT)	R-1550 SOLID LID
STO MH H-5	874.92	SE INV: 872.68 (8") SW INV: 872.76 (6") NE INV: 872.51 (12")	2.4	36 IN MH (FLAT)	R-1550 SOILID LID

*STRUCTURE TO BE INSTALLED WITH OIL AND GREASE FILTER.

PROPOSED PIPES TABLE

LABEL	TO	FROM	LENGTH	DISCHARGE EL. (FT)	INVERT EL. (FT)	SLOPE	SIZE & MATERIAL
STO A-1	EXISTING INLET	STO CB A-1	41'	865.38	865.79	1.00%	12 IN HDPE
STO B-1	STO CB B	STO INL B-1	14'	862.66	862.94	2.00%	12 IN HDPE
STO C-1	STO INL C-2	STO INL C-1	9'	867.85	867.87	0.20%	12 IN HDPE
STO C-2	STO INL C-3	STO INL C-2	56'	867.49	867.60	0.20%	15 IN HDPE
STO C-3	STO INL C-4	STO INL C-3	9'	867.37	867.39	0.20%	15 IN HDPE
STO C-4	STO INL C-5	STO INL C-4	53'	867.16	867.27	0.20%	15 IN HDPE
STO C-5	STO CB C-6	STO INL C-5	64'	866.78	866.91	0.20%	18 IN HDPE
STO C-6	STO CB C-7	STO CB C-6	59'	866.56	866.68	0.20%	18 IN HDPE
STO C-7	STO MH C-8	STO CB C-7	71'	866.32	866.46	0.20%	18 IN HDPE
STO C-8	STO MH C-9	STO MH C-8	75'	866.17	866.32	0.20%	18 IN HDPE
STO C-8.1	STO MH C-8	BUILDING	15'	866.82	866.98	1.04%	6 IN HDPE
STO C-9	STO MH C-10	STO MH C-9	30'	866.11	866.17	0.20%	18 IN HDPE
STO C-9.1	STO MH C-9	BUILDING	15'	866.67	866.82	1.04%	6 IN HDPE
STO C-10	FES C	STO MH C-10	10'	866.00	866.02	0.20%	18 IN HDPE
STO D-1	STO MH D-2	STO CB D-1	41'	863.41	863.55	0.34%	12 IN HDPE
STO D-2	BOX CULVERT	STO MH D-2	93'	863.08	863.31	0.24%	12 IN HDPE
STO E-1	STO CB E-2	STO INL E-1	94'	866.29	866.47	0.20%	15 IN HDPE
STO E-2	STO CB E-3	STO CB E-2	71'	865.98	866.19	0.29%	15 IN HDPE
STO E-3	FES E	STO CB E-3	45'	865.80	865.88	0.18%	15 IN HDPE
STO F-1	BOX CULVERT	STO CB F-1	91'	865.57	865.80	0.25%	12 IN HDPE
STO H-1		BUILDING	23'	870.47	870.71	1.04%	6 IN HDPE
STO H-2		BUILDING	22'	871.01	871.23	1.04%	6 IN HDPE
STO H-3	ENDWALL	BEND	17'	872.30	872.34	0.22%	12 IN HDPE
STO H-4	BEND	STO MH H-4	39'	872.34	872.43	0.22%	12 IN HDPE
STO H-4.1	STO MH H-4	BUILDING	5'	872.68	872.73	1.04%	6 IN HDPE
STO H-5	STO MH H-4	STO MH H-5	38'	872.43	872.51	0.22%	12 IN HDPE
STO H-5.1	STO MH H-5	BUILDING	5'	872.68	872.70	0.40%	8 IN HDPE
STO H-6	STO MH H-5	STO MH H-6	27'	872.76	873.04	1.04%	6 IN HDPE
STO H-6.1	STO MH H-6	BUILDING	5'	873.04	873.09	1.04%	6 IN HDPE
STO I-1		BUILDING	22'	865.50	865.59	0.40%	8 IN HDPE

UTILITY NOTES CONT.

12. STORM SEWER SPECIFICATIONS —

PIPE – REINFORCED CONCRETE PIPE (RCP) SHALL MEET THE REQUIREMENTS OF ASTM CLASS III (MINIMUM) C-76 WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C-443. HIGH DENSITY DUAL-WALL POLYETHYLENE CORRUGATED PIPE SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATER TIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M-294 TYPE "S".

INLETS – INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE, NO. 28 OF THE "STANDARD SPECIFICATIONS", OR APPROVED EQUAL. CURB FRAME & GRATE SHALL BE NEENAH R-3067 WITH TYPE L GRATE, OR EQUAL.

BACKFILL AND BEDDING – STORM SEWER SHALL BE CONSTRUCTED WITH GRAVEL BACKFILL AND CLASS "B" BEDDING IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".

MANHOLE FRAMES AND COVERS – MANHOLE FRAMES AND COVERS SHALL BE NEENAH R-1550 SOLID LID OR EQUAL.

CATCH BASIN FRAMES AND COVERS – CATCH BASIN FRAMES AND COVERS SHALL BE NEENAH R-2050 TYPE D LID OR EQUAL.

FIELD TILE CONNECTION – ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE(S) FOR STORM SEWER. TILE LINES CROSSED BY THE TRENCH SHALL BE REPLACED WITH THE SAME MATERIAL AS THE STORM SEWER.

13. WATER MAIN SPECIFICATIONS —

PIPE – DUCTILE IRON PIPE SHALL BE CLASS 52 CONFORMING TO AWWA C151 AND CHAPTER 8.18.0 OF THE "STANDARD SPECIFICATIONS". POLYVINYL CHLORIDE (PVC) PIPE SHALL MEET THE REQUIREMENTS OF AWWA STANDARD C-900, CLASS 150, DR-18, WITH CAST IRON O.D. AND INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS. NON-METALLIC WATER MAINS SHALL BE INSTALLED WITH BLUE INSULATION TRACER WIRE AND CONFORM WITH SPS 382.30(11)(k). HIGH DENSITY DUAL-WALL POLYETHYLENE CORRUGATED PIPE SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATER TIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M-294 TYPE "S".

VALVES AND VALVE BOXES – GATE VALVES SHALL BE AWWA GATE VALVES MEETING THE REQUIREMENTS OF AWWA C-500 AND CHAPTER 8.27.0 OF THE "STANDARD SPECIFICATIONS". GATE VALVES AND VALVE BOXES SHALL CONFORM TO LOCAL PLUMBING ORDINANCES.

HYDRANTS – HYDRANTS SHALL CONFORM TO THE SPECIFICATIONS OF THE CITY OF MADISON. THE DISTANCE FROM THE GROUND LINE TO THE CENTERLINE OF THE LOWEST NOZZLE AND THE LOWEST CONNECTION OF THE FIRE DEPARTMENT SHALL BE NO LESS THAN 18-INCHES AND NO GREATER THAN 23-INCHES (SEE DETAIL).

BEDDING AND COVER MATERIAL – PIPE BEDDING AND COVER MATERIAL SHALL BE SAND, CRUSHED STONE CHIPS OR CRUSHED STONE SCREENINGS CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

BACKFILL – BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS". GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".

14. SANITARY SEWER SPECIFICATIONS —

PIPE – SANITARY SEWER PIPE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) MEETING REQUIREMENTS OF ASTM D 3034, SDR-35, WITH INTEGRAL BELL TYPE FLEXIBLE ELASTOMERIC JOINTS, MEETING THE REQUIREMENTS OF ASTM D-3212.

BEDDING AND COVER MATERIAL – BEDDING AND COVER MATERIAL SHALL CONFORM TO THE APPROPRIATE SECTIONS OF THE "STANDARD SPECIFICATION" WITH THE FOLLOWING MODIFICATION: "COVER MATERIAL SHALL BE THE SAME AS USED FOR BEDDING AND SHALL CONFORM TO SECTION 8.43.2 (A). BEDDING AND COVER MATERIAL SHALL BE PLACED IN A MINIMUM OF THREE SEPARATE LIFTS, OR AS REQUIRED TO INSURE ADEQUATE COMPACTING OF THESE MATERIALS, WITH ONE LIFT OF BEDDING MATERIAL ENDING AT OR NEAR THE SPRINGLINE OF THE PIPE. THE CONTRACTOR SHALL TAKE CARE TO COMPLETELY WORK BEDDING MATERIAL UNDER THE HAUNCH OF THE PIPE TO PROVIDE ADEQUATE SIDE SUPPORT."

BACKFILL – BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS." GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS."

MANHOLES – MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE NOS. 12, 13 AND 15 OF THE "STANDARD SPECIFICATIONS" AND ALL SPECIAL PROVISIONS OF THE CITY OF MADISON.

MANHOLE FRAMES AND COVERS – MANHOLE FRAMES AND COVERS SHALL BE NEENAH R-1642 WITH TYPE "B" SELF SEALING LIDS, NON-ROCKING OR EQUAL.

15. WATERMAIN AND SANITARY SEWER SHALL BE INSULATED WHEREVER THE DEPTH OF COVER IS LESS THAN 6 FEET. INSULATION AND INSTALLATION OF INSULATION SHALL BE CONFORMING WITH CHAPTER 4.17.0 "INSULATION" OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN 6TH EDITION UPDATED WITH ITS LATEST ADDENDUM (TYP.).

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD Professional Services, Inc.
Engineers • Surveyors • Planners
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CLIENT:
DEGEN & ASSOCIATES, LLC

CLIENT ADDRESS:
PO BOX 5567
MADISON, WI 53705-0567

PROJECT:
5273, 5265, & 5257 UNIVERSITY AVE

PROJECT LOCATION:
MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	01.15.2020	LAND USE UDC INITIAL
2	04.17.2020	LAND USE RESUBMITTAL
3	10.21.2020	UDC FINAL
4	01.18.2021	SITE PLAN VERIFICATION
5	04.16.2021	SPV COMMENTS/ADDEDUM #2
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15		

Design/Drawn: CEJ, MS
Approved: JLF
Reviewed: PMP

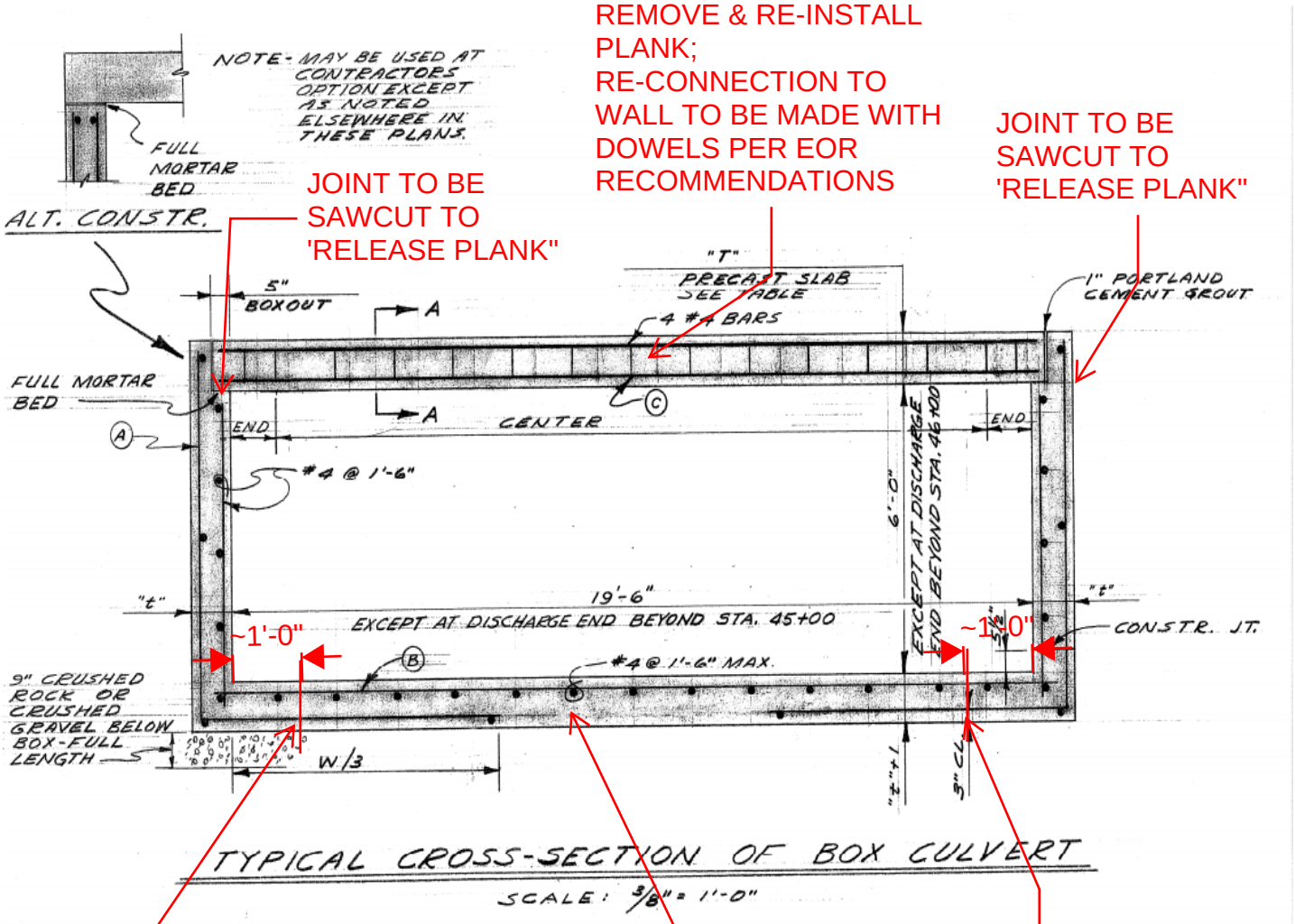
SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C6.0

JSD PROJECT NO: 07-2912

File: I:\2007\07-2912\dwg\07-2912 Construction Documents.dwg Layout: C6.0 UTILITY PLAN User: cjones Plotted: Apr 16, 2021 - 3:55pm Xref's:

ATTACHMENT 3 – BOX CULVERT CROSS SECTION – REMOVAL AND REPLACMEMENT


NOTE- MAY BE USED AT CONTRACTORS OPTION EXCEPT AS NOTED ELSEWHERE IN THESE PLANS.
FULL MORTAR BED
ALT. CONSTR.
JOINT TO BE SAWCUT TO 'RELEASE PLANK"
REMOVE & RE-INSTALL PLANK; RE-CONNECTION TO WALL TO BE MADE WITH DOWELS PER EOR RECOMMENDATIONS
JOINT TO BE SAWCUT TO 'RELEASE PLANK"
5" BOXOUT
"T" PRECAST SLAB SEE TABLE
4 #4 BARS
1" PORTLAND CEMENT GROUT
FULL MORTAR BED
END
CENTER
END
#4 @ 1'-6"
6'-0"
EXCEPT AT DISCHARGE END BEYOND STA. 46+00
"t"
19'-6"
EXCEPT AT DISCHARGE END BEYOND STA. 45+00
"t"
~1'-0"
~1'-0"
CONSTR. JT.
#4 @ 1'-6" MAX.
9" CRUSHED ROCK OR CRUSHED GRAVEL BELOW BOX-FULL LENGTH
W/3
"t"+1
3" CL.
TYPICAL CROSS-SECTION OF BOX CULVERT
SCALE: 3/8" = 1'-0"
SAWCUT CULVERT "MAT" SLAB FOOTING AT ~1'-0" IN FROM WALL
SAWCUT CULVERT "MAT" SLAB FOOTING AT ~1'-0" IN FROM WALL
REMOVAL:
SAW CUT AND REMOVE "MAT" SLAB; REMOVAL SECTION TO BE ~4'-0" WIDE BY ~17'-6" IN LENGTH ACROSS THE CULVERT;
REPLACEMENT:
DRILL & DOWEL REBAR; INSTALL BENTONITE WATERSTOP, INSTALL REBAR TO REPLACE IN KIND OF EXISTING; POUR BACK WITH 4000PSI CONCRETE WITH ZYPEX ADDITIVE

ATTACHMENT 4 – UNIVERSITY AVEMNUE STORM CULVERT – SANITARY INSTALL PLAN

UNIVERSITY AVENUE STORM CULVERT-SANITARY INSTALL PLAN

DAY 1:

- Excavate storm culvert at alignment of sanitary sewer from grade to bottom of "mat" footing of storm culvert (Badgerland Excavating/TBD)

DAY 2:

- Sawcut joints between precast plank and at plank to wall connection (TBD)

DAY 3:

- Remove precast plank at culvert lid and salvage for re-use (TBD)
- Install sandbag berm (2'-0" to 3'-0" in height) upstream approximately 10'-0" from sanitary alignment; Install backup pumping system (TBD)

DAY 4:

- Sawcut "mat" slab (Approx. 1'-0" in from inside face of culvert wall x 4'-0" wide at alignment of sanitary sewer) (TBD)

DAY 5:

- Remove sawcut portion of culvert "mat" slab (Badgerland Excavating/TBD)
- Hydro Excavate inside of storm culvert to install sanitary to MH2 (Badgerland Excavating/TBD)
- Bed/support 8" sanitary to MH #2 from Bldg A/Bldg B (Badgerland Excavating/TBD)
- Backfill to bottom of "mat" slab with 1000psi flowable fill (TBD)

DAY 6:

- Drill & Dowel Mat slab rebar into existing mat slab to replace rebar in kind (TBD)
- Install bentonite water stop (TBD)
- Replace removed portion of culver mat slab with 4000 psi concrete with Zypex additive; Bull float finish (TBD)

DAY 7:

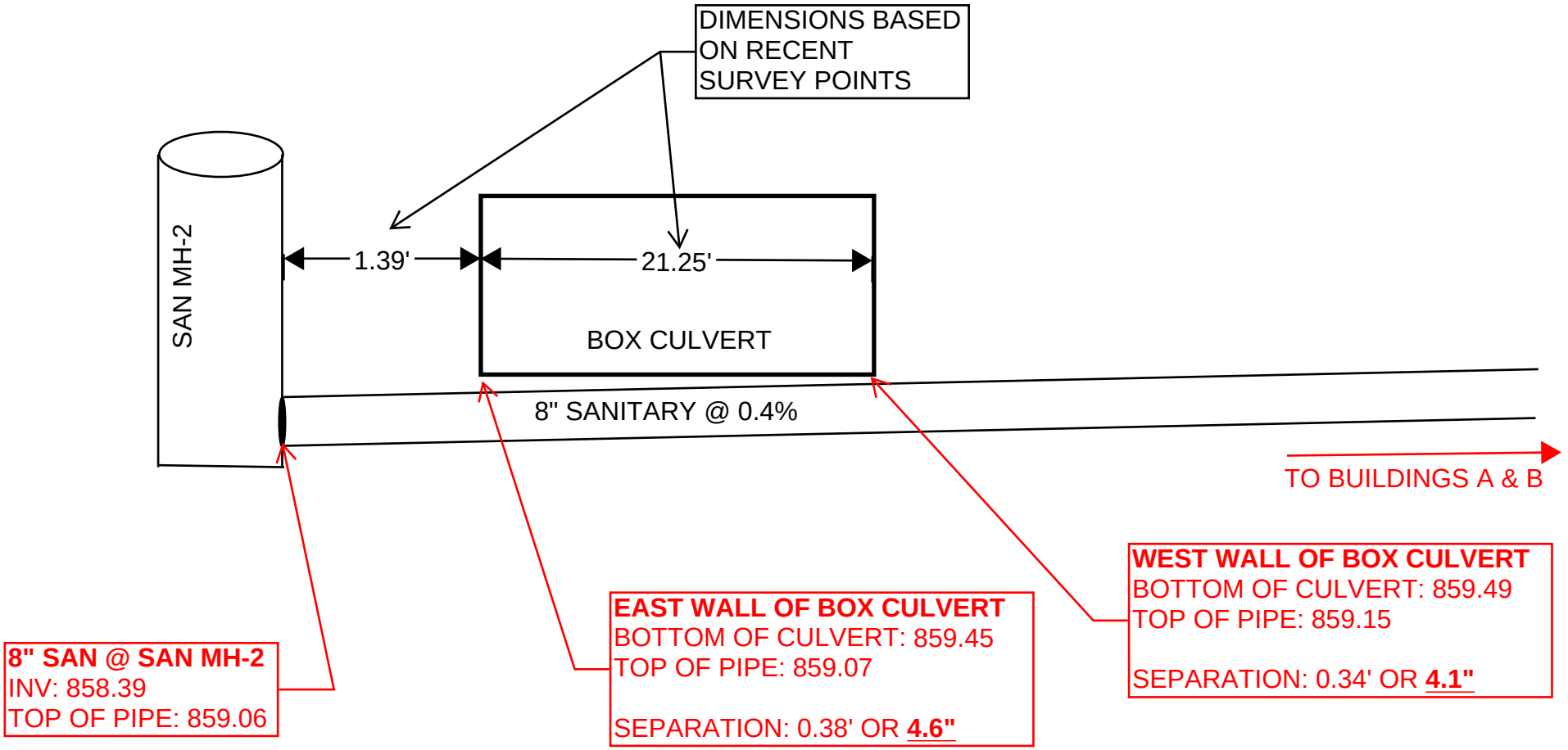
- Re-Install salvaged pre-cast plank lid; Dowel connection of plan to top of wall per EOR recommendations; Grout joints of pre-cast plank (TBD)

DAY 8:

- Backfill culvert (Badgerland Excavating/TBD)

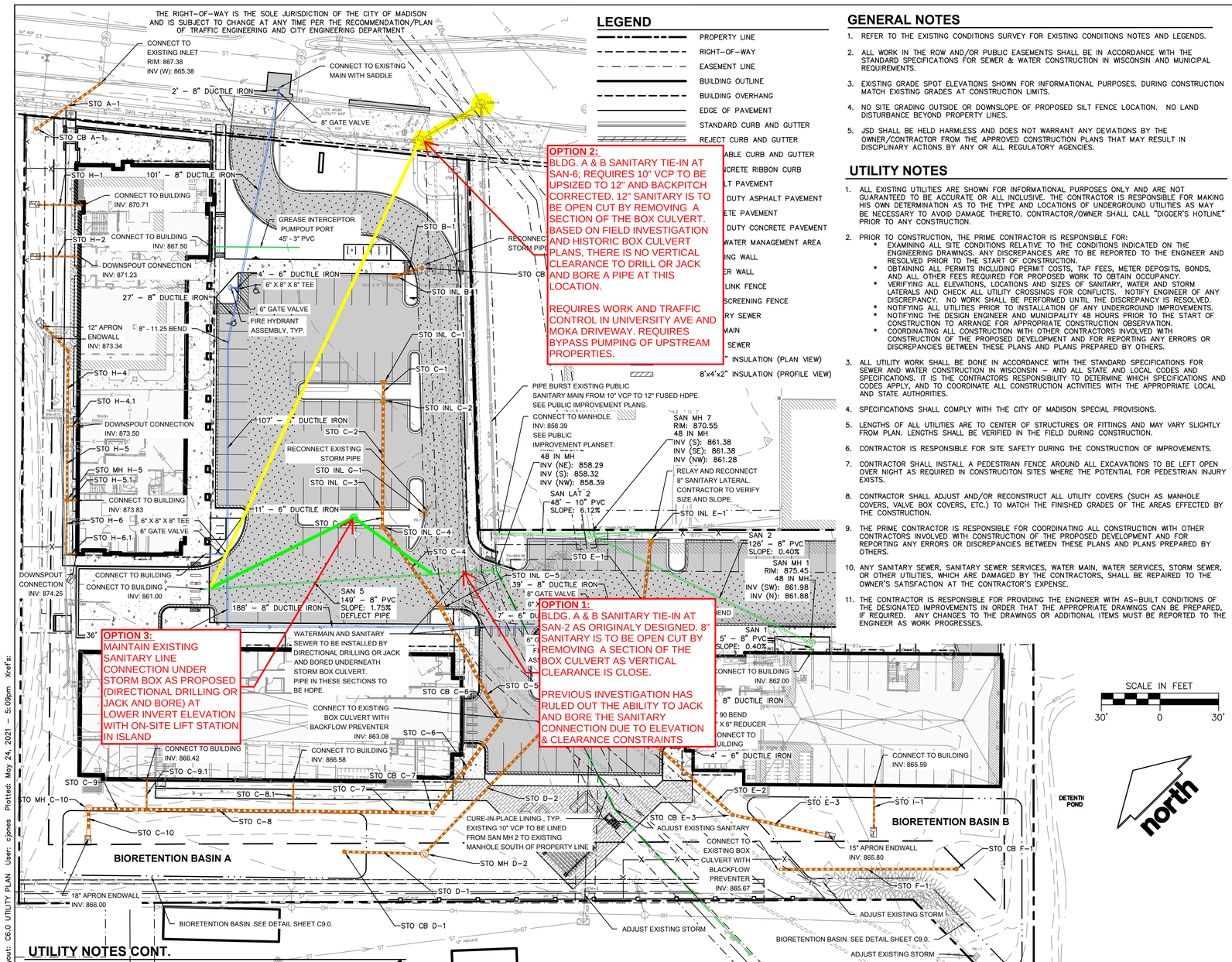
** A GO/NO-GO DECISION WILL BE MADE AT THE END OF DAY 4 TO PROCEED WITH DAY 5 OPERATIONS OR DELAY BASED ON WEATHER FORECAST. THE MAT SLAB BASE OF THE CULVERT WILL ONLY BE REMOVED IF THE WEATHER CONDITIONS ARE FAVORABLE WITH NO PERCIPITATION/SNOW IN THE FORECAST FOR THE NEXT 72 HOURS**

ATTACHMENT 5 – BOX CULVERT CROSS SECTION – VERTICAL CLEARANCE



SANITARY CLEARANCE CROSS SECTION

ATTACHMENT 6 – PLAN MARKUP – OPTIONS FROM MEETING (12-20-2021)



LEGEND

- PROPERTY LINE
- RIGHT–OF–WAY
- EASEMENT LINE
- BUILDING OUTLINE
- BUILDING OVERHANG
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- ABLE CURB AND GUTTER
- NCRETE RIBBON CURB
- LT PAVEMENT
- DUTY ASPHALT PAVEMENT
- ETE PAVEMENT
- DUTY CONCRETE PAVEMENT
- WATER MANAGEMENT AREA
- ING WALL
- ER WALL
- LINK FENCE
- SCREENING FENCE
- RY SEWER
- MAIN
- SEWER
- " INSULATION (PLAN VIEW)
- 8'x4'x2" INSULATION (PROFILE VIEW)

GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE ROW AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN AND MUNICIPAL REQUIREMENTS.
3. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
4. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.

UTILITY NOTES

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
   - EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING ALL ELEVATIONS, LOCATIONS AND SIZES OF SANITARY, WATER AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
   - COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN — AND ALL STATE AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.
4. SPECIFICATIONS SHALL COMPLY WITH THE CITY OF MADISON SPECIAL PROVISIONS.
5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED IN CONSTRUCITON SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.
8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
9. THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
10. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS–BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.

PROPOSED STRUCTURES TABLE

LABEL	RIM EL. (FT)	INVERT EL. (FT)	DEPTH (FT)	STRUCTURE DESC.	FRAME & GRATE
STO CB A–1	869.17	E INV: 865.79 (12")	3.4	36 IN MH (FLAT)	R–2050 TYPE D
*STO CB B	870.82	NW INV: 862.66 (12") E INV: 862.16 (18")	8.7	48 IN MH (FLAT)	R–2050 TYPE D
*STO CB C–6	871.00	N INV: 866.78 (18") W INV: 866.68 (18")	4.3	48 IN MH (FLAT)	R–2050 TYPE D
STO CB C–7	870.96	E INV: 866.56 (18") NW INV: 866.46 (18")	4.5	48 IN MH (FLAT)	R–2510 TYPE A
STO CB D–1	867.80	SE INV: 863.55 (12")	4.2	36 IN MH (FLAT)	R–2050 TYPE D
*STO CB E–2	871.26	NE INV: 866.29 (15") S INV: 866.19 (15")	5.1	48 IN MH (FLAT)	R–2050 TYPE D
STO CB E–3	871.42	N INV: 865.98 (15") SE INV: 865.88 (15")	5.5	48 IN MH (FLAT)	R–2510 TYPE A
STO CB F–1	868.30	NW INV: 865.80 (12")	2.5	36 IN MH (FLAT)	R–2050 TYPE D
*STO INL B–1	870.72	SE INV: 862.94 (12")	7.8	2 x 3 INLET	R–3067 TYPE L
*STO INL C–1	871.63	SW INV: 867.87 (12")	3.8	2 x 3 INLET	R–3067 TYPE L
*STO INL C–2	871.87	NE INV: 867.85 (12") SW INV: 867.60 (15")	4.3	2 x 3 INLET	R–3067 TYPE L
*STO INL C–3	871.50	NE INV: 867.49 (15") SW INV: 867.39 (15")	4.1	2 x 3 INLET	R–3067 TYPE L
*STO INL C–4	872.77	NE INV: 867.37 (15") S INV: 867.27 (15")	5.5	2 x 3 INLET	R–3067 TYPE L
*STO INL C–5	871.91	N INV: 867.16 (15") S INV: 866.91 (18")	5.0	2 x 3 INLET	R–3067 TYPE L
*STO INL E–1	870.20	SW INV: 866.47 (15")	3.7	2 x 3 INLET	R–3067 TYPE L
STO INL G–1	871.70	E INV: 863.79 (10")	7.9	2 x 3 INLET	R–3067 TYPE L
STO MH C–10	869.26	SE INV: 866.11 (18") SW INV: 866.02 (18")	3.2	48 IN MH (FLAT)	R–1550 SOLID LID
STO MH D–2	869.81	NW INV: 863.41 (12") E INV: 863.31 (12")	6.5	48 IN MH (FLAT)	R–1550 SOLID LID
STO MH H–5	874.92	SE INV: 872.68 (8") SW INV: 872.76 (6") NE INV: 872.51 (12")	2.4	36 IN MH (FLAT)	R–1550 SOLID LID

*STRUCTURE TO BE INSTALLED WITH OIL AND GREASE FILTER.

PROPOSED PIPES TABLE

LABEL	TO	FROM	LENGTH	DISCHARGE EL. (FT)	INVERT EL. (FT)	SLOPE	SIZE & MATERIAL
STO A–1	EXISTING INLET	STO CB A–1	41'	865.38	865.79	1.00%	12 IN HDPE
STO B–1	STO CB B	STO INL B–1	14'	862.66	862.94	2.00%	12 IN HDPE
STO C–1	STO INL C–2	STO INL C–1	9'	867.85	867.87	0.20%	12 IN HDPE
STO C–2	STO INL C–3	STO INL C–2	56'	867.49	867.60	0.20%	15 IN HDPE
STO C–3	STO INL C–4	STO INL C–3	9'	867.37	867.39	0.20%	15 IN HDPE
STO C–4	STO INL C–5	STO INL C–4	52'	867.16	867.27	0.21%	15 IN HDPE
STO C–5	STO CB C–6	STO INL C–5	65'	866.78	866.91	0.20%	18 IN HDPE
STO C–6	STO CB C–7	STO CB C–6	59'	866.56	866.68	0.20%	18 IN HDPE
STO C–7	STO MH C–8	STO CB C–7	71'	866.32	866.46	0.20%	18 IN HDPE
STO C–8	STO MH C–9	STO MH C–8	75'	866.17	866.32	0.20%	18 IN HDPE
STO C–8.1	STO MH C–8	BUILDING	15'	866.82	866.98	1.04%	6 IN HDPE
STO C–9	STO MH C–10	STO MH C–9	30'	866.11	866.17	0.20%	18 IN HDPE
STO C–9.1	STO MH C–9	BUILDING	15'	866.67	866.82	1.04%	6 IN HDPE
STO C–10	FES C	STO MH C–10	10'	866.00	866.02	0.20%	18 IN HDPE
STO D–1	STO MH D–2	STO CB D–1	41'	863.41	863.55	0.34%	12 IN HDPE
STO D–2	BOX CULVERT	STO MH D–2	93'	863.08	863.31	0.24%	12 IN HDPE
STO E–1	STO CB E–2	STO INL E–1	94'	866.29	866.47	0.20%	15 IN HDPE
STO E–2	STO CB E–3	STO CB E–2	71'	865.98	866.19	0.29%	15 IN HDPE
STO E–3	FES E	STO CB E–3	45'	865.80	865.88	0.18%	15 IN HDPE
STO F–1	BOX CULVERT	STO CB F–1	91'	865.57	865.80	0.25%	12 IN HDPE
STO H–1		BUILDING	23'	870.47	870.71	1.04%	6 IN HDPE
STO H–2		BUILDING	22'	871.01	871.23	1.04%	6 IN HDPE
STO H–3	ENDWALL	BEND	17'	872.30	872.34	0.22%	12 IN HDPE
STO H–4	BEND	STO MH H–4	39'	872.34	872.43	0.22%	12 IN HDPE
STO H–4.1	STO MH H–4	BUILDING	5'	872.68	872.73	1.04%	6 IN HDPE
STO H–5	STO MH H–4	STO MH H–5	38'	872.43	872.51	0.22%	12 IN HDPE
STO H–5.1	STO MH H–5	BUILDING	5'	872.68	872.70	0.40%	8 IN HDPE
STO H–6	STO MH H–5	STO MH H–6	27'	872.76	873.04	1.04%	6 IN HDPE
STO H–6.1	STO MH H–6	BUILDING	5'	873.04	873.09	1.04%	6 IN HDPE
STO I–1		BUILDING	22'	865.50	865.59	0.40%	8 IN HDPE

UTILITY NOTES CONT.

12. STORM SEWER SPECIFICATIONS –

PIPE – REINFORCED CONCRETE PIPE (RCP) SHALL MEET THE REQUIREMENTS OF ASTM CLASS III (MINIMUM) C–76 WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C–443. HIGH DENSITY DUAL–WALL POLYETHYLENE CORRUGATED PIPE SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATER TIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M–294 TYPE "S".

INLETS – INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE, NO. 28 OF THE "STANDARD SPECIFICATIONS", OR APPROVED EQUAL. CURB FRAME & GRATE SHALL BE NEENAH R–3067 WITH TYPE L GRATE, OR EQUAL.

BACKFILL AND BEDDING – STORM SEWER SHALL BE CONSTRUCTED WITH GRAVEL BACKFILL AND CLASS "B" BEDDING IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".

MANHOLE FRAMES AND COVERS – MANHOLE FRAMES AND COVERS SHALL BE NEENAH R–1550 SOLID LID OR EQUAL.

CATCH BASIN FRAMES AND COVERS – CATCH BASIN FRAMES AND COVERS SHALL BE NEENAH R–2050 TYPE D LID OR EQUAL.

FIELD TILE CONNECTION – ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE(S) FOR STORM SEWER. TILE LINES CROSSED BY THE TRENCH SHALL BE REPLACED WITH THE SAME MATERIAL AS THE STORM SEWER.

13. WATER MAIN SPECIFICATIONS –

PIPE – DUCTILE IRON PIPE SHALL BE CLASS 52 CONFORMING TO AWWA C151 AND CHAPTER 8.18.0 OF THE "STANDARD SPECIFICATIONS". POLYVINYL CHLORIDE (PVC) PIPE SHALL MEET THE REQUIREMENTS OF AWWA STANDARD C–900, CLASS 150, DR–18, WITH CAST IRON O.D. AND INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS. NON–METALLIC WATER MAINS SHALL BE INSTALLED WITH BLUE INSULATION TRACER WIRE AND CONFORM WITH SPS 382.30(11)(b). HIGH DENSITY DUAL–WALL POLYETHYLENE CORRUGATED PIPE SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATER TIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M–294 TYPE "S".

VALVES AND VALVE BOXES – GATE VALVES SHALL BE AWWA GATE VALVES MEETING THE REQUIREMENTS OF AWWA C–500 AND CHAPTER 8.27.0 OF THE "STANDARD SPECIFICATIONS". GATE VALVES AND VALVE BOXES SHALL CONFORM TO LOCAL PLUMBING ORDINANCES.

HYDRANTS – HYDRANTS SHALL CONFORM TO THE SPECIFICATIONS OF THE CITY OF MADISON. THE DISTANCE FROM THE GROUND LINE TO THE CENTERLINE OF THE LOWEST NOZZLE AND THE LOWEST CONNECTION OF THE FIRE DEPARTMENT SHALL BE NO LESS THAN 18–INCHES AND NO GREATER THAN 23–INCHES (SEE DETAIL).

BEDDING AND COVER MATERIAL – PIPE BEDDING AND COVER MATERIAL SHALL BE SAND, CRUSHED STONE CHIPS OR CRUSHED STONE SCREENINGS CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

BACKFILL – BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS". GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".

14. SANITARY SEWER SPECIFICATIONS –

PIPE – SANITARY SEWER PIPE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) MEETING REQUIREMENTS OF ASTM D 3034, SDR–35, WITH INTEGRAL BELL TYPE FLEXIBLE ELASTOMERIC JOINTS, MEETING THE REQUIREMENTS OF ASTM D–3212.

BEDDING AND COVER MATERIAL – BEDDING AND COVER MATERIAL SHALL CONFORM TO THE APPROPRIATE SECTIONS OF THE "STANDARD SPECIFICATION" WITH THE FOLLOWING MODIFICATION: "COVER MATERIAL SHALL BE THE SAME AS USED FOR BEDDING AND SHALL CONFORM TO SECTION 8.43.2 (A). BEDDING AND COVER MATERIAL SHALL BE PLACED IN A MINIMUM OF THREE SEPARATE LIFTS, OR AS REQUIRED TO INSURE ADEQUATE COMPACTING OF THESE MATERIALS, WITH ONE LIFT OF BEDDING MATERIAL ENDING AT OR NEAR THE SPRINGLINE OF THE PIPE. THE CONTRACTOR SHALL TAKE CARE TO COMPLETELY WORK BEDDING MATERIAL UNDER THE HAUNCH OF THE PIPE TO PROVIDE ADEQUATE SIDE SUPPORT."

BACKFILL – BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS." GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS."

MANHOLES – MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE NOS. 12, 13 AND 15 OF THE "STANDARD SPECIFICATIONS" AND ALL SPECIAL PROVISIONS OF THE CITY OF MADISON.

MANHOLE FRAMES AND COVERS – MANHOLE FRAMES AND COVERS SHALL BE NEENAH R–1642 WITH TYPE "B" SELF SEALING LIDS, NON–ROCKING OR EQUAL.

15. WATERMAIN AND SANITARY SEWER SHALL BE INSULATED WHEREVER THE DEPTH OF COVER IS LESS THAN 6 FEET. INSULATION AND INSTALLATION OF INSULATION SHALL BE CONFORMING WITH CHAPTER 4.17.0 "INSULATION" OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN 6TH EDITION UPDATED WITH ITS LATEST ADDENDUM (TYP.).

DIGGERS HOTLINE
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PO BOX 5567
MADISON, WI 53705-0567

PROJECT:
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DANE COUNTY

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Design/Drawn: CEJ, MS
Approved: JLF
Reviewed: PMP

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C6.0

JSD PROJECT NO: 07-2912

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ATTACHMENT 7 – CITY MEETING MINUTES (12-20-2021)

5133 University Avenue – Private Sanitary / Box Culvert Conflict Meeting
12/20/21 @ 10:00 AM via Zoom

Issue – only 4" to 6" clearance between top of proposed private sanitary lateral pipe and the bottom of the existing box culvert – with these conditions not able to directional drill / jack & bore as originally planned for constructing the private sanitary lateral connection.

Option 1 – maintain same connection location & elevations – requires removal & replacement of a section of the existing storm box to install the private sanitary connection

- Contract Addendum Needed
- City Improvement Plan Revision Needed
- Update private site utility plan with Engineering & Zoning

Option 2 – reroute connection to University Ave connection – requires upsizing of existing sanitary and correction of existing back-pitch condition – clearance under storm box anticipated to be the same or less at this location – additional ULO/investigation would be require – disturbance & restoration in University Ave required – bypass pumping required

- Contract Addendum Needed
- City Improvement Plan Revision Needed
- Update private site utility plan with Engineering & Zoning

Option 3 – Private lift station condition – connect at original location (at lower elevation?) – would need to do a site plan revision (?) – pressure from lift station to current condition

- Addendum Not Needed
- City Improvement Plan Revision Needed
- Update private site utility plan with Engineering & Zoning
- May require a site plan review for an alteration through Zoning (especially if affecting landscaping approvals in the island) – check with Zoning once site impacts known

Option 3A – not shown on exhibit from meeting - pump lower parking levels, but gravity drain upper floors – smaller pump system & long term maintenance impacts over Option 3

- Addendum Not needed (most likely)
- City Improvement Plan Revision Needed
- Update private site utility plan with Engineering & Zoning
- May require a site plan review for an alteration through Zoning (especially if affecting landscaping approvals in the island) – check with Zoning once site impacts known