

COPPER ROCKS DEVELOPMENT



LA CROSSE, WISCONSIN

ISG PROJECT # 21-25290

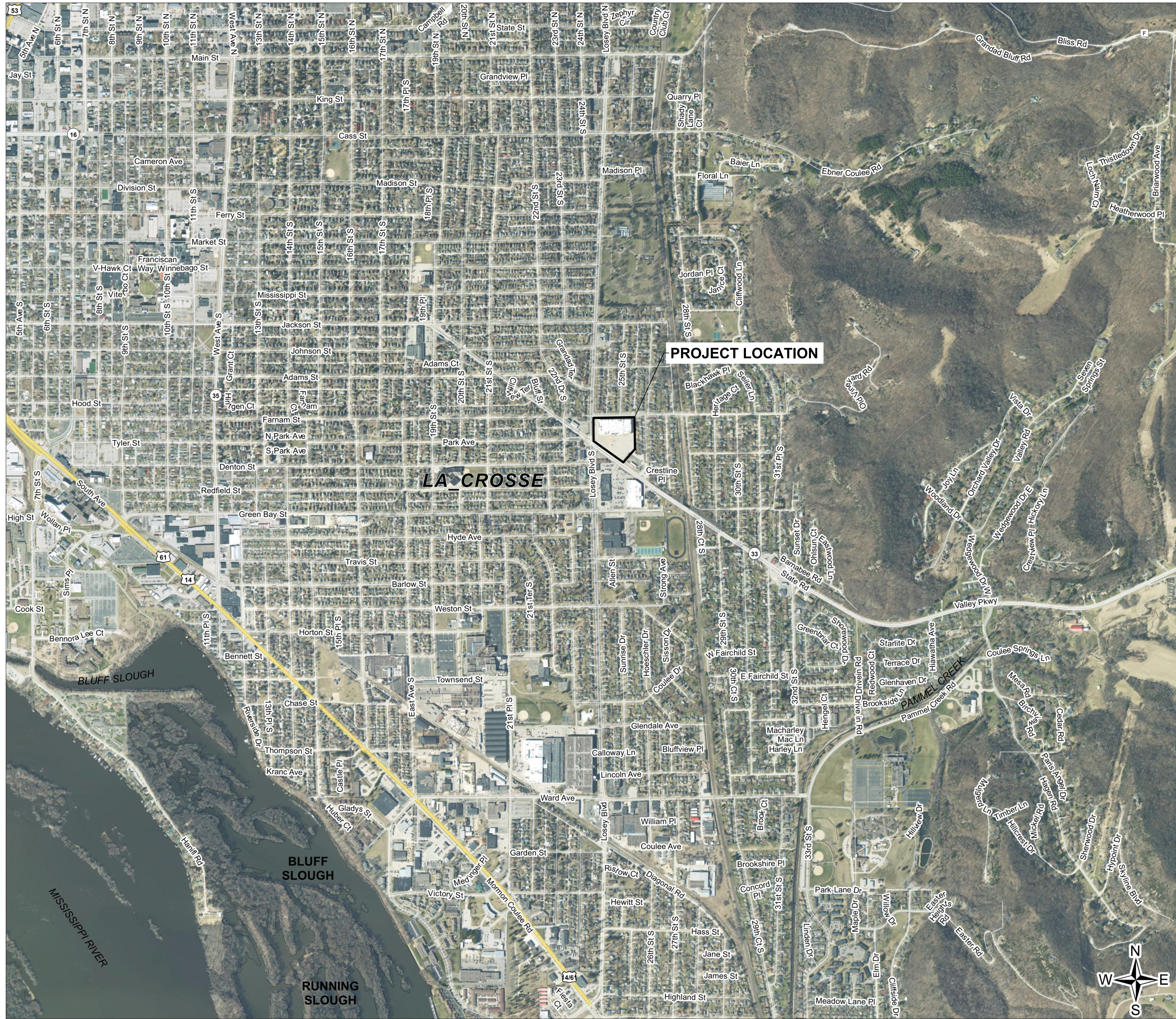
LEGEND

EXISTING

- CITY LIMITS
- SECTION LINE
- QUARTER SECTION LINE
- RIGHT OF WAY LINE
- PROPERTY / LOTLINE
- EASEMENT LINE
- ACCESS CONTROL
- WATER EDGE
- WETLAND BOUNDARY
- WETLAND / MARSH
- FENCE LINE
- CULVERT
- STORM SEWER
- SANITARY SEWER
- SANITARY SEWER FORCEMAIN
- WATER
- GAS
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND TV
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- UNDERGROUND FIBER OPTIC
- CONTOUR (MAJOR)
- CONTOUR (MINOR)
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- MANHOLE/STRUCTURE
- CATCH BASIN
- HYDRANT
- VALVE
- CURB STOP
- POWER POLE
- UTILITY PEDESTAL / CABINET

PROPOSED

- LOT LINE
- RIGHT OF WAY
- EASEMENT
- CULVERT
- STORM SEWER
- STORM SEWER (PIPE WIDTH)
- SANITARY SEWER
- SANITARY SEWER (PIPE WIDTH)
- WATER
- GAS
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND TV
- CONTOUR
- MANHOLE (STORM, SANITARY)
- CATCH BASIN
- HYDRANT
- VALVE



SHEET INDEX

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- C0-11 SITE DETAILS
- C0-12 SITE DETAILS
- C0-13 SITE DETAILS
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PROJECT GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, THE OWNER - CONTRACTOR AGREEMENT, THE PROJECT MANUAL (WHICH INCLUDES GENERAL SUPPLEMENTARY CONDITIONS AND SPECIFICATIONS), DRAWINGS OF ALL DISCIPLINES AND ALL ADDENDA, MODIFICATIONS AND CLARIFICATIONS ISSUED BY THE ARCHITECT/ENGINEER.
- CONTRACT DOCUMENTS SHALL BE ISSUED TO ALL SUBCONTRACTORS BY THE GENERAL CONTRACTOR IN COMPLETE SETS IN ORDER TO ACHIEVE THE FULL EXTENT AND COMPLETE COORDINATION OF ALL WORK.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED THROUGHOUT THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO DETAILS SHOWN, WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED AND CONDITIONED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. IN CASE OF DISCREPANCIES BETWEEN MANUFACTURERS' AND INSTRUCTIONS AND THE CONTRACT DOCUMENTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
- THE LOCATION AND TYPE OF ALL INPLACE UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY AND ARE ACCURATE AND COMPLETE TO THE BEST OF THE KNOWLEDGE OF I & S GROUP, INC. (ISG). NO WARRANTY OR GUARANTEE IS IMPLIED. THE CONTRACTOR SHALL VERIFY THE SIZES, LOCATIONS AND ELEVATIONS OF ALL INPLACE UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
- THE CONTRACTOR IS TO CONTACT "DIGGERS' HOTLINE" FOR UTILITY LOCATIONS. MINIMUM 3 BUSINESS DAYS PRIOR TO ANY EXCAVATION / CONSTRUCTION (811 OR 1-800-242-8511).



ABBREVIATIONS:

AC	ACRE	DEMO	DEMOLITION	GV	GATE VALVE	MH	MANHOLE	ROW	RIGHT OF WAY
ADA	AMERICANS WITH DISABILITIES ACT	DIA	DIAMETER	HDPE	HIGH DENSITY POLYETHYLENE	MIN	MINIMUM	R/W	RIGHT OF WAY
ADD	ADDENDUM	DIM	DIMENSION	HD	HEAVY DUTY	MISC	MISCELLANEOUS	R/W	RIGHT OF WAY
AF	ABOVE FINISHED FLOOR	DS	DOWNSPOUT	HR	HANDHOLE	NO	NUMBER	SCH	SCHEDULE
AGG	AGGREGATE	EA	EACH	HORIZ	HORIZONTAL	NTS	NOT TO SCALE	SQ	SQUARE FOOT
APPROX	APPROXIMATE	ELEC	ELECTRICAL	HR	HOUR	NWL	NORMAL WATER LEVEL	SPEC	SPECIFICATION
ARCH	ARCHITECT, ARCHITECTURAL	ELEV	ELEVATION	HWL	HIGH WATER LEVEL	OC	ON CENTER	SQ	SQUARE
BFE	BASEMENT FLOOR ELEVATION	EOF	EMERGENCY OVERFLOW	HWY	HIGHWAY	OCEW	ON CENTER EACH WAY	STA	STATION
BIT	BITUMINOUS	EQ	EQUAL	HYD	HYDRANT	OH	OVERHEAD	SV	SQUARE YARD
CB	COMPUTER-AIDED DESIGN	EX	EXISTING	I	INVERT	OHD	OVERHEAD DOOR	T/C	TOP OF CURB
CD	CATCH BASIN	FDC	FIRE DEPARTMENT CONNECTION	ID	INSIDE DIAMETER	OZ	OUNCE	TEL	TELEPHONE
CFS	CUBIC FEET PER SECOND	FON	FOUNDATION	IN	INCH	PED	PEDESTAL, PEDESTRIAN	TEMP	TEMPORARY
CF	CUBIC FOOT	FES	FINISHED END SECTION	INV	INVERT	PERF	PERFORATED	THRU	THROUGH
CI	CAST IRON	FEE	FINISHED FLOOR ELEVATION	IP	IRON PIPE	PL	PROPERTY LINE	THN	TOP NUT OF FIRE HYDRANT
CIP	CAST IRON PIPE	FS	FEET PER SECOND	IP	IRON PIPE SIZE	PP	POLYPROPYLENE	TRANS	TRANSFORMER
CPC	CAST IN PLACE CONCRETE	FT	FEET PER SECOND	JBS	JUNCTION BOX	PSI	POUNDS PER SQUARE INCH	TV	TELEVISION
CI	CONTROL JOINT	FT	FOOT, FEET	JNT	JUNCTION	PVC	POLYVINYL CHLORIDE	T/W	TOP OF WALL
CL	CENTERLINE	FTG	FOOTING	LF	LINEAR FEET	PVMT	PAVEMENT	TYP	TYPICAL
CMP	CORRUGATED METAL PIPE	GA	GAUGE	LN	LINEAR	QTY	QUANTITY	UT	UTILITY, UNDERGROUND
CO	CLEANOUT	GAL	GALLON	LPS	LOW PRESSURE STEAM	R	RIM	UT	UTILITY, UNDERGROUND
CONC	CONCRETE	GALV	GALVANIZED	LS	LOW SLOPE	RAD	RADIUS	VEP	VITRIFIED CLAY PIPE
CONST	CONSTRUCTION	GC	GENERAL CONTRACTOR	LSO	LOWEST STRUCTURAL OPENING	RCP	REINFORCED CONCRETE PIPE	W/O	WITHOUT
CONT	CONTINUOUS	GFE	GARAGE FLOOR ELEVATION	MAX	MAXIMUM	RD	ROOF DRAIN	W/	WITH
CY	CUBIC YARD	GL	GUTTER LINE	MB	MAIL BOX	REBAR	REINFORCING BAR	YD	YARD
CKG	CURB AND GUTTER	GPM	GALLONS PER MINUTE	MECH	MECHANICAL	REM	REMOVE	YR	YEAR

PROJECT INDEX:

OWNER:
MKB COPPER ROCKS, LLC
3800 EMERALD DRIVE EAST
ONALASKA WISCONSIN 54650
PH: 608.779.2702

PROJECT ADDRESS / LOCATION:
2415 STATE ROAD
LA CROSSE WISCONSIN
54601

MANAGING OFFICE:

LA CROSSE OFFICE
201 MAIN STREET
SUITE 1020
LA CROSSE, WI 54601
PHONE: 608.789.2034

PROJECT MANAGER: KRIS ROPPE
EMAIL: KRIS.ROPPE@ISG.COM

SPECIFICATIONS REFERENCE

ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF LA CROSSE STANDARD SPECIFICATIONS, CURRENT EDITION, WISDOT STANDARD SPECIFICATIONS, 2022 EDITION, WISDOT CONSTRUCTION AND MATERIALS MANUAL, CURRENT EDITION, WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES STATE PLUMBING CODE, CURRENT EDITION, AND STANDARD SPECIFICATION FOR SEWER & WATER CONSTRUCTION IN WISCONSIN, 6th EDITION, UNLESS DIRECTED OTHERWISE.

B.M. ELEVATION=668.24

TNHF LOCATED AT THE NE QUAD OF FARNAM AND 25TH STREET SOUTH

TOPOGRAPHIC SURVEY

HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT (NAD83(11)) ON THE LA CROSSE COUNTY COORDINATE SYSTEM, IN U.S. SURVEY FEET.

THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED IN FEBRUARY AND MARCH 2022 BY ISG.

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

COPPER ROCKS DEVELOPMENT

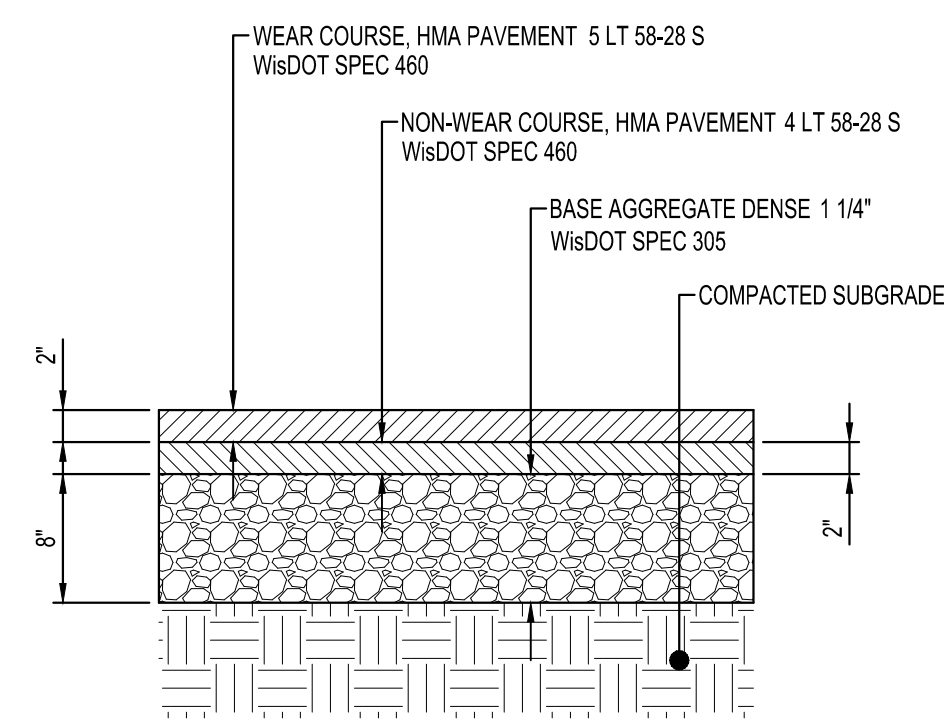
LA CROSSE	WISCONSIN	
REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 G1-TITLE
DRAWN BY	AAQ/SMW
DESIGNED BY	AAQ/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	
CLIENT PROJECT NO.	

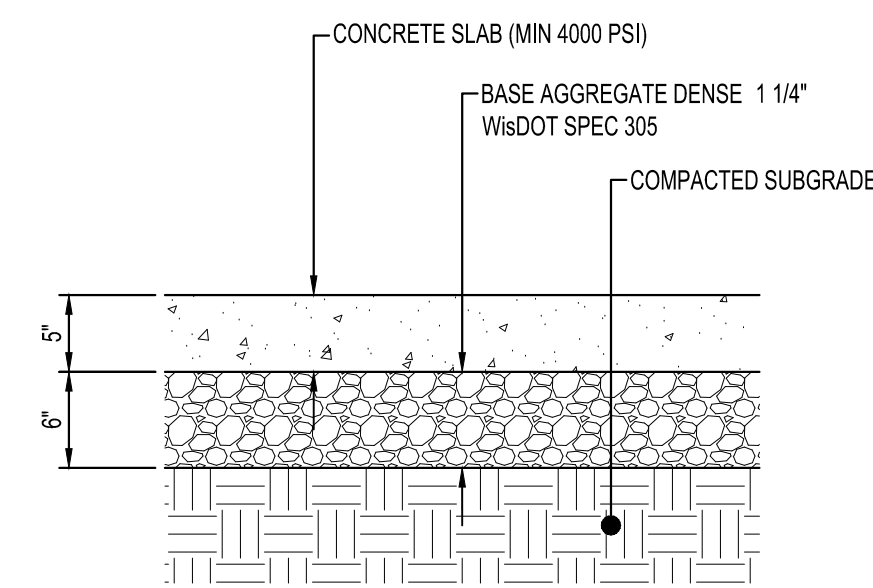
TITLE

G1-10

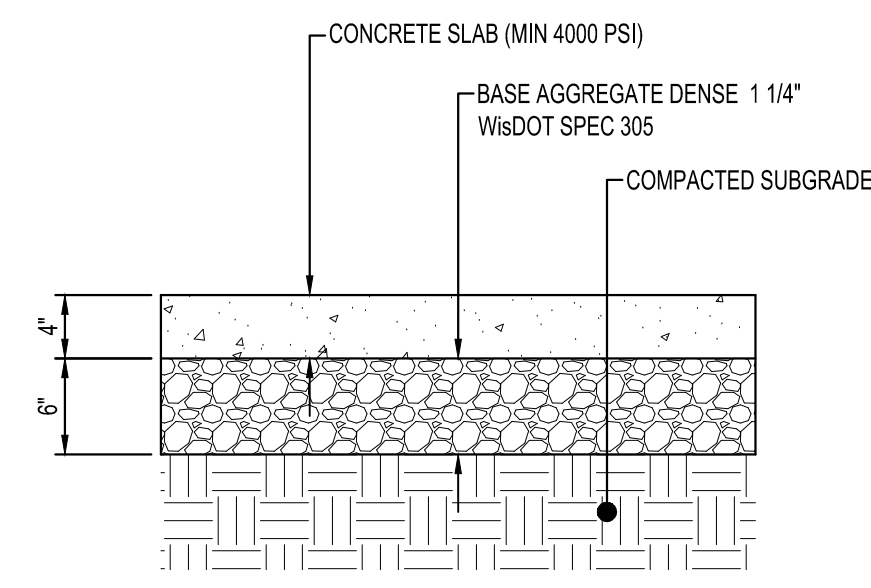
PRELIMINARY NOT FOR CONSTRUCTION



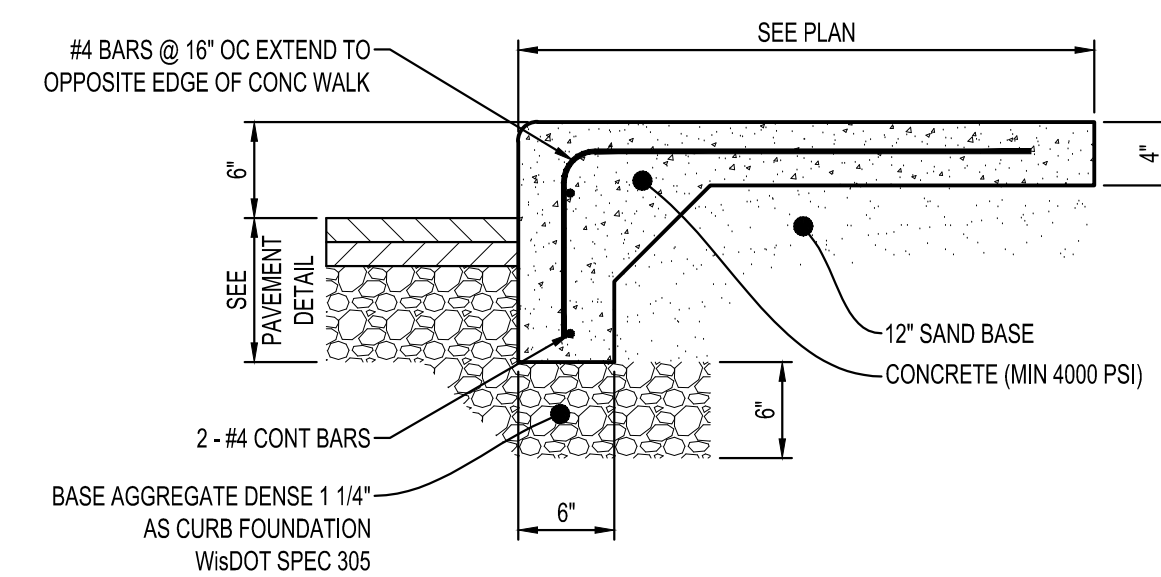
STANDARD ASPHALT PAVEMENT
NTS



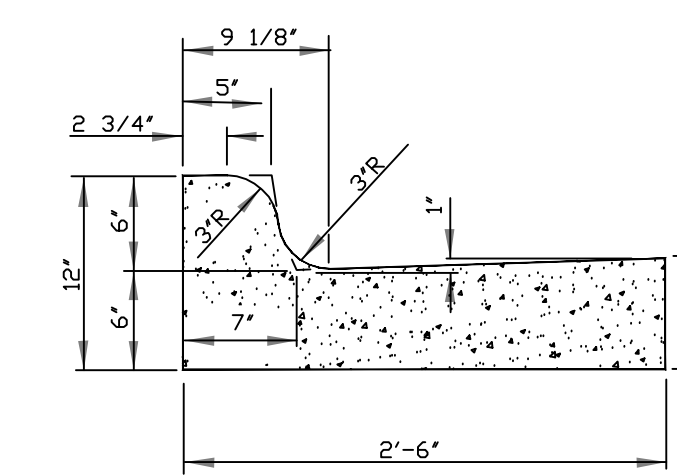
STANDARD CONCRETE PAVEMENT
NTS



STANDARD CONCRETE WALK
NTS

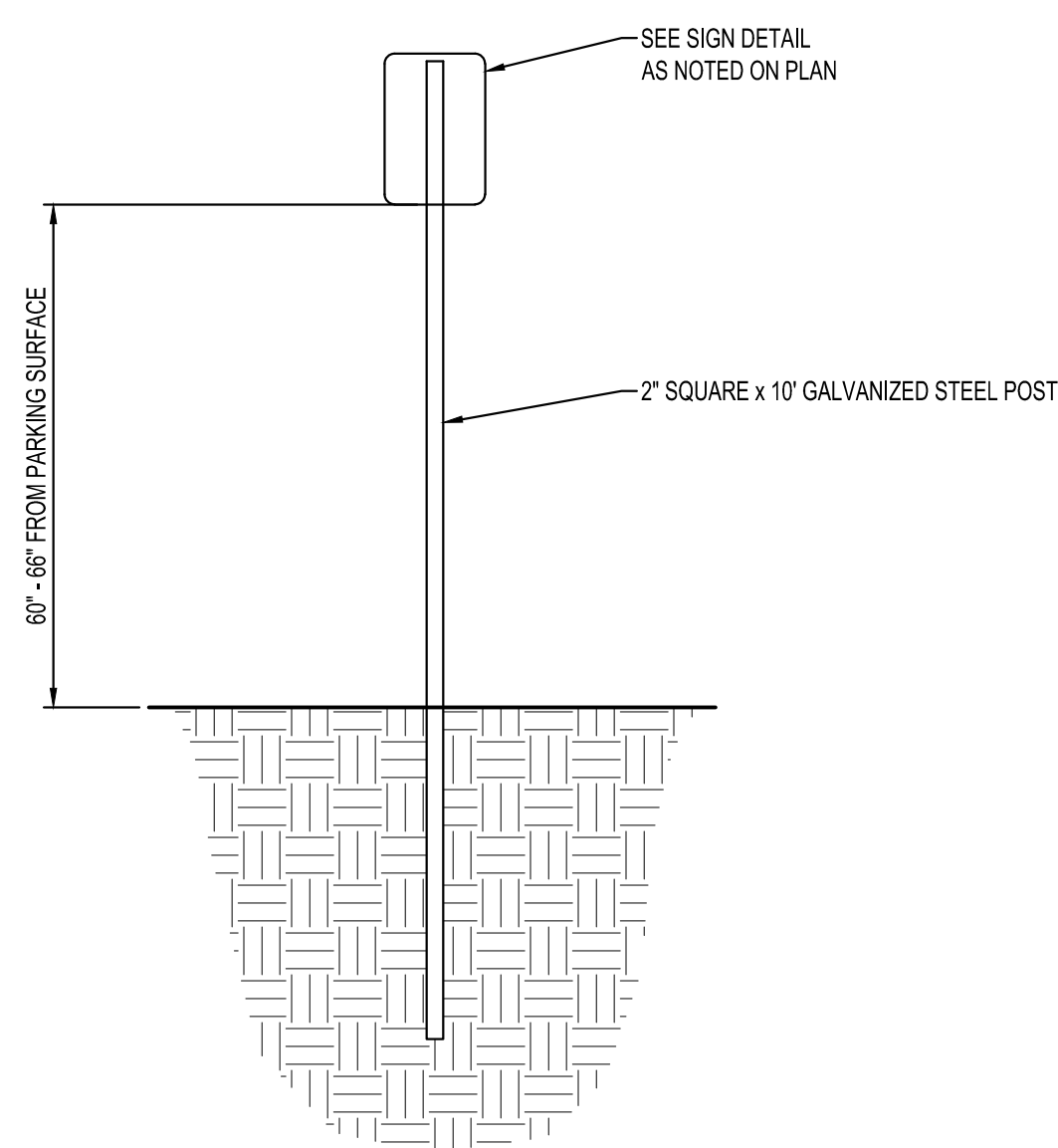


TURN DOWN CONCRETE WALK
NTS

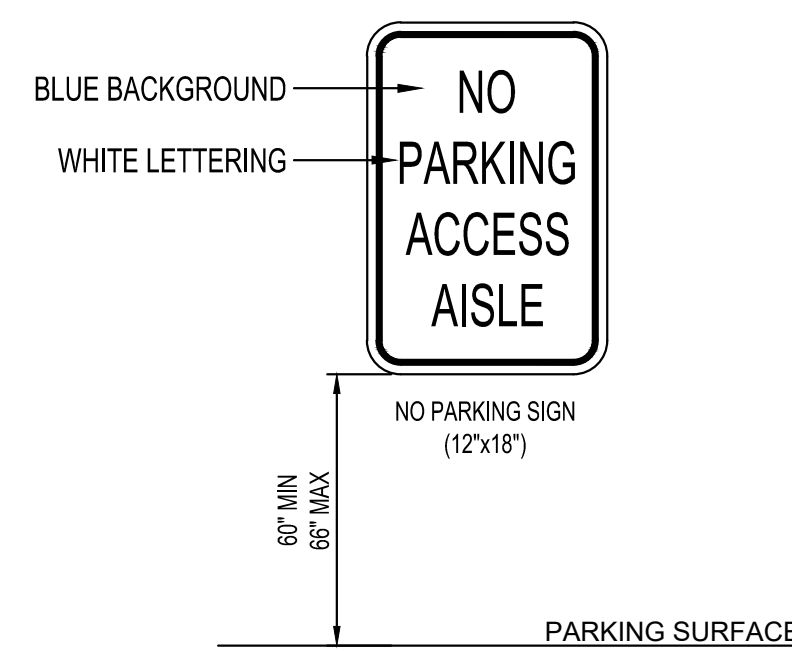


STANDARD CURB & GUTTER SECTION

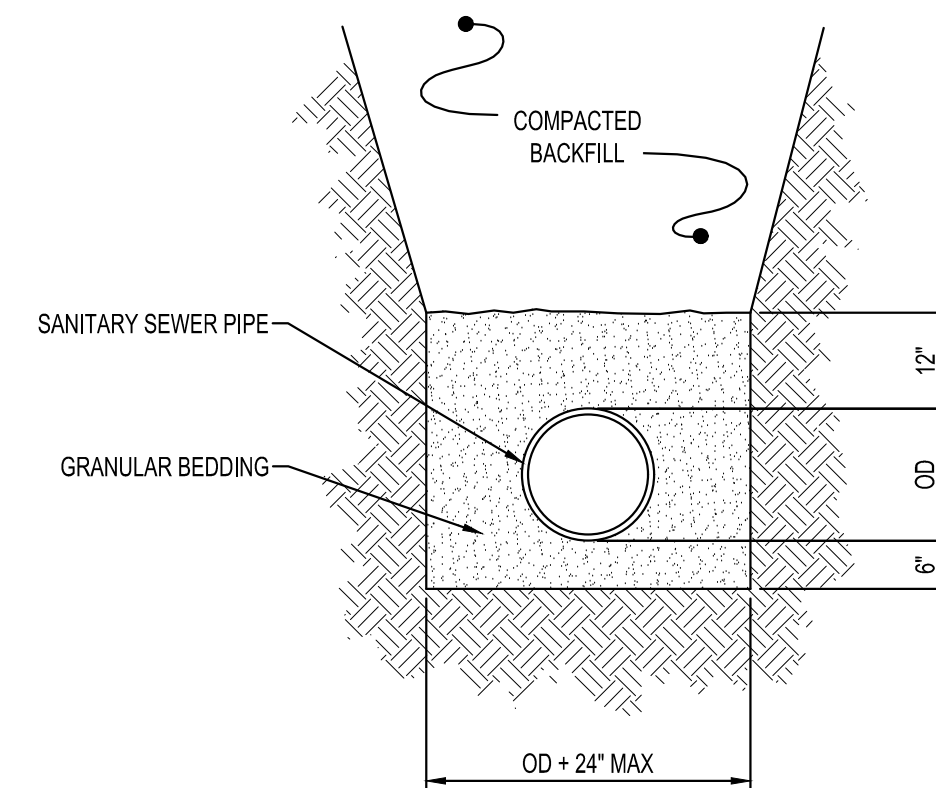
NOTE:
WITH REFERENCE TO SAWING OF CONTRACTION JOINTS ON SLIP FORM CURB & GUTTER & CURB, PAGE 9.3, STANDARD SPEC'S THE SAW CUT SHALL BE A MINIMUM 1/8" WIDE X 1" DEEP.



SIGN POST
NTS



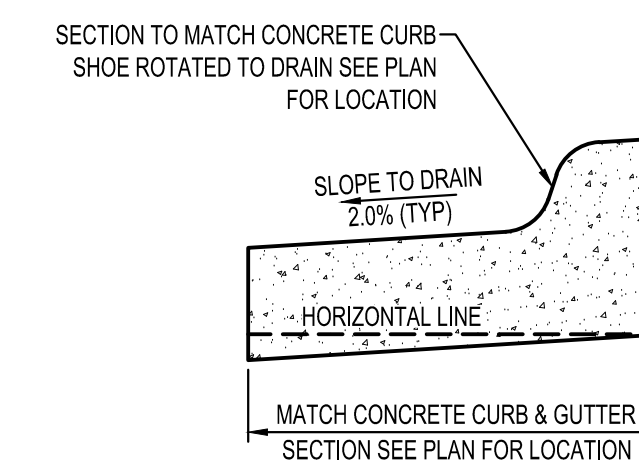
NO PARKING ACCESS AISLE SIGN
NTS



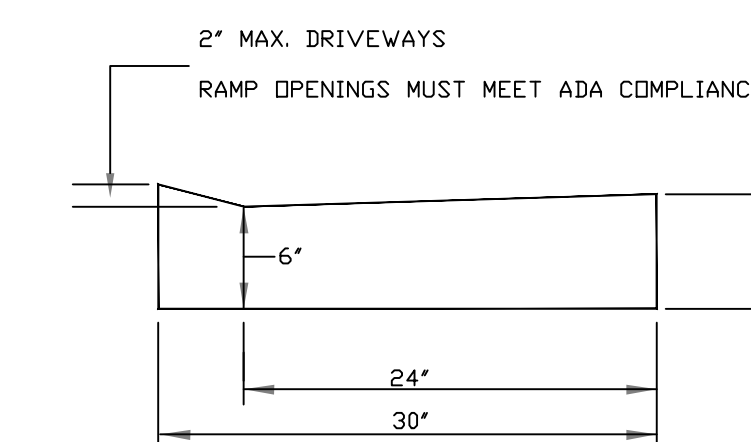
NOTES:

GRANULAR BEDDING AND ENCASEMENT FOR SANITARY SEWER PIPES SHALL BE INCIDENTAL TO CONSTRUCTION

PIPE BEDDING SANITARY SEWER
NTS



REVERSE PITCH CONCRETE CURB & GUTTER
NTS



MOUNTABLE CURB SECTION

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

COPPER ROCKS DEVELOPMENT

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

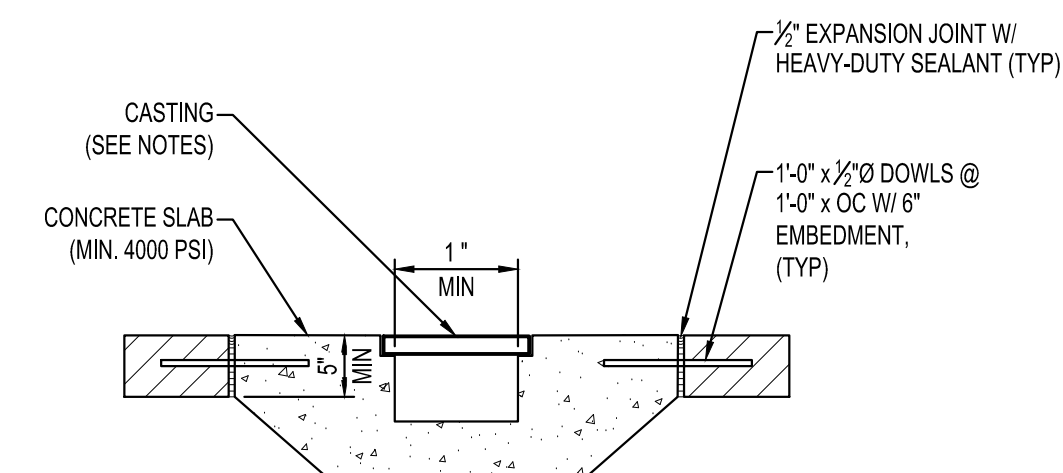
PROJECT NO. 21-25290
 FILE NAME 25290 CO-DETAILS
 DRAWN BY AAG/SMW
 DESIGNED BY AAG/SMW/KBR
 REVIEWED BY KBR
 ORIGINAL ISSUE DATE 05/20/2022

CLIENT PROJECT NO. -

SITE DETAILS

SHEET

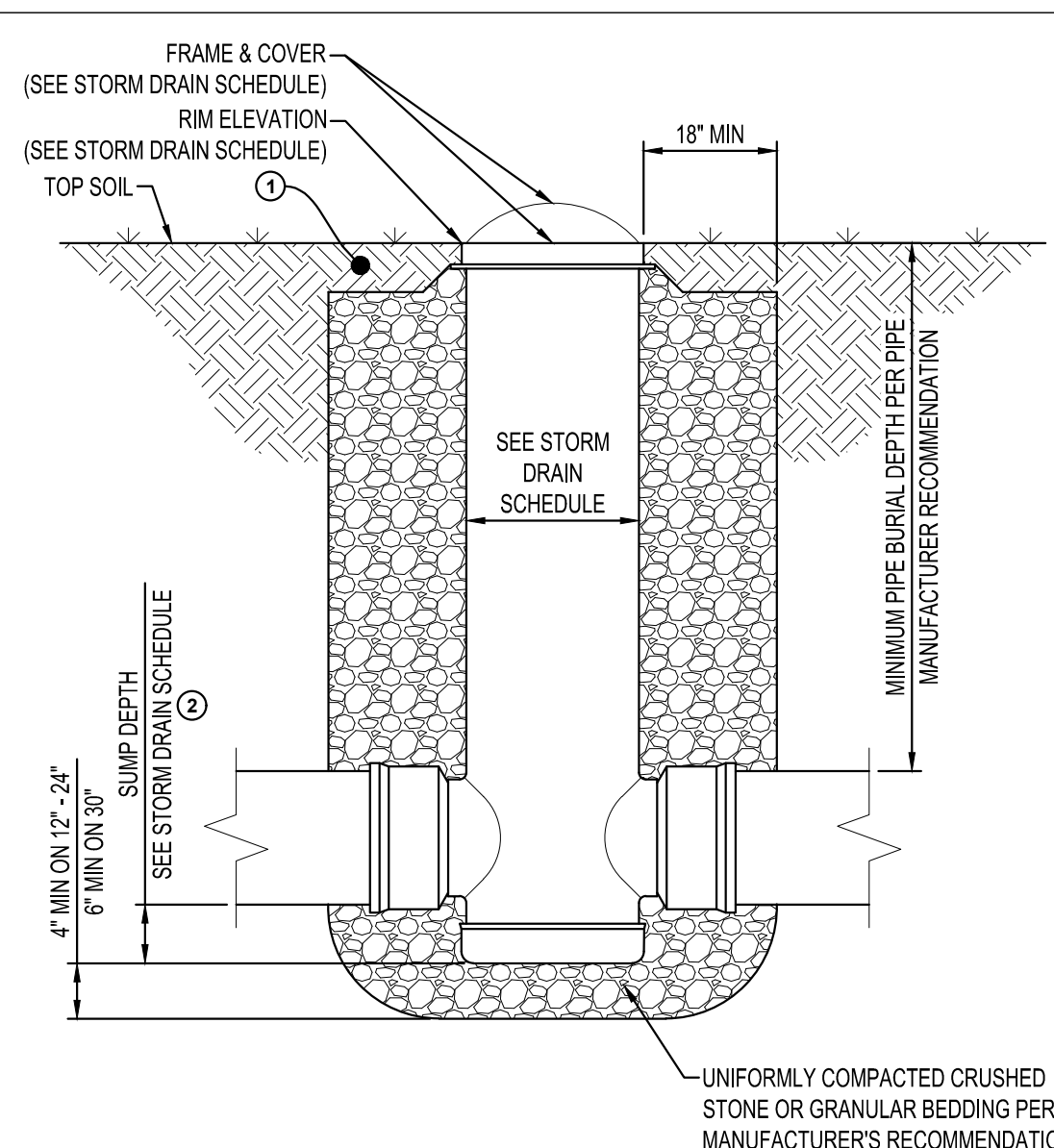
C0-10



NOTES:

- CASTING = NEENAH R-4990-CX
- GRATE = TYPE C

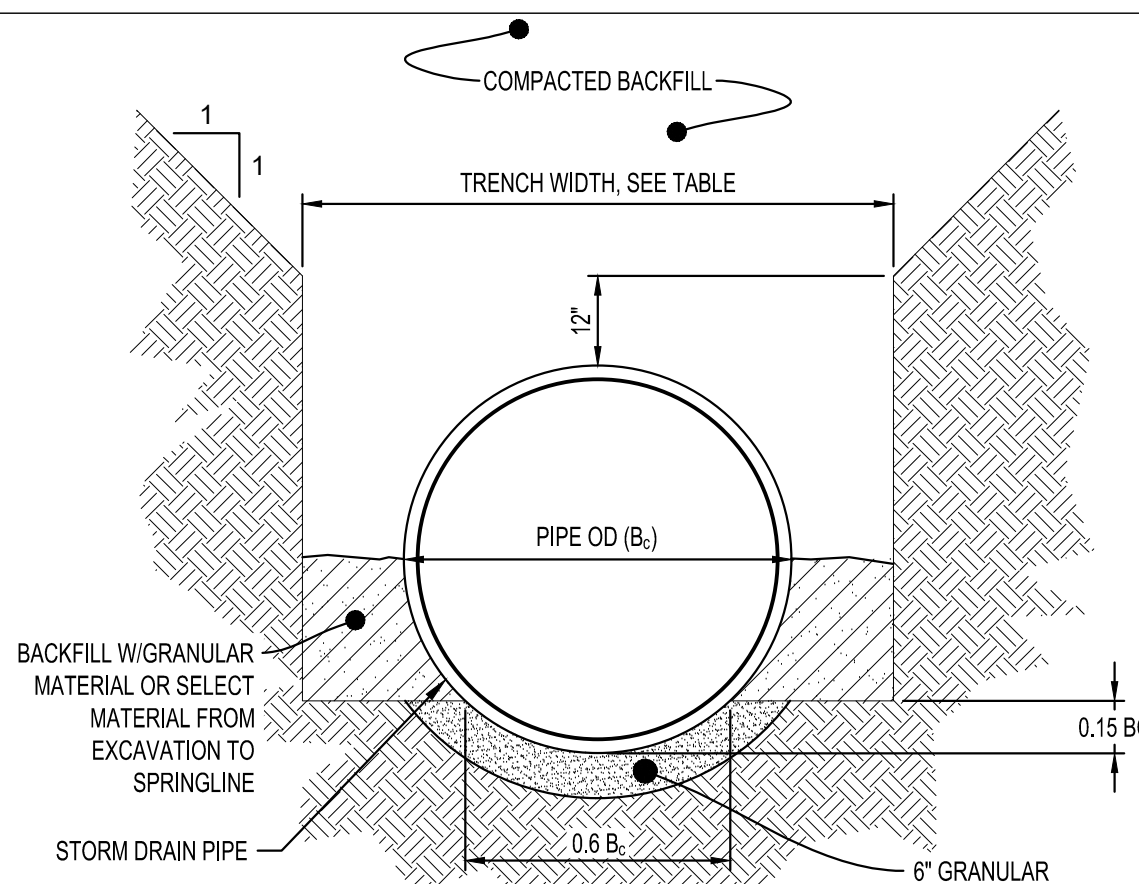
CONCRETE TRENCH DRAIN
NTS



NOTES:

- DESIGN SHOULD ACCOUNT FOR ROOT DEPTH TO ALLOW TURF TO GROW AND PREVENT EROSION AROUND GRATE SO THAT HAZARDS TO DO NOT FORM
- 8" MIN ON 6"-24" DRAIN BASIN, 10" MIN ON 30" DRAIN BASIN. VERIFY WITH MANUFACTURER'S RECOMMENDATIONS.

DRAIN BASIN
NTS

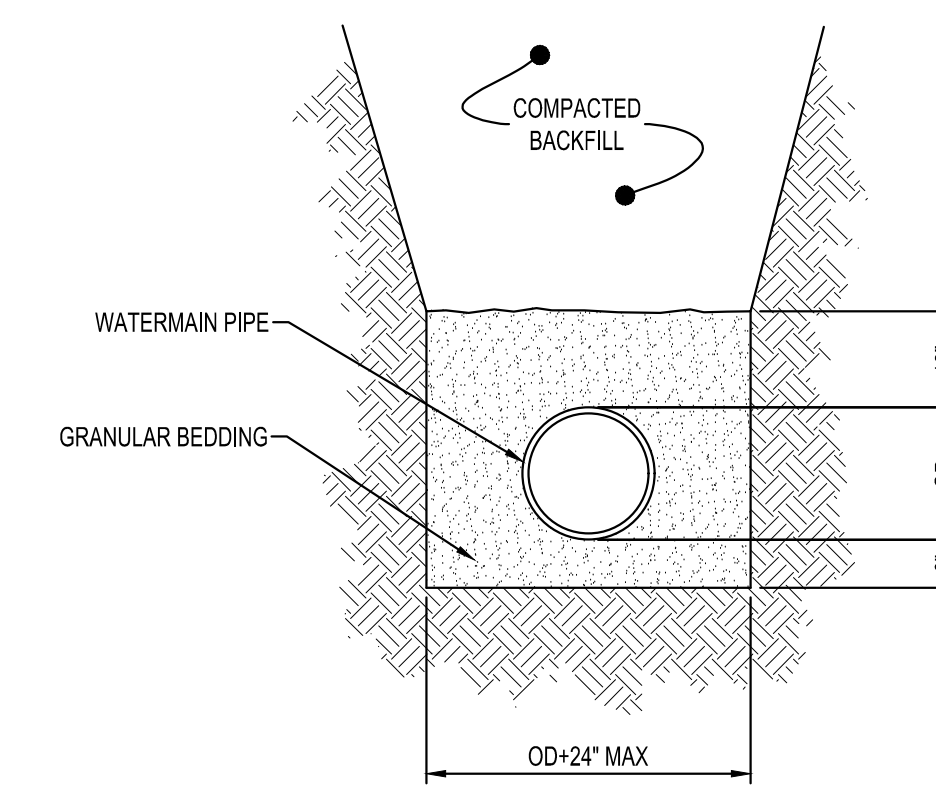


TRENCH WIDTH	
PIPE Ø	TRENCH WIDTH
36" OR LESS	B _s + 24"
42" TO 54"	1.5 X B _s
60" OR OVER	B _s + 36"

NOTES:

GRANULAR BEDDING AND BACKFILL FOR STORM DRAIN PIPES SHALL BE INCIDENTAL TO CONSTRUCTION

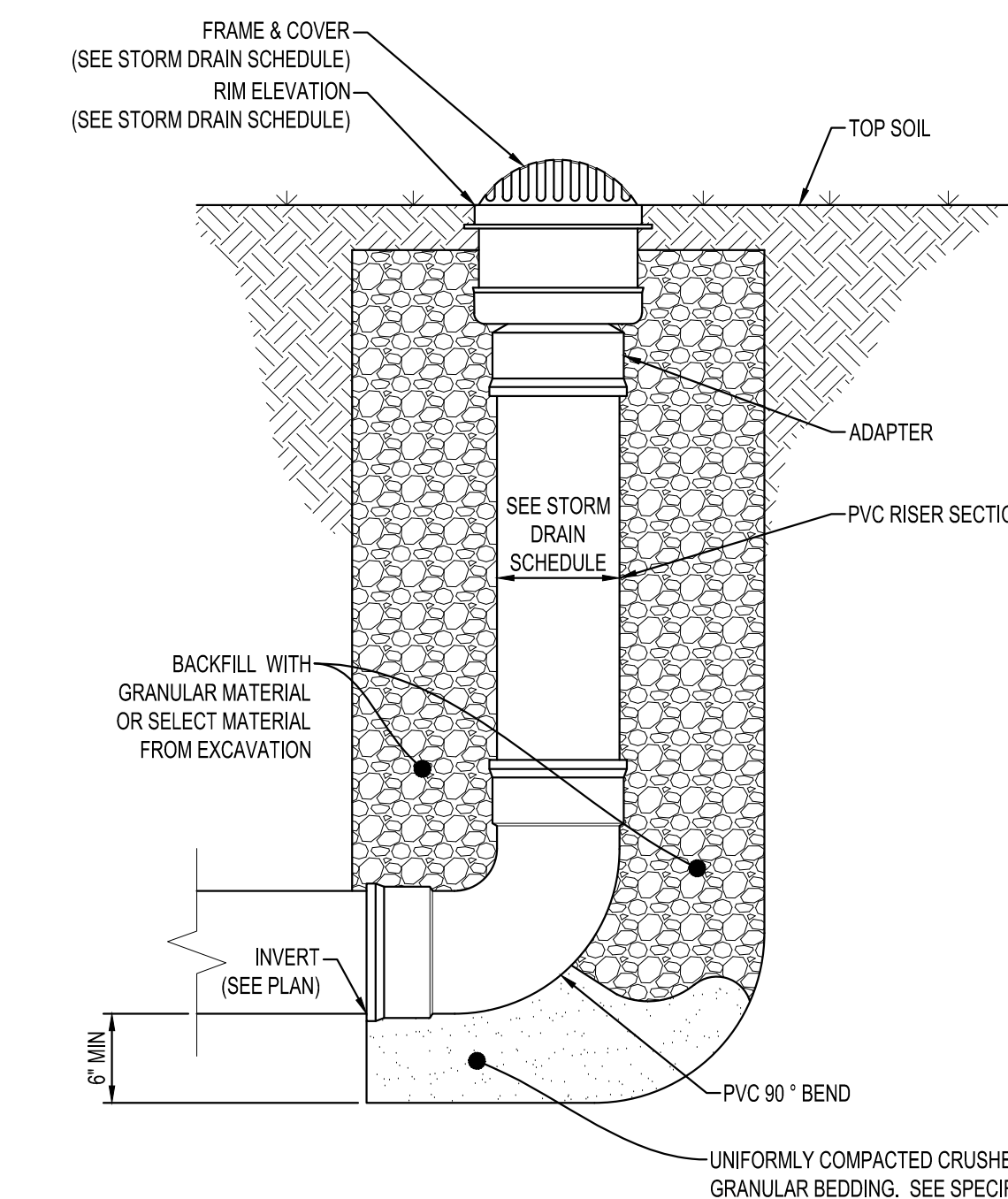
REINFORCED CONCRETE STORM DRAIN PIPE BEDDING
NTS



NOTE:

GRANULAR BEDDING AND ENCASEMENT FOR WATERMAIN PIPES SHALL BE INCIDENTAL TO CONSTRUCTION

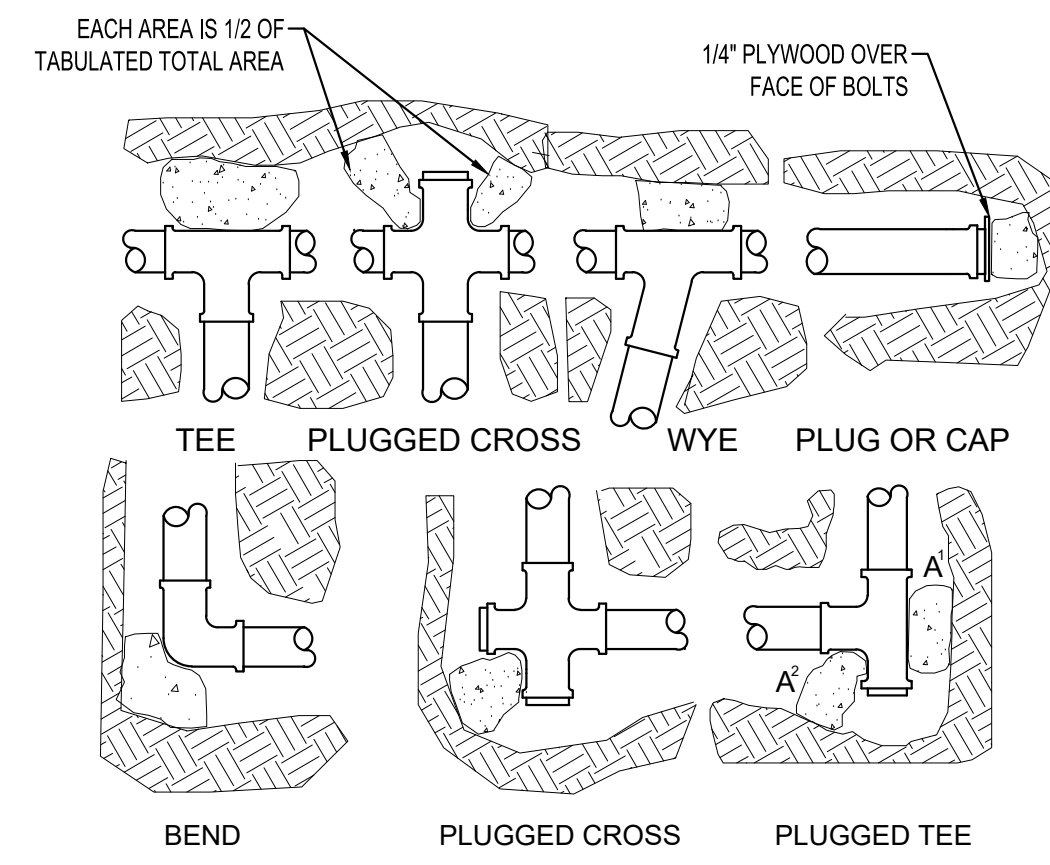
PIPE BEDDING WATER MAIN
NTS



INLINE DRAIN
NTS



PRELIMINARY NOT FOR CONSTRUCTION

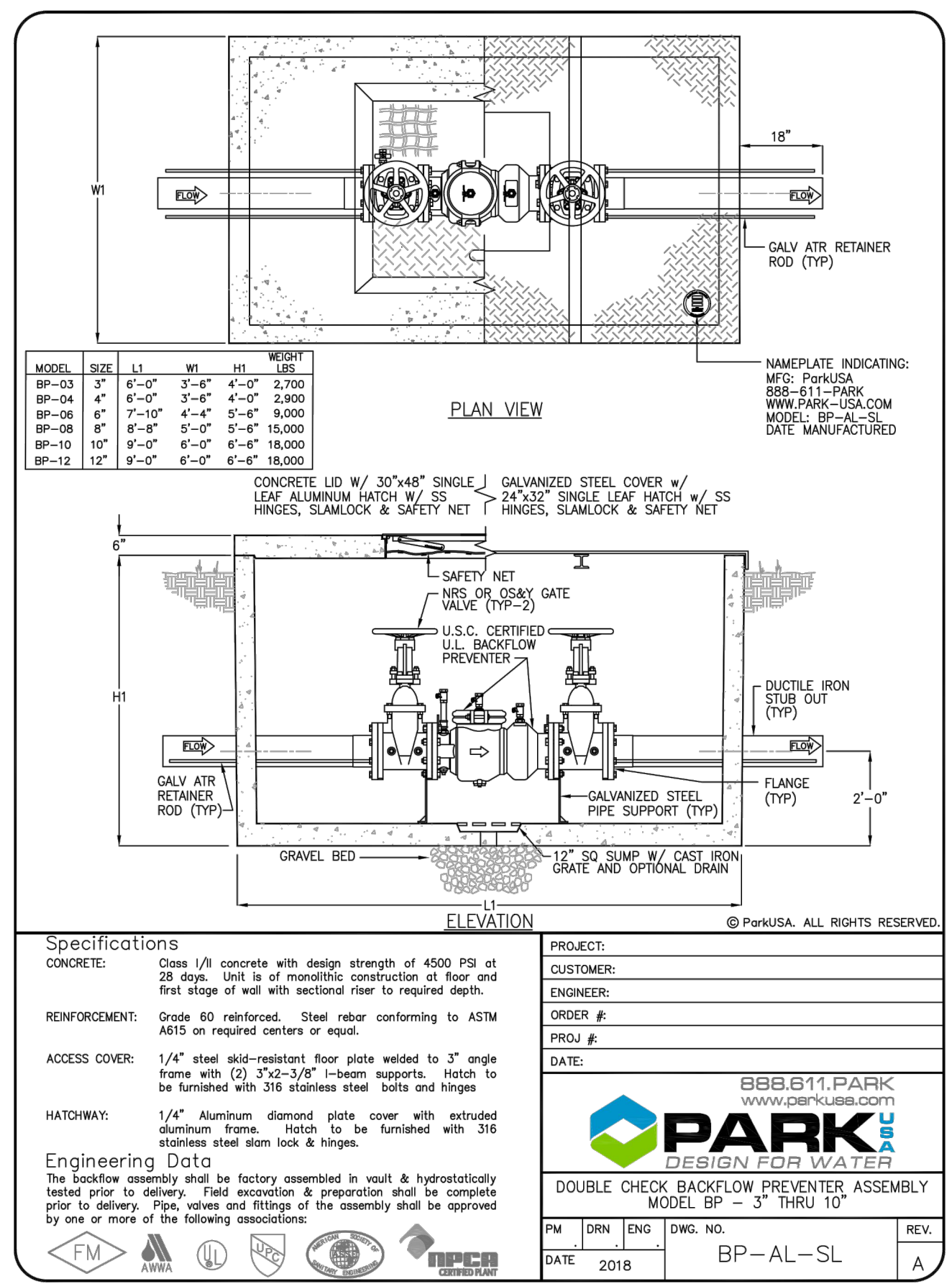


THRUST BLOCK BEARING (SF) TABLE

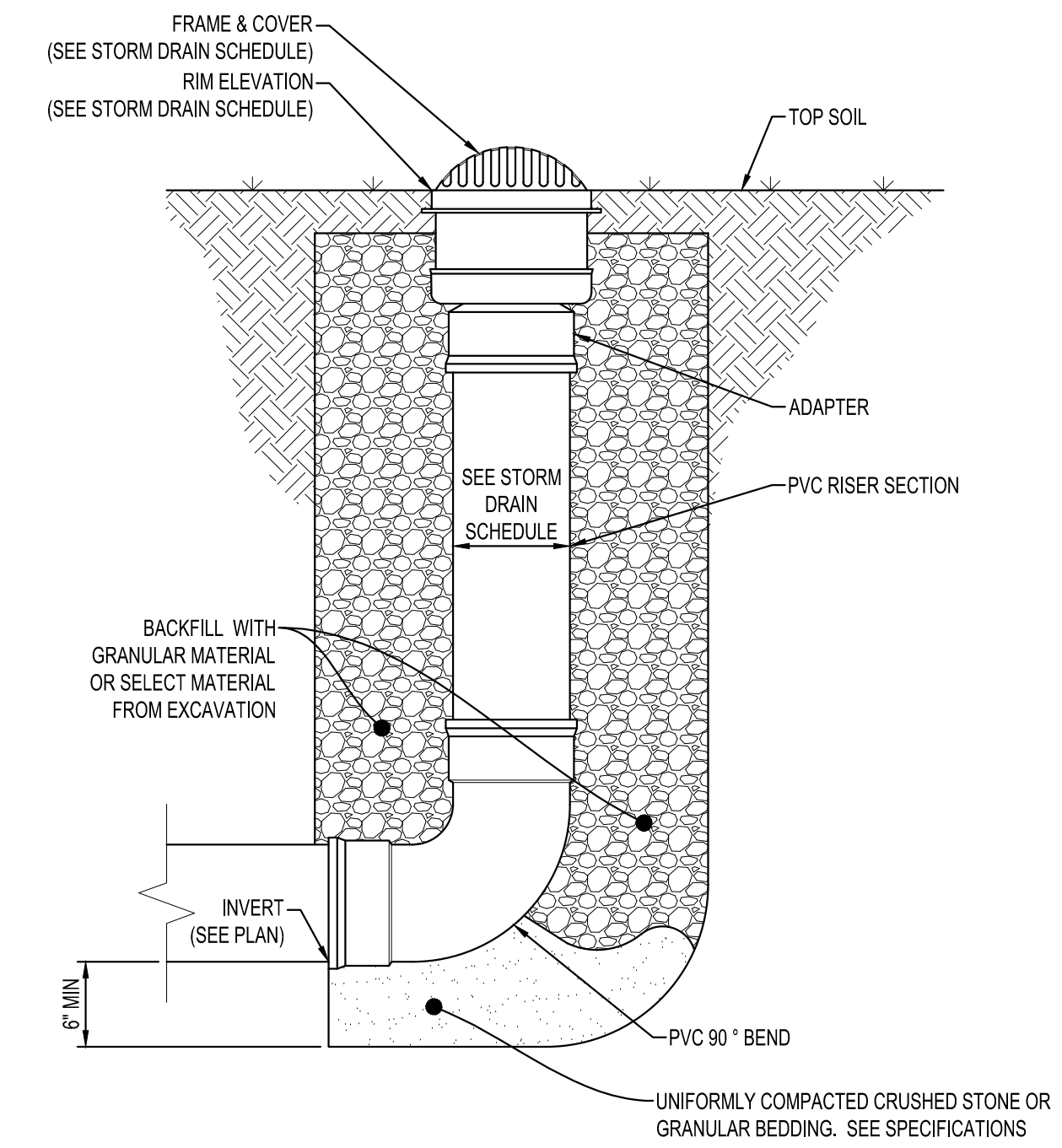
NOMINAL FITTING SIZE INCHES	TEE, WYE PLUG OR CAP	90 BEND PLUGGED CROSS	TEE PLUGGED ON RUN A' A²	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1.0	1.4	1.9	1.4	1.0	
6	2.1	3.0	4.3	3.0	1.6	1.0
8	3.8	5.3	7.6	5.4	2.9	1.5
10	5.9	8.4	11.8	8.4	4.6	2.6
12	8.5	12.0	17.0	12.0	6.6	3.4
14	11.5	16.3	23.0	16.3	8.9	4.6
16	15.0	21.3	30.0	21.3	11.6	6.0
18	19.0	27.0	38.0	27.0	14.6	7.6
20	23.5	33.3	47.0	33.3	18.1	9.4
24	34.0	48.0	68.0	48.0	26.2	13.6

- NOTES**
- CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH
 - KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES
 - IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED ABOVE. ADJUST IF NECESSARY, TO CONFORM TO THE TEST PRESSURES AND ALLOWABLE SOIL BEARING STRESS (ES)
 - BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL
 - ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 LBS PER SQ FT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING USE THE FOLLOWING EQUATION: BEARING AREA = TEST PRESSURE / (ALLOWABLE SOIL BEARING STRESS * TABLE VALUE)

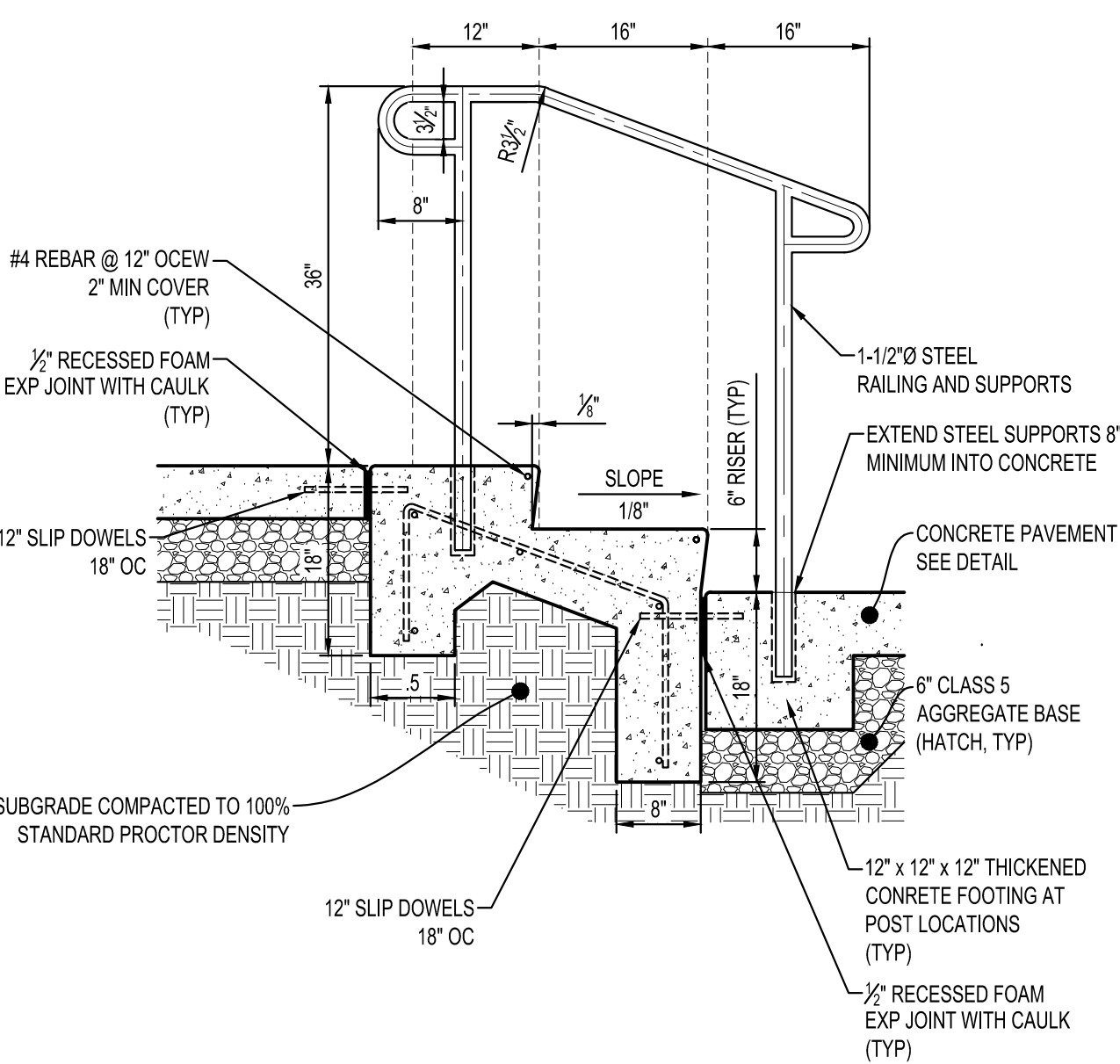
WATERMAIN THRUST BLOCKING
NTS



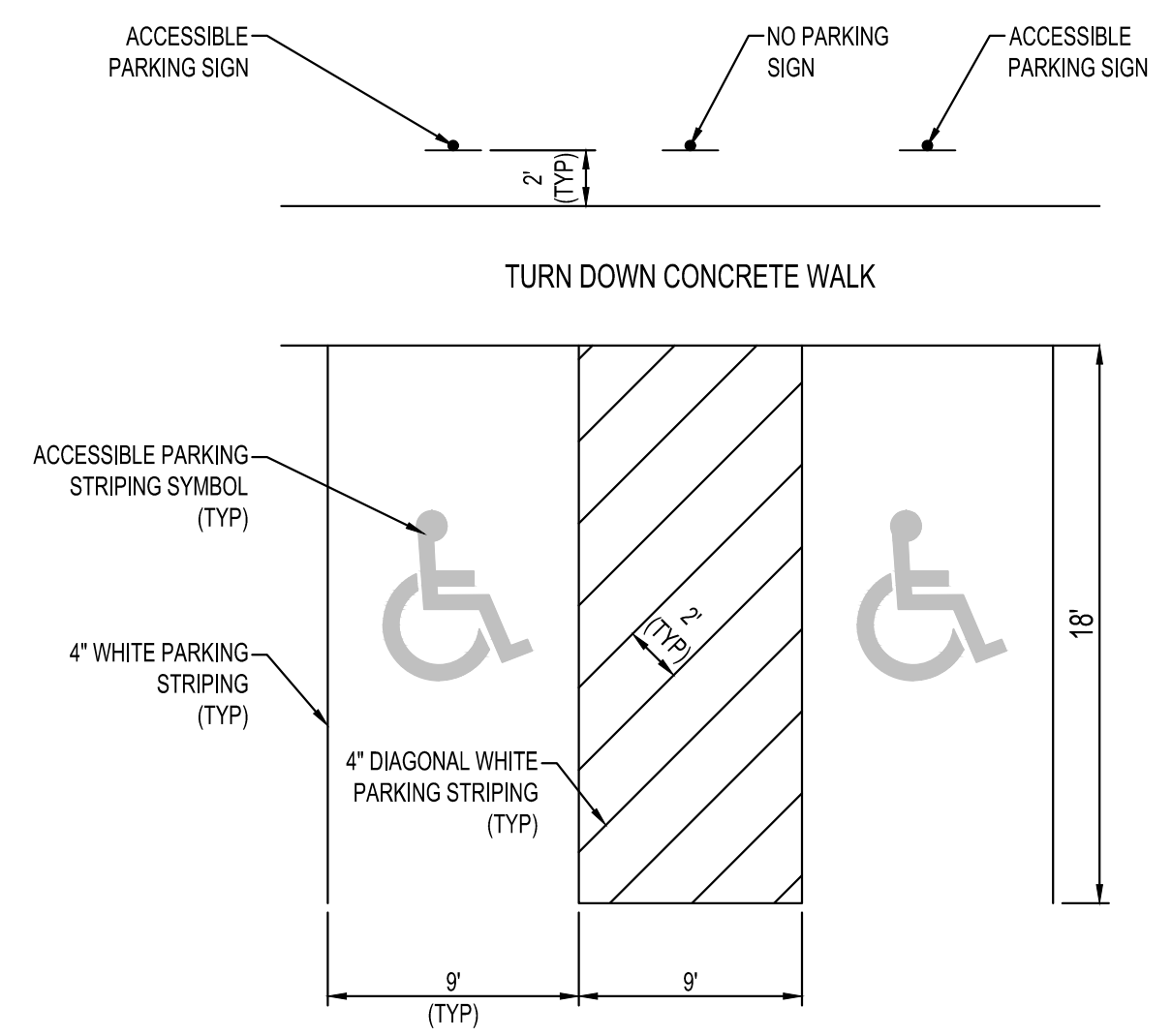
ROCK LANDSCAPING WITH UNDERDRAIN DETAIL
NTS



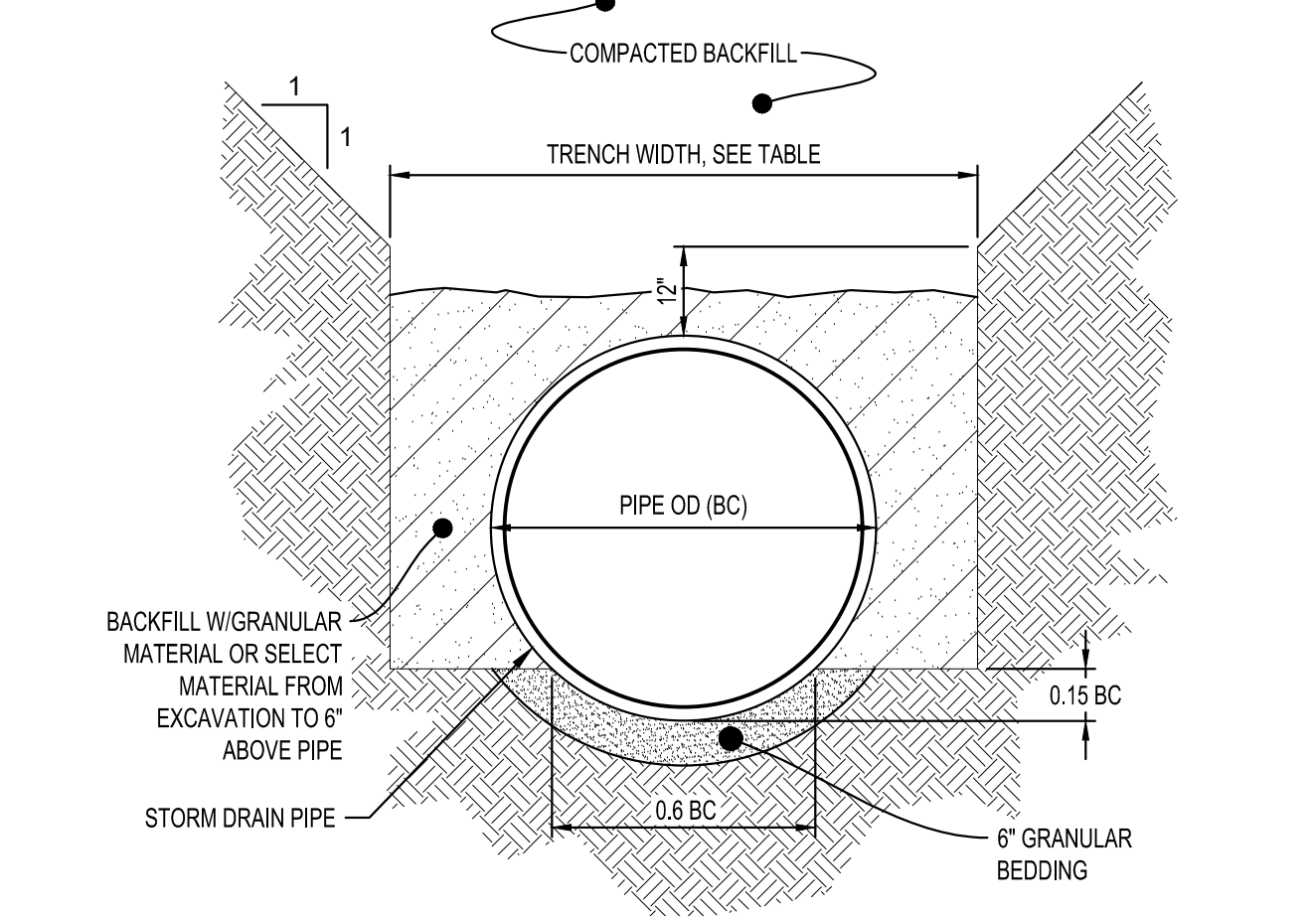
INLINE DRAIN
NTS



CONCRETE STAIR WITH RAILING
NTS



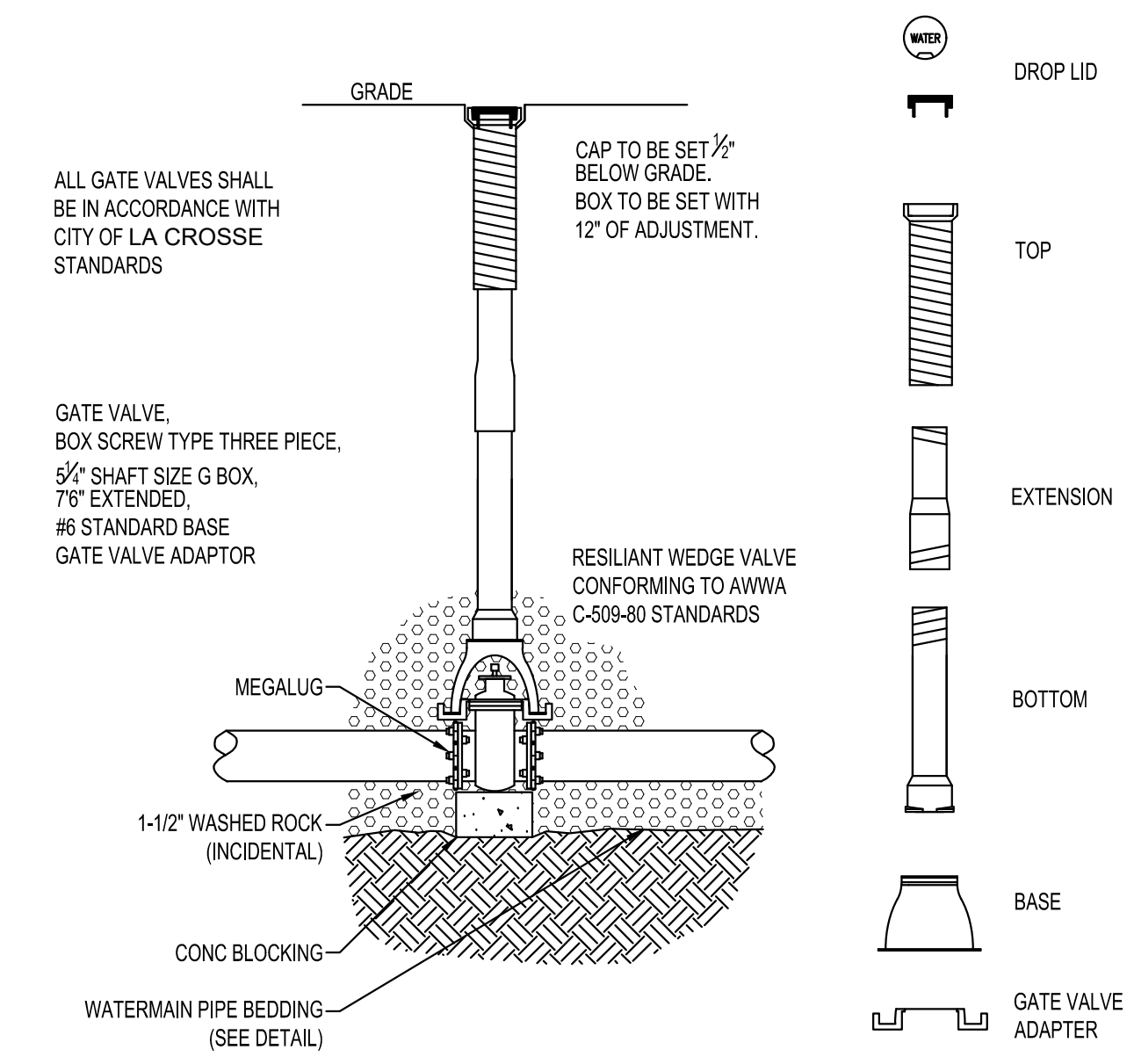
ACCESSIBLE PARKING AREA
NTS



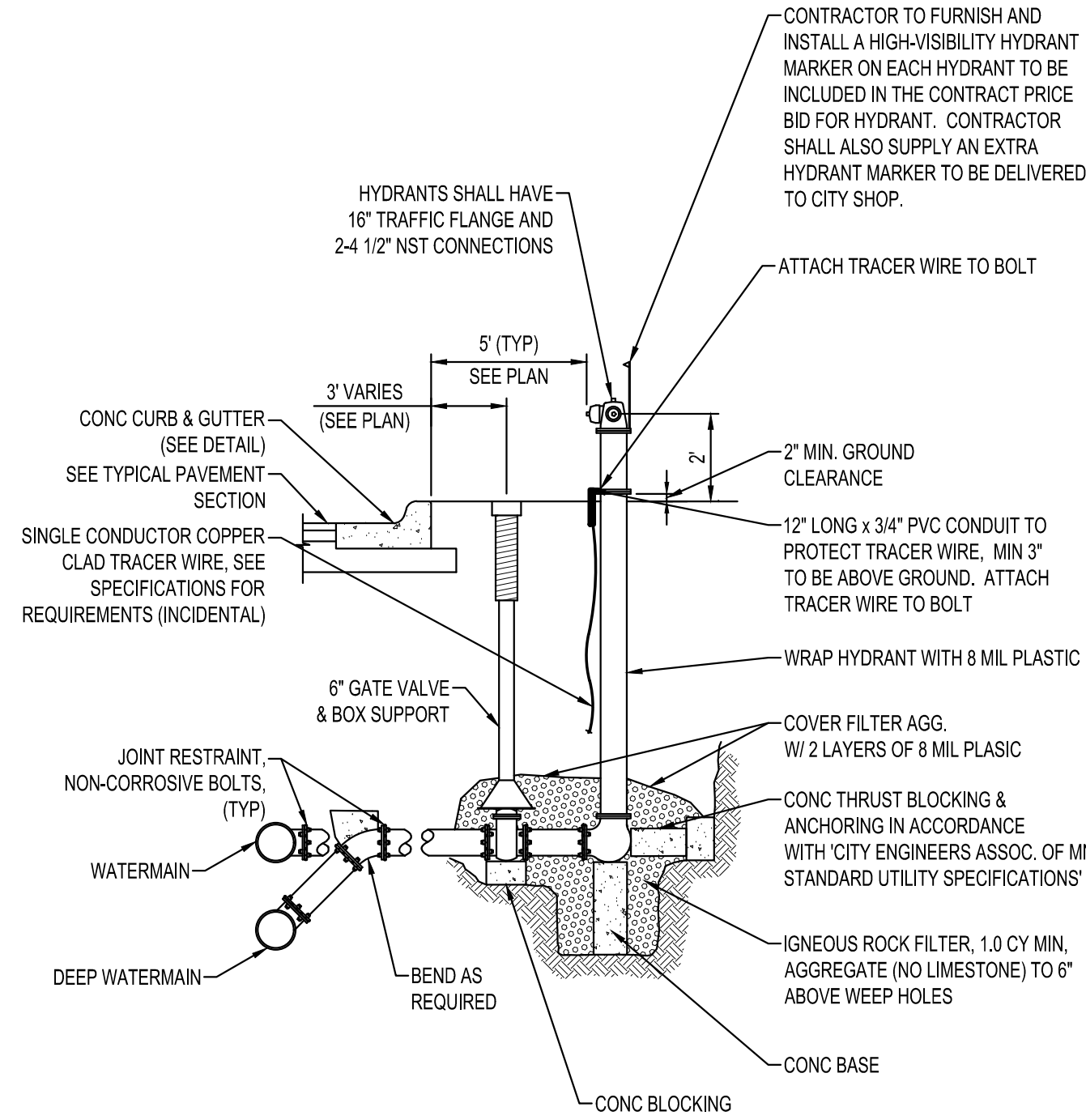
TRENCH WIDTH

PIPE Ø	TRENCH WIDTH
36" OR LESS	BC + 24"
42" TO 54"	1.5 x BC
60" OR OVER	BC + 36"

NON-CONCRETE STORM DRAIN PIPE BEDDING
NTS



TYPICAL GATE VALVE & BOX INSTALLATION
NTS



TYPICAL HYDRANT INSTALLATION
NTS

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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LA CROSSE WISCONSIN

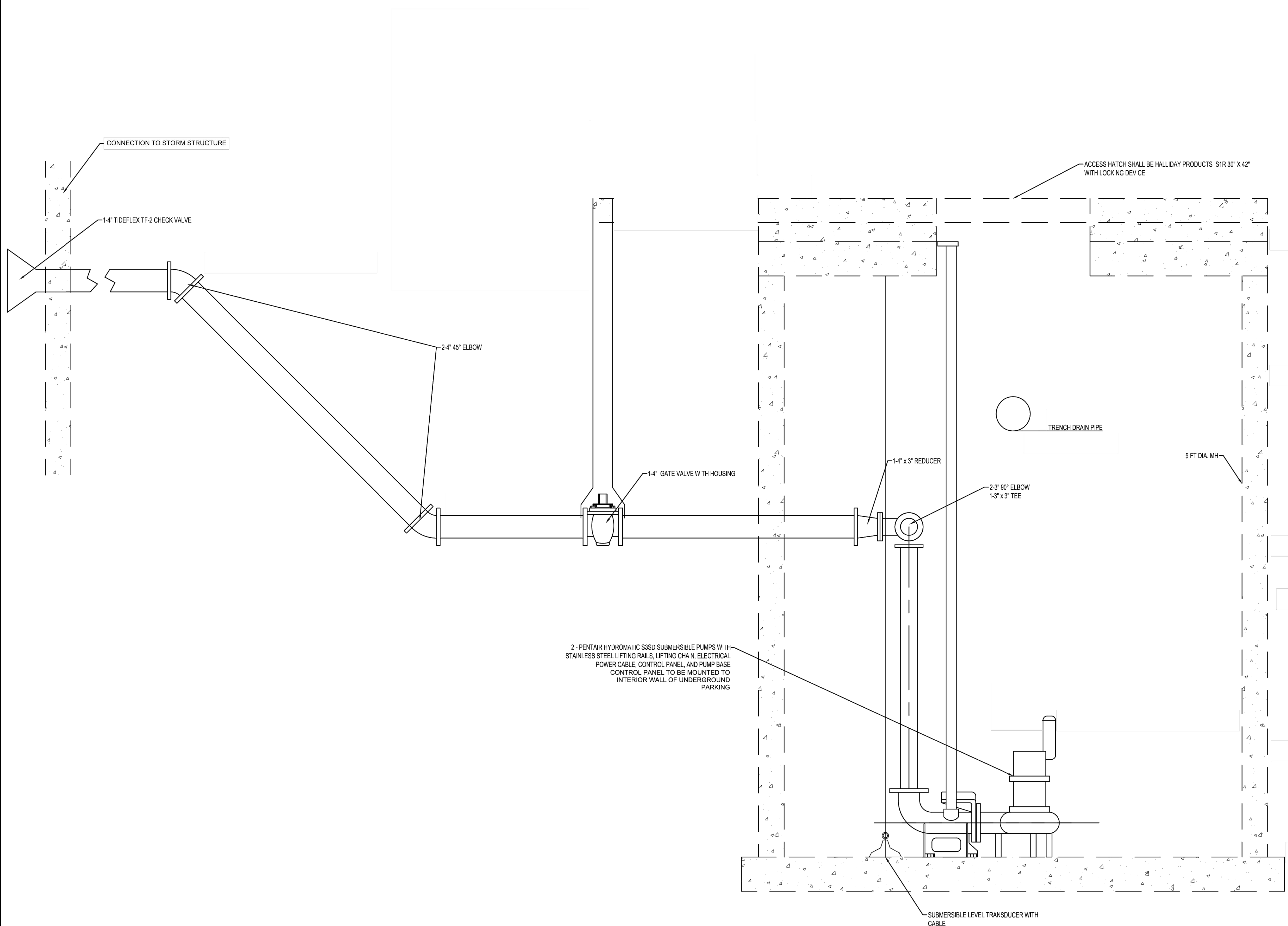
REVISION SCHEDULE

DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 CO-DETAILS
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	
CLIENT PROJECT NO.	

SITE DETAILS

SHEET
C0-11



DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

**COPPER ROCKS
DEVELOPMENT**

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 CO-DETAILS
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	05/20/22
CLIENT PROJECT NO.	-

TITLE

SITE DETAILS

SHEET
C0-12

SUBMERSIBLE PUMP
NTS SD450

PLOT DATE: 5/20/22 3:53 PM

PRELIMINARY NOT FOR CONSTRUCTION



MC-4500 STORMTECH CHAMBER SPECIFICATIONS

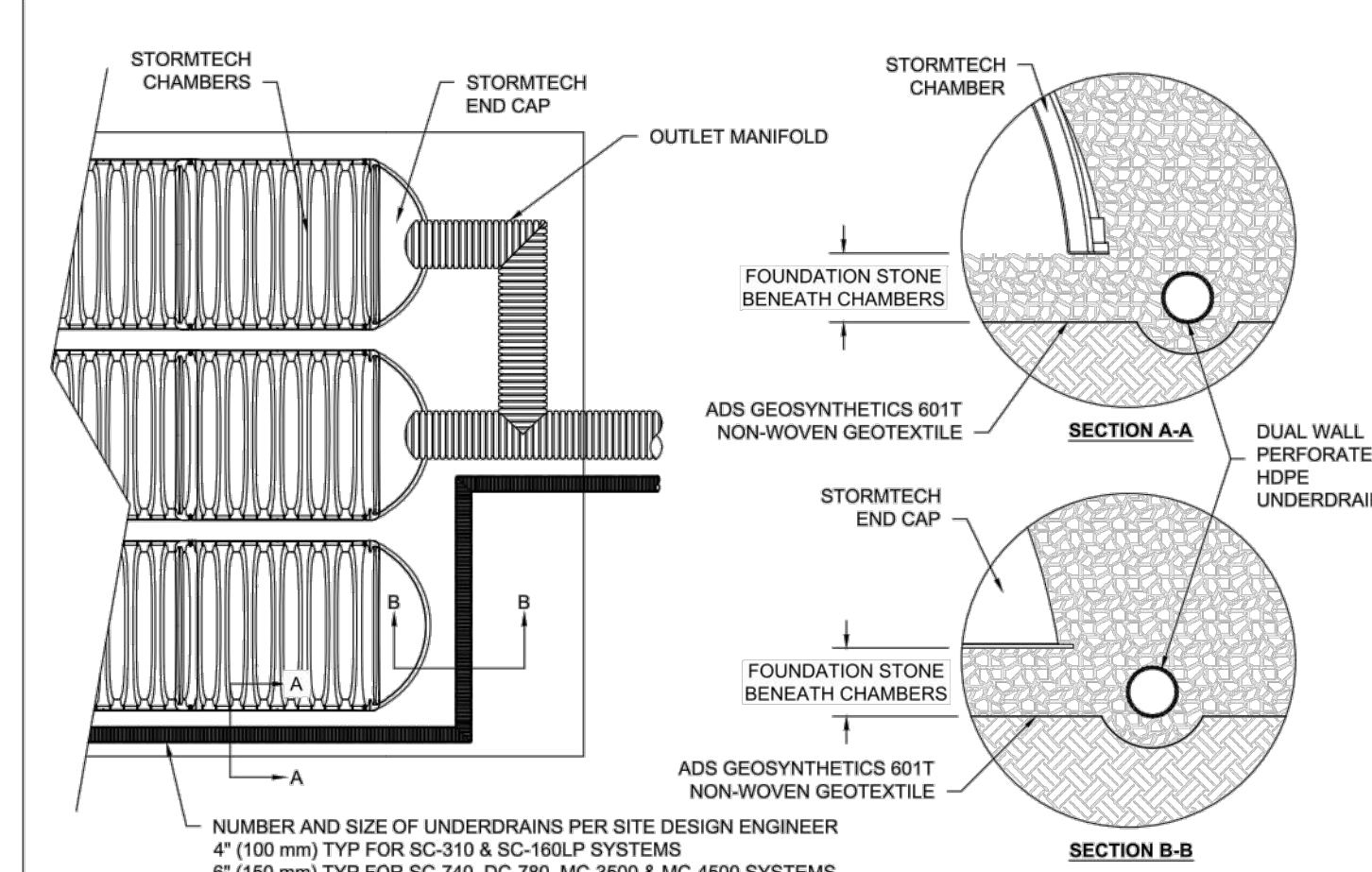
- 1. CHAMBERS SHALL BE STORMTECH MC-4500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS' CHAMBER CLASSIFICATION 60x101.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPIDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.2, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS' LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (1 MIN) ASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER; 2) MAXIMUM PERMANENT (75 YRS) COVER LOAD; AND 3) ALLOWABLE COVER WITH PARKED (1 WEEK) ASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LB/IN/IN, AND 3) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCE FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
- THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
- THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.56 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.2 OF THE AASHTO LFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
- THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

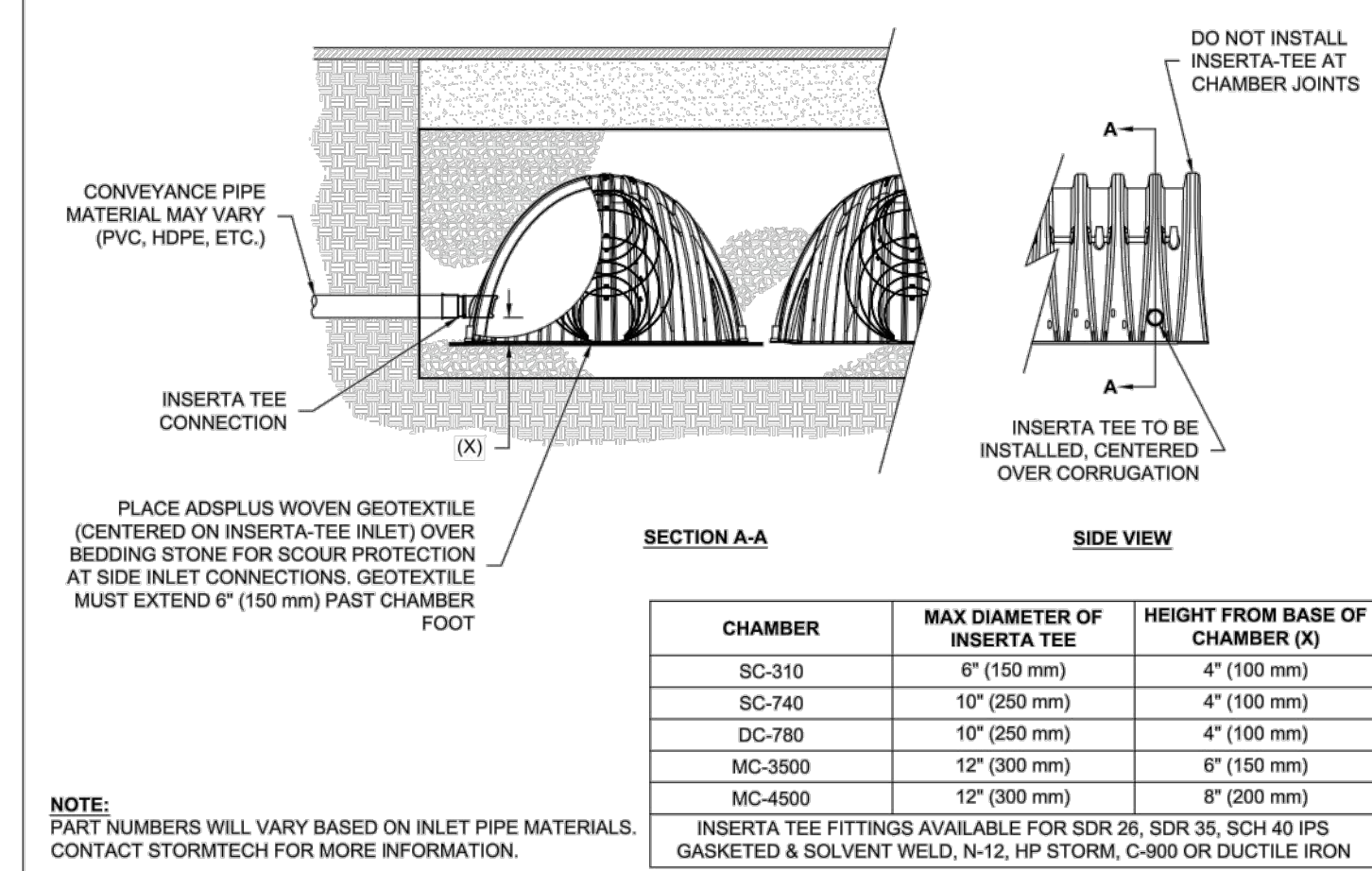
- 1. STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE 'STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE'.
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
- STONEBATCHES LOCATED OFF THE CHAMBER BED.
- BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
- BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM 1" (25mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M35 DESIGNATION OF #3 OR #4.
9. STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300mm) BETWEEN ADJACENT CHAMBER ROWS.
10. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
11. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
12. ADS RECOMMENDS THE USE OF 'TELEFORM GATCH IT' INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

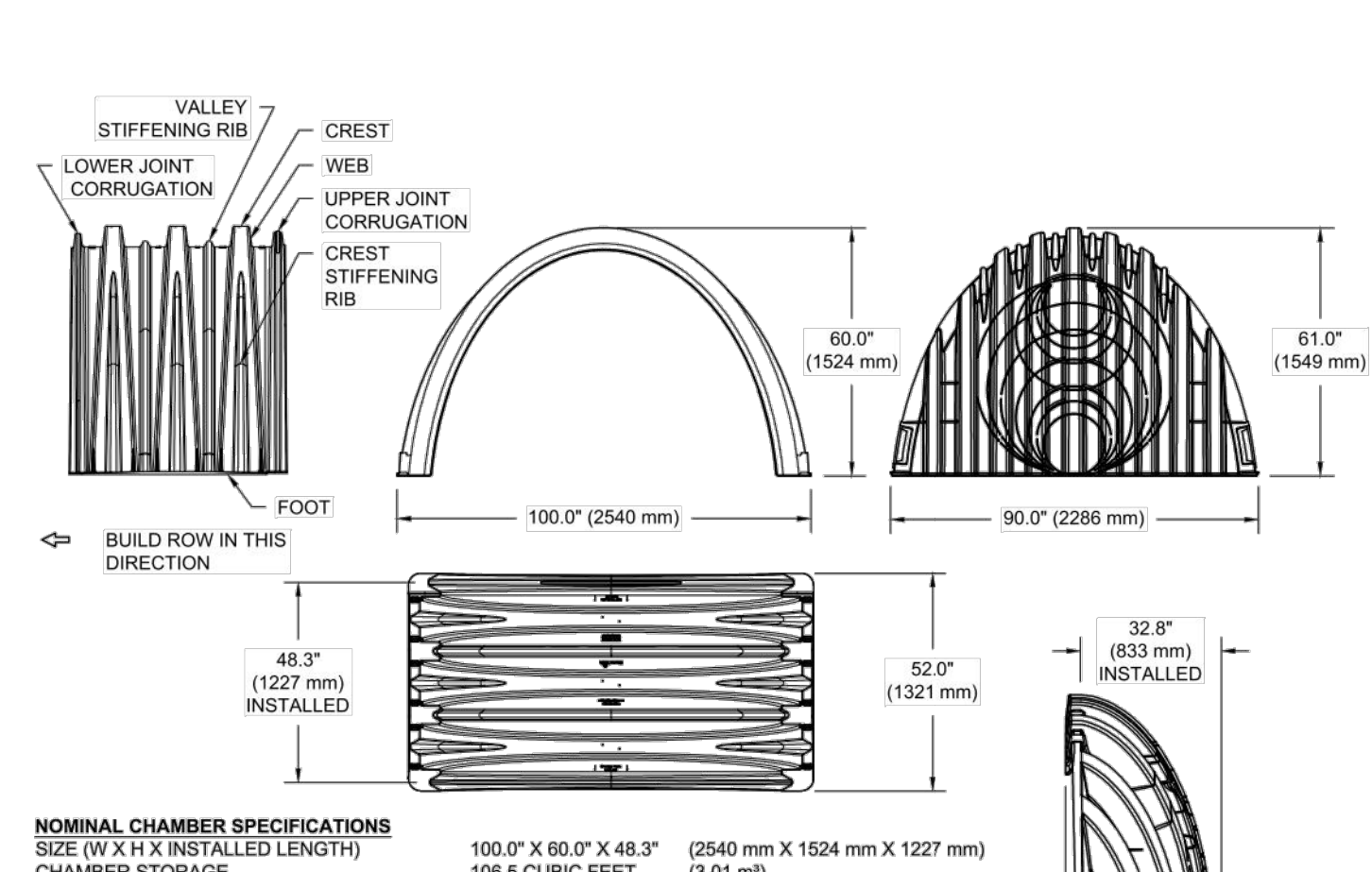
- 1. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE 'STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE'.
2. THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
- NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE 'STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE'.
- WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE 'STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE'.
3. FULL 36" (900mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE 'DUMP AND PUSH' METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
CONTACT STORMTECH AT 1-888-882-2698 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



5 UNDERDRAIN DETAIL



6 INSERTA-TEE SIDE INLET DETAIL

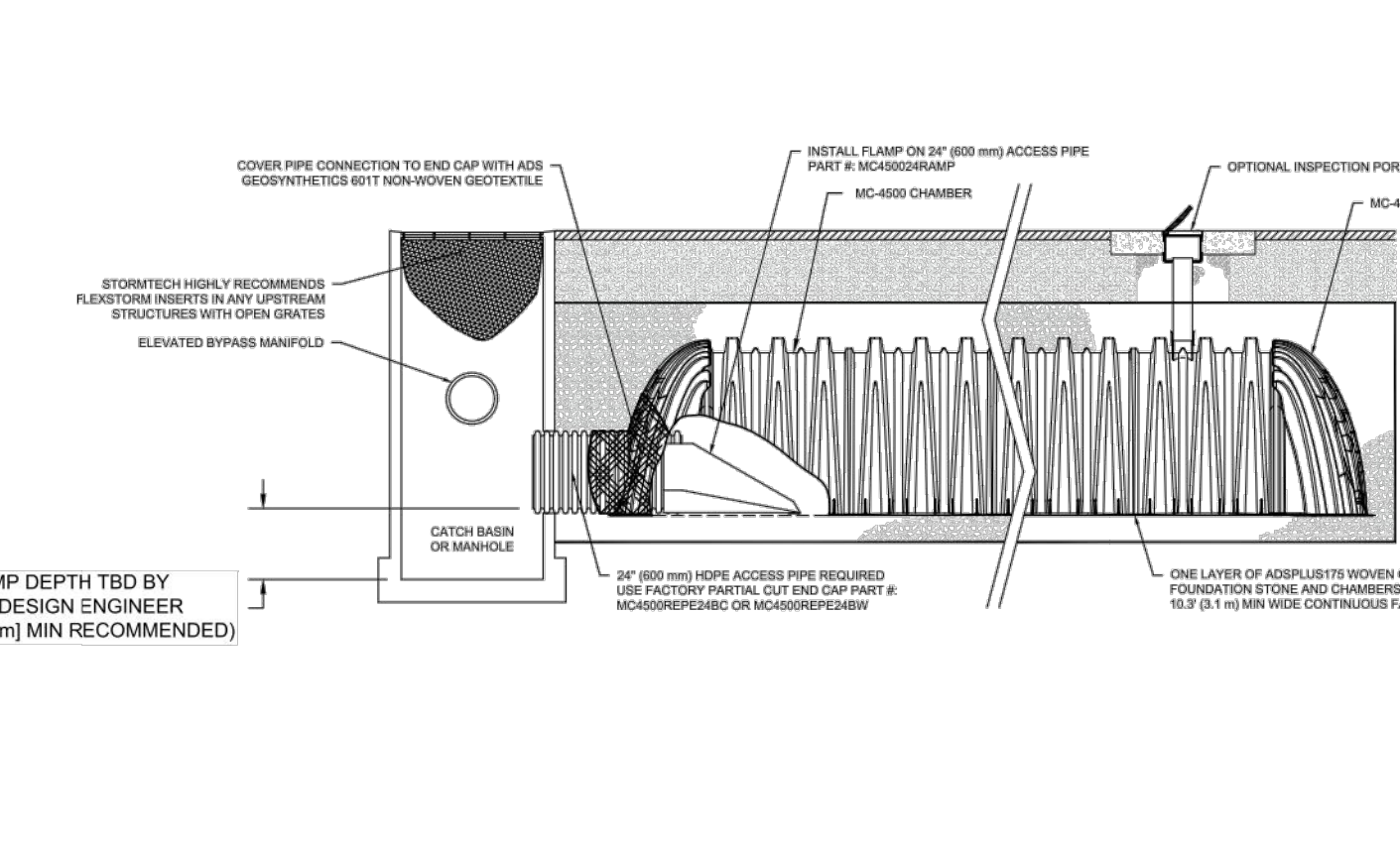


2 MC-4500 TECHNICAL SPECIFICATIONS

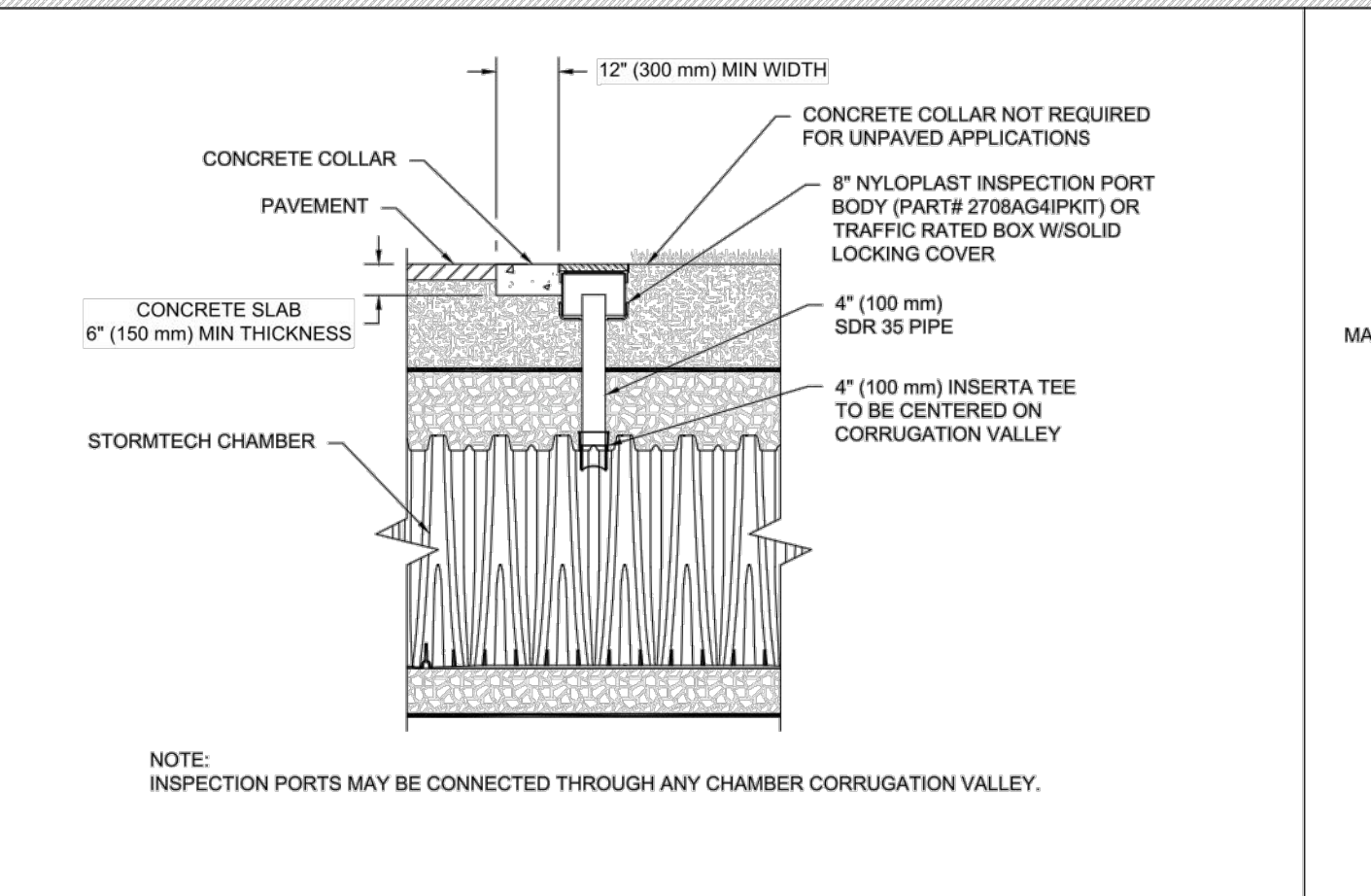
Table with columns: PART #, STUB, B, C. Lists various part numbers and their dimensions.

DATE: PROJECT NO: NOT TO SCALE
DRAWN: REVIEWED: REV:
STANDARD DETAILS
MC-4500

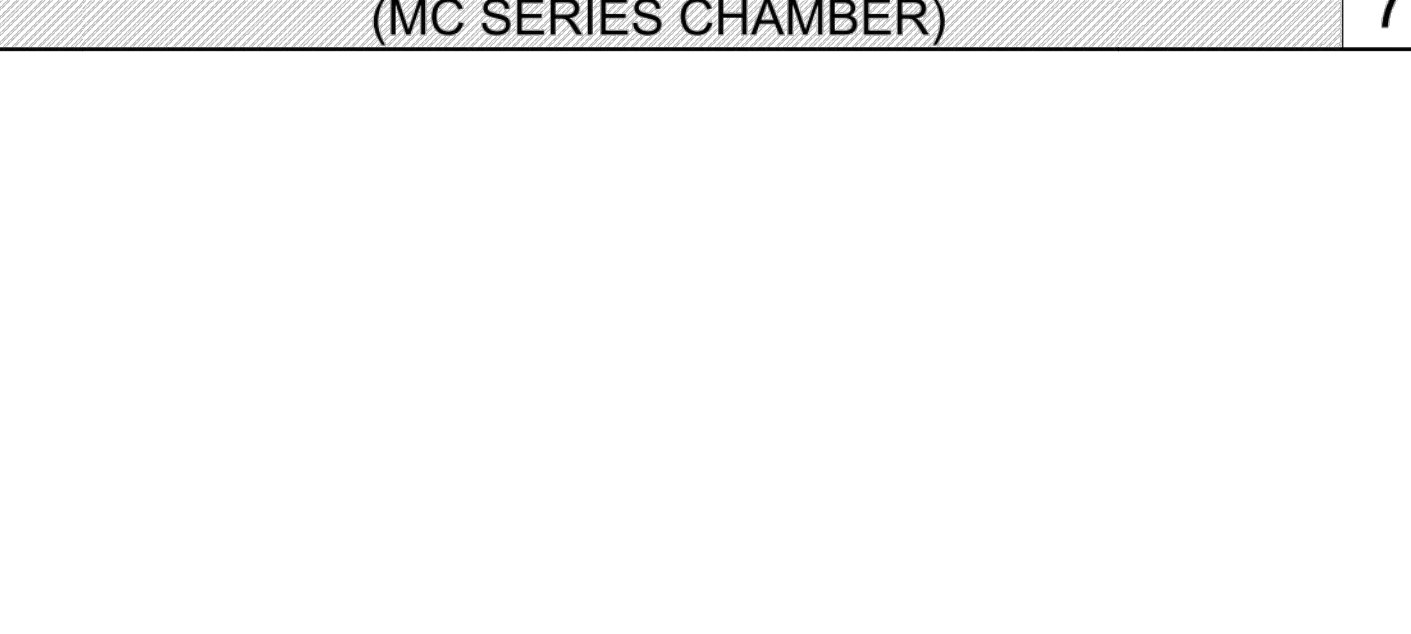
3 MC-4500 ISOLATOR ROW PLUS DETAIL



4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)



7 MC-SERIES END CAP INSERTION DETAIL



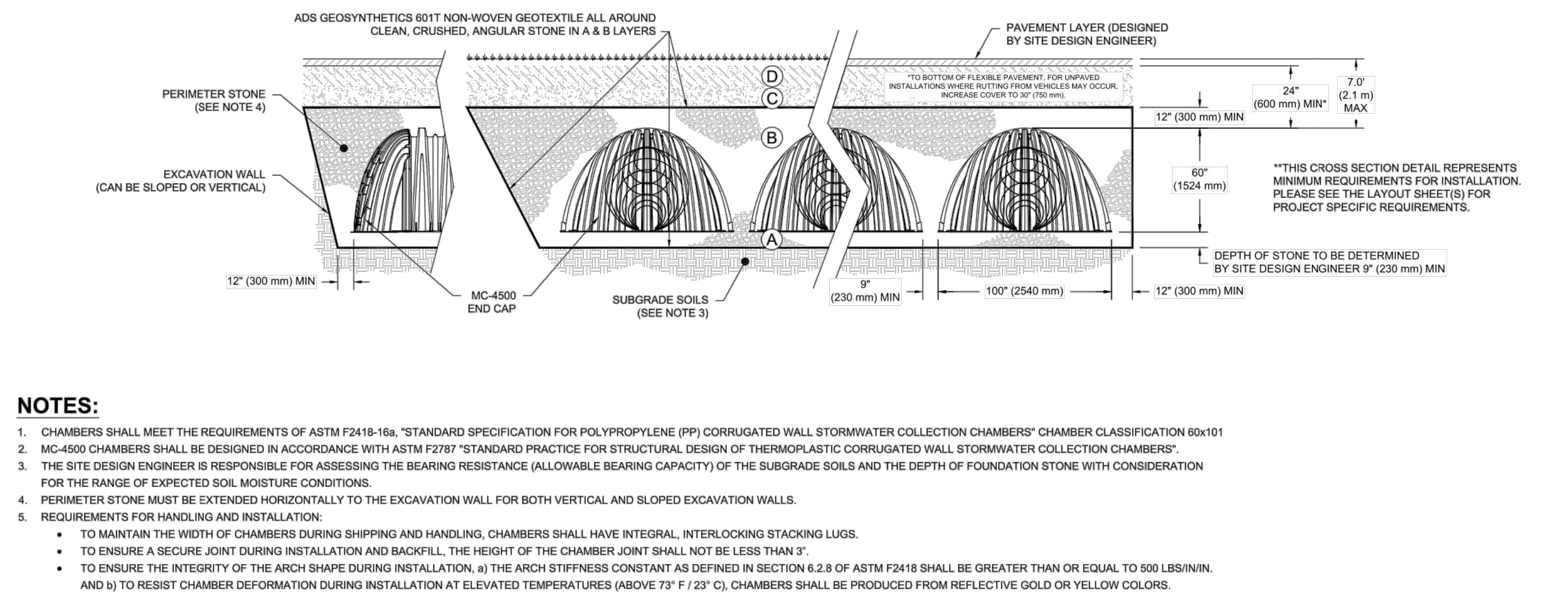
INSPECTION & MAINTENANCE

- STEP 1 INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
A. INSPECTION PORTS (IF PRESENT)
A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
A.2. REMOVE AND CLEAN FLESTORM FILTER IF INSTALLED
A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT (OPTIONAL)
A.5. IF SEDIMENT IS AT OR ABOVE 3" (80mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
B. ALL ISOLATOR PLUS ROWS
B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
B.3. MIRRORS OR HOLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
i) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
ii) IF SEDIMENT IS AT OR ABOVE 3" (80mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
STEP 2 CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
A. A FIXED CURVE CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1m) OR MORE IS PREFERRED
B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
C. VACUUM STRUCTURE SLUMP AS REQUIRED
STEP 3 REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
STEP 4 INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.
NOTES
1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT SETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

Table with columns: MATERIAL LOCATION, DESCRIPTION, AASHTO MATERIAL CLASSIFICATIONS, COMPACTION / DENSITY REQUIREMENT. Lists fill materials for final fill, initial fill, embedment stone, and foundation stone.

- PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: 'CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M35) STONE'.
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOLS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



1 MC-4500 CROSS SECTION DETAIL

- NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS' CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS'
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LB/IN/IN, AND 3) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCE FROM REFLECTIVE GOLD OR YELLOW COLORS.

4640 TRUEMAN BLVD
HILLIARD, OH 43026
SHEET
ADVANCED DRAINAGE SYSTEMS, INC.
STANDARD DETAILS
MC-4500

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022
NOTE: THE CLARITY OF THESE PLANS DEPEND UPON COLOR COPIES. IF THIS TEXT DOES NOT APPEAR IN COLOR, THIS IS NOT AN ORIGINAL PLAN SET AND MAY RESULT IN MISINTERPRETATION.
PROJECT
COPPER ROCKS DEVELOPMENT
LA CROSSE WISCONSIN
REVISION SCHEDULE
DATE DESCRIPTION BY
PROJECT NO. 21-25290
FILE NAME 25290 CO-DETAILS
DRAWN BY AAG/SMW
DESIGNED BY AAG/SMW/KBR
REVIEWED BY KBR
ORIGINAL ISSUE DATE
CLIENT PROJECT NO.
TITLE
SITE DETAILS
C0-13

PRELIMINARY NOT FOR CONSTRUCTION



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 6 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING ASTM A1918 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH, 16 INCH (C-C) MAXIMUM SPACING, PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT. MINIMUM LENGTH OF 10 INCHES. MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 3/8 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO M318 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 10 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

② SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES.

③ SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

④ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 190 (TYP).

⑤ SEE MANHOLE COVER OPENING MATRIX.

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL JS	K	L	M
2 DIA.	X	X	X	X	X
3 DIA.			X	X	X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES (IN) SEPARATION (IN)	MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
3-FT	15	12	4
4-FT	24	18	4
5-FT	36	24	5
6-FT	42	30	6
7-FT	48	36 ^{1/2}	7
8-FT	60	42	8
9-FT	66	54	9
10-FT	72	60	10

* 3/8" PIPE AND A 62" PIPE CAN BE PLACED WITHIN 40 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

PLAN VIEW CIRCULAR OPENING

OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

SECTION A - A

SECTION B - B

DETAIL "A"

DETAIL "B"

DETAIL "C"

MANHOLES, 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED: *[Signature]*
DATE: _____
ROADWAY STANDARDS DEVELOPMENT ENGINEER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SLUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	F	ALL HS
2X3-FT	2	3	X
2.5X3-FT	2.5	3	X

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	WIDTH (IN)	LENGTH (IN)
2X3-FT	18	24	24
2.5X3-FT	18	24	24

CATCH BASINS 2X3-FT AND 2.5X3-FT

PLAN VIEW

SECTION A - A

SECTION B - B

DETAIL "A"

MANHOLES, 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED: *[Signature]*
DATE: _____
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

PRELIMINARY NOT FOR CONSTRUCTION

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

COPPER ROCKS DEVELOPMENT

LA CROSSE WISCONSIN

DATE	REVISION SCHEDULE DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 CO-DETAILS
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	05/20/2022
CLIENT PROJECT NO.	-

TITLE

SITE DETAILS



SANITARY SEWER PIPE SCHEDULE									
PIPE NO.	DRAIN FROM	INLET ELEVATION	DRAIN TO	OUTLET ELEVATION	PIPE SIZE	MATERIAL	PIPE CLASS	PIPE GRADE	PIPE LENGTH (FT)
SP-1	S-1	646.85	EX S-1	646.03	8"	PVC	SDR-35	0.40%	155
SP-2	S-2	647.16	S-1	646.75	8"	PVC	SDR-35	0.40%	103
SP-2A	WEST TOWNHOMES	649.16	S-2	648.86	6"	PVC	SDR-26	1.00%	30
SP-2B	45' BEND	648.08	S-2	648.02	8"	PVC	SDR-35	1.00%	7
SP-2C	BUILDING 1	649.00	45' BEND	648.08	8"	PVC	SDR-35	1.00%	91
SP-3	TEE	647.82	S-2	647.26	8"	PVC	SDR-35	0.40%	138
SP-3A	MIDDLE TOWNHOMES	650.23	TEE	649.93	6"	PVC	SDR-26	1.00%	30
SP-4	S-3	648.22	TEE	647.82	8"	PVC	SDR-35	0.40%	101
SP-4A	45' BEND	655.32	S-3	655.13	8"	PVC	SDR-35	1.00%	19
SP-4B	BUILDING 2	655.58	45' BEND	655.32	8"	PVC	SDR-35	1.00%	24
SP-5	S-4	648.69	S-3	648.32	8"	PVC	SDR-35	0.40%	93
SP-5A	EAST TOWNHOMES	651.36	S-4	651.06	6"	PVC	SDR-26	1.00%	30
SP-6	S-5	649.80	S-4	649.79	8"	PVC	SDR-35	0.40%	202
SP-7	BUILDING 3	650.50	S-5	649.70	8"	PVC	SDR-35	0.40%	200

SANITARY SEWER STRUCTURE SCHEDULE								
STRUCTURE NO.	STRUCTURE TYPE	STRUCTURE SIZE (IN)	STRUCTURE MATERIAL	CASTING	PAY HEIGHT (LN FT)	TOP OF CASTING ELEVATION	INVERT ELEVATION	OUTLET PIPE
S-1	SANITARY MANHOLE	48 0	RC	NEENAH R-1670	17.11	663.76	646.85	SP-1
S-3	SANITARY MANHOLE	48 0	RC	NEENAH R-1670	16.23	664.45	648.22	SP-4
S-4	SANITARY MANHOLE	48 0	RC	NEENAH R-1670	16.19	664.88	648.69	SP-5
S-5	SANITARY MANHOLE	48 0	RC	NEENAH R-1670	14.64	664.24	649.80	SP-6

STORM DRAIN PIPE SCHEDULE									
PIPE NO.	DRAIN FROM	INLET ELEVATION	DRAIN TO	OUTLET ELEVATION	PIPE SIZE (IN)	MATERIAL	PIPE CLASS	PIPE GRADE	PIPE LENGTH (FT)
P-1	ST-1	658.22	ST-2	656.99	18	RCP	CLASS III	0.50%	246
P-2	ST-2	656.99	ST-3	655.86	21	RCP	CLASS III	0.68%	164
P-3	ST-3	655.80	ADS STORMTECH MC-4500	655.50	21	RCP	CLASS III	0.92%	33
P-4	ST-4	658.49	ST-6	657.95	12	RCP	CLASS III	0.50%	109
P-4A	ST-5	658.31	ST-6	657.97	12	RCP	CLASS III	0.50%	68
P-5	ST-6	657.96	ST-7	657.20	12	RCP	CLASS III	0.50%	153
P-6	ST-7	657.20	ST-8	656.39	15	RCP	CLASS III	0.50%	164
P-7	ST-11	657.74	TEE	657.55	12	RCP	CLASS III	0.50%	38
P-7A	TEE	657.55	ST-10	657.47	12	RCP	CLASS III	0.50%	17
P-8	ST-10	657.42	ST-8	656.82	15	RCP	CLASS III	0.50%	119
P-9	ST-12	656.77	ST-8	656.23	12	RCP	CLASS III	0.49%	108
P-10	ST-8	656.21	ST-13	655.71	24	RCP	CLASS III	0.50%	100
P-11	ST-13	655.81	ST-15	655.45	24	RCP	CLASS III	0.61%	61
P-11A	ST-15	655.55	ADS STORMTECH MC-4500	655.50	24	RCP	CLASS III	0.49%	9
P-11B	ST-14	656.01	ST-13	655.86	15	RCP	CLASS III	0.50%	30
P-12	ST-16	655.78	ST-15	655.63	12	RCP	CLASS III	0.50%	30
P-13	BOTTOM SOUTH RAMP TRENCH DRAIN	653.47	ST-9	654.32	4	PVC	FORCEMAN	7.02%	12
P-14	ST-9	654.32	ST-10	657.57	4	PVC	FORCEMAN	9.60%	34
P-15	NORTH RAMP TRENCH DRAIN	653.25	ST-19	653.25	4	PVC	FORCEMAN	0.00%	7
P-16	ST-19	653.31	ST-26	657.00	4	PVC	FORCEMAN	7.01%	53
P-17	TOP SOUTH RAMP TRENCH DRAIN	657.00	TEE	656.70	12	RCP	CLASS III	3.78%	8
P-18	ST-18	654.72	EXISTING CATCH BASIN	654.50	15	RCP	CLASS III	0.50%	45
P-19	ST-17	655.35	ST-18	654.82	15	RCP	CLASS III	0.50%	106
P-20	ADS STORMTECH MC-4500	655.55	ST-17	655.45	15	RCP	CLASS III	0.70%	14
P-21	ST-23	658.29	ST-24	657.95	6	HDPE	CLASS III	1.00%	34
P-22	ST-24	657.95	ST-2	657.39	6	HDPE	CLASS III	1.00%	55
P-23	ST-21	648.70	ST-20	648.76	24	RCP	CLASS III	0.37%	22

STORM DRAIN STRUCTURE SCHEDULE									
STRUCTURE NO.	STRUCTURE TYPE	STRUCTURE SIZE (IN)	STRUCTURE MATERIAL	CASTING	PAY HEIGHT (LN FT)	* TOP OF CASTING ELEVATION	INVERT ELEVATION	OUTLET PIPE	
ST-1	W6DOT CATCH BASIN	36 x 24	RC	TYPE T	5.65	663.87	658.22	P-1	
ST-2	W6DOT CATCH BASIN	36 x 24	RC	TYPE T	7.49	664.29	656.80	P-2	
ST-3	W6DOT CATCH BASIN	36 x 24	RC	TYPE T	8.72	664.52	655.80	P-3	
ST-4	W6DOT MANHOLE	36 0	RC	TYPE C	5.33	663.83	658.49	P-4	
ST-5	W6DOT MANHOLE	36 0	RC	TYPE C	6.42	664.73	658.31	P-4A	
ST-6	W6DOT MANHOLE	36 0	RC	TYPE C	7.15	665.10	657.95	P-5	
ST-7	W6DOT MANHOLE	36 0	RC	TYPE C	6.96	664.16	657.20	P-6	
ST-8	W6DOT MANHOLE	48 0	RC	TYPE C	6.56	662.77	656.21	P-10	
ST-10	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	6.17	663.59	657.42	P-8	
ST-11	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	6.06	663.80	657.74	P-7	
ST-12	W6DOT MANHOLE	36 0	RC	TYPE C	6.45	662.66	656.20	P-9	
ST-13	W6DOT MANHOLE	36 0	RC	TYPE C	7.35	663.04	655.68	P-11	
ST-14	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	6.93	662.94	656.01	P-11B	
ST-15	W6DOT MANHOLE	36 0	RC	TYPE C	8.13	663.58	655.45	P-11A	
ST-16	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	7.81	663.59	655.78	P-12	
ST-17	W6DOT MANHOLE	36 0	RC	TYPE C	7.23	662.58	655.35	P-19	
ST-18	W6DOT MANHOLE	36 0	RC	TYPE C	7.06	661.79	654.72	P-18	
ST-20	W6DOT MANHOLE	36 0	RC	TYPE C	12.65	661.43	648.78		
ST-21	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	12.34	660.73	648.39	P-23	
ST-22	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	4.00	661.23	657.23		
ST-23	INLINE DRAIN	8 0	PVC	STANDARD GRATE	6.06	664.35	658.29	P-21	
ST-24	DRAIN BASIN	8 0	PVC	STANDARD GRATE	6.38	664.32	657.95	P-22	
ST-25	W6DOT CATCH BASIN	36 x 24	RC	TYPE H-S	6.19	664.84	658.65	P-1A	
ST-26	W6DOT CATCH BASIN	36 0	RC	TYPE C	8.02	665.02	657.00	P-1B	

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

**COPPER ROCKS
DEVELOPMENT**

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 CO-DETAILS
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	5/20/2022
CLIENT PROJECT NO.	-

TITLE

**UTILITY
SCHEDULES**

SHEET

C0-20

STORM WATER POLLUTION PREVENTION PLAN NOTES:

GENERAL PROJECT INFORMATION:

PROJECT NARRATIVE:

This project consists of the construction of asphaltic pavement, concrete sidewalk, curb & gutter, grading, stormwater management, restoration, erosion control, and any incidental work.

RESPONSIBLE PARTIES:

Contractor and Owner are required to apply for and receive a Wisconsin Pollution Discharge Elimination System (WPDES) Stormwater Construction Permit from the WDNR at least 14 days prior to beginning work.

Contractor and owner shall identify a person knowledgeable and experienced in the application of erosion prevention and sediment control BMP's who will oversee the implementation of the SWPPP.

Company: _____ Contact Person: _____
Phone: _____

Company: _____ Contact Person: _____
Phone: _____

Owner shall identify the entity responsible for the long term Operation and Maintenance of the storm water management system.

Company: _____ Contact Person: _____
Phone: _____

PROJECT AREAS:

Total project size (disturbed area) = 6.96 acres
Minimum area requiring WPDES permit = 1.00 acres
****PROJECT DOES REQUIRE A WPDES PERMIT****
Existing area of impervious surface = 6.277 acres
Post construction area of impervious surface = 4.584 acres

Total new impervious surface area created = (1.696) acres

STORM WATER MANAGEMENT:

Types of permanent storm water management that will be used if more than one acre of new impervious surface is created are checked below:

- Wet sedimentation basin Infiltration / Filtration
 Regional Pond - Un-Named Alternative methods

RECEIVING WATERS:

Surface waters which will receive storm water from the site within 1 mile (aerial radius measurement) of project boundary. Include waters shown on USGS 7.5 minute quad and all special or impaired waters.

Name of Water Body	Type (ditch, pond, lake, etc.)	Special/Impaired Water?

CONSTRUCTION ACTIVITY NOTES:

POLLUTION PREVENTION:

All solid waste collected from the construction site must be disposed in accordance with all applicable regulations.

All hazardous materials (oil, gasoline, fuel, paint, etc.) must be properly stored to prevent spills, leaks, or other discharge. Storage areas shall provide secondary containment and a hazardous materials spill kit. Equipment fueling and maintenance shall occur in a designated, contained area. Storage and disposal of hazardous waste must be in compliance with all applicable regulations. All runoff containing any hazardous material must be properly collected and disposed. No engine degreasing shall be allowed on site.

All sanitary wastes must be collected from portable units on site by a licensed sanitary waste management contractor. The units must be secured and shall be maintained on a regular basis as needed to prevent overflowing.

Emergency Spill Plan – The Contractor is responsible for all construction personnel to be informed of the manufacturers' recommended spill cleanup methods, and the location of that information and cleanup supplies. The Contractor shall modify the SWPPP as required within seven calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. Plans must identify measures to prevent the recurrence of such releases. If a spill occurs, the following steps shall be followed:

1. Observe the safety precautions associated with the spilled material. Stop the source of the spill, if you can do so safely. Call 911 if fire or public safety hazards are created.
2. Contain the spilled material. Dirt, sand, or any semi-impermeable material may be used to create a containment structure to prevent the material from flowing.
3. Report the spill to Wisconsin's Spill Hotline at (800) 943-0003.
4. Clean up the spilled material and dispose of the wastes properly.

The contractor is responsible for monitoring air pollution and ensuring it does not exceed levels set by local, state, or federal regulations. This includes dust created by work being performed on the site. Air pollution and dust control correction is considered incidental to the unit bid prices for which work is being performed. Additional dust control measures may be required by the Engineer.

Concrete washout onsite: All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.

INSPECTION AND MAINTENANCE:

The Permittees must routinely inspect the construction site once every seven (7) days during active construction and within 24 hours of a rainfall event greater than 0.5 inches in a 24 hour period.

All inspections performed during construction must be recorded and records retained with the erosion plan in accordance with the Permit. Contractor is responsible for keeping a record of all rainfall data & erosion control maintenance until final establishment of turf.

Erosion control and other BMP's must be replaced, repaired, or supplemented when they reach 33% design load.

FINAL STABILIZATION:

The Contractor must ensure final stabilization of the site. The Contractor must submit a Notice of Termination when the site has undergone final stabilization and all stormwater discharges associated with the construction site activities that require to have WPDES coverage have ceased.

All temporary erosion control measures and BMP's must be removed as part of the final site stabilization.

The storm water permit further defines final stabilization and its requirements.

CONSTRUCTION ACTIVITY NOTES:

EROSION PREVENTION:

Construction of silt fence and all other erosion control measures shall be complete before other construction activity occurs. Use phased construction wherever practical and establish turf as soon as possible to minimize sediment transport.

Temporary cover during construction is incidental.

Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours after connection to a surface water.

All disturbed areas shall be seeded and mulched at the earliest possible time to prevent/reduce erosion.

A. Seed for the infiltration basin and swales shall be WisDOT mix #75 with mix #60 as a nurse crop and shall meet Specification Section 630. All other seed shall be WisDOT mix #40 and shall meet Specification Section 630. Mulching shall be applied according to Specification Section 627.

B. Fertilizer shall be WisDOT Type B and shall meet Specification Section 629.

C. Temporary mulching shall be applied at a rate of 2 tons/acre. Mulch shall be disc anchored.

Additional erosion prevention measures may be found at the Wisconsin Department of Natural Resources Best Management Practices.

SEDIMENT CONTROL PRACTICES:

Construction of silt fence and all other erosion control measures shall be complete prior to land disturbing activities occur.

A tracking pad entrance or other approved alternatives must be constructed at the exit point from the project site.

Inlet erosion protection shall be installed and maintained until turf or pavement has been established.

The contractor shall be responsible for controlling erosion and preventing eroded material from leaving the construction zone. All eroded material that leaves the construction zone shall be collected by the contractor and returned to the site at the contractor's expense.

Contractor shall maintain a 50-foot natural buffer or use redundant sediment controls near surface waters if a buffer is not feasible.

Contractor shall take the necessary steps to minimize soil compaction and preserve topsoil on site.

All streets must be swept within 24 hours when any tracking occurs.

Silt fence or other effective erosion control measures must be installed around the perimeter of any soil stockpiled, including temporary stockpiles, at this location or any other on the project site. Stockpiles cannot be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches.

DEWATERING AND BASIN DRAINING:

Dewater sediment-laden water to sedimentation basins if possible, or use other BMP's to prevent erosion when discharging to surface waters. Use appropriate energy dissipation measures on all discharges.

Dewatering practices cannot cause nuisance conditions, erosion or in receiving channels or inundation of wetlands resulting in adverse impacts.



DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

**COPPER ROCKS
DEVELOPMENT**

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

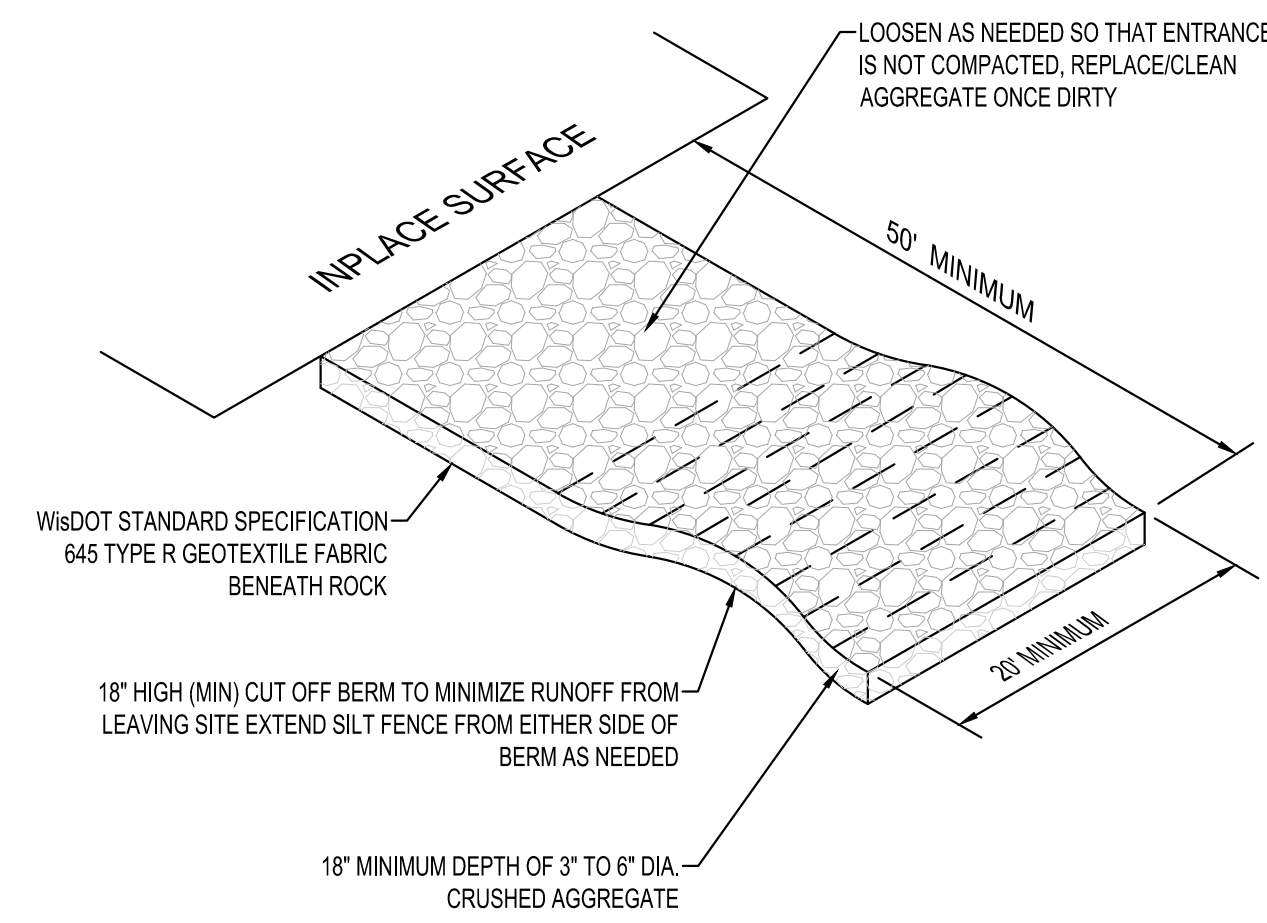
PROJECT NO. 21-25290
FILE NAME 25290 C1-SWPPP
DRAWN BY AAG/SMW
DESIGNED BY AAG/SMW/KBR
REVIEWED BY KBR
ORIGINAL ISSUE DATE 5/20/22
CLIENT PROJECT NO. -

TITLE

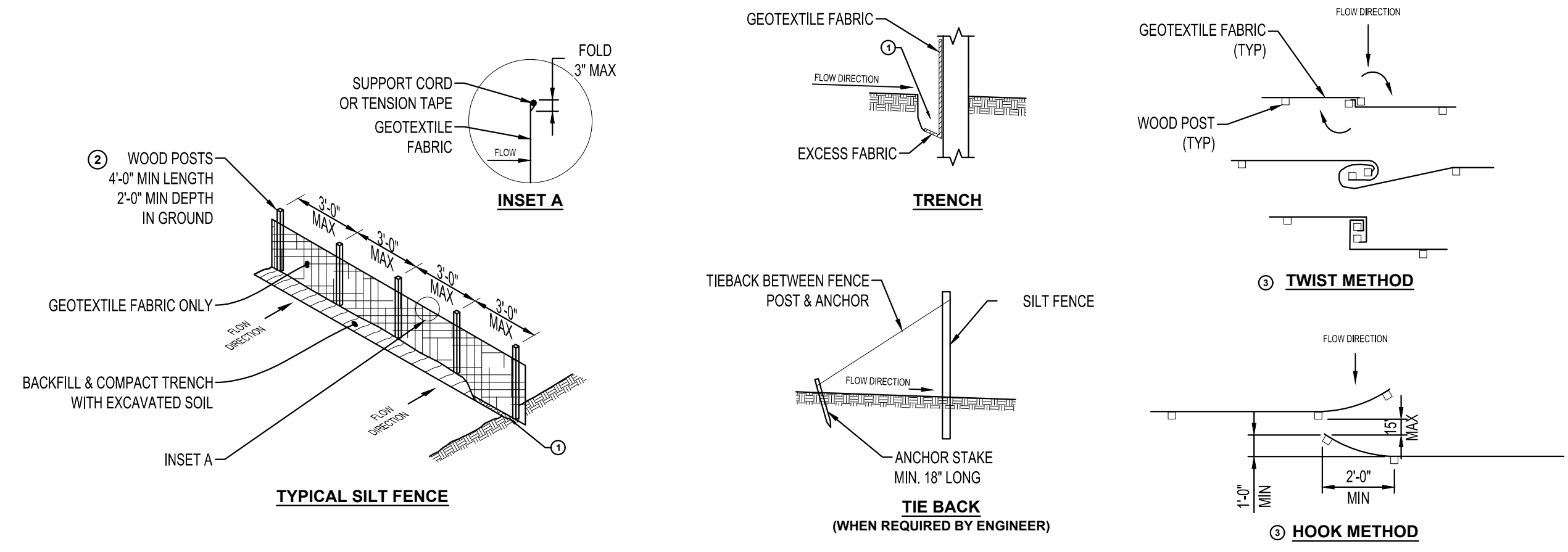
**STORMWATER
POLLUTION
PREVENTION
PLAN NOTES**

SHEET

C1-10



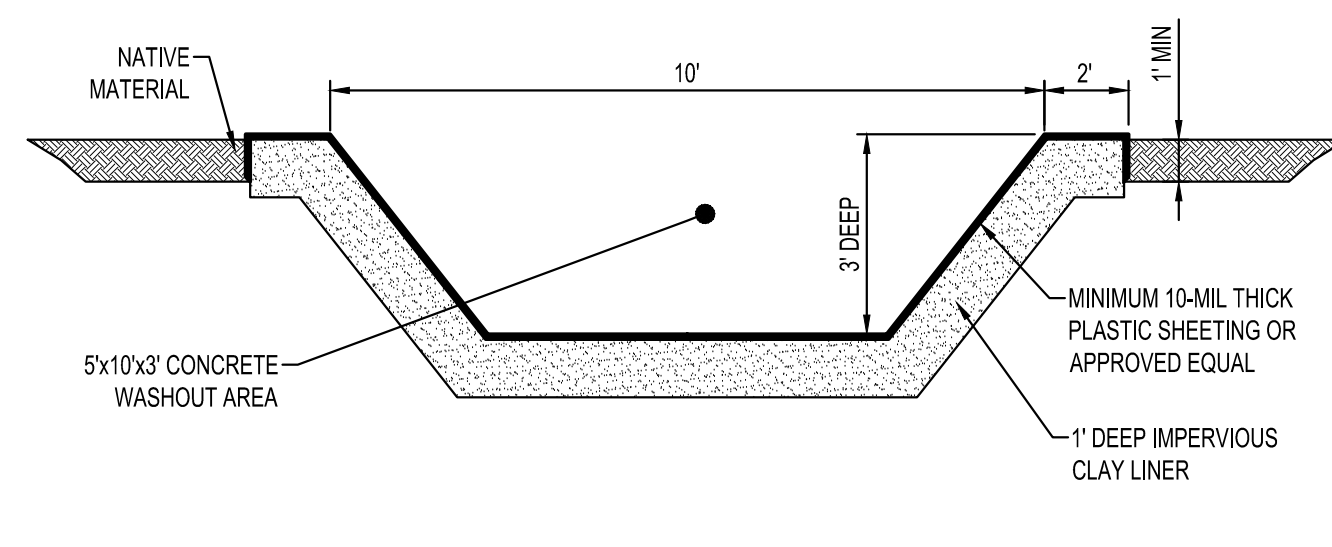
ROCK TRACKING PAD
NTS



NOTES:

- ATTACH FABRIC TO THE POSTS WITH WIRE STAPLES OR WOODEN LATH & NAILS. ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS. 8" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.
- FOR MANUAL INSTALLATIONS, TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY & ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH. BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- WOOD POST SHALL BE A MINIMUM SIZE OF 1 1/2" x 1 1/2" OF OAK OR HICKORY.
- CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS:
 - TWIST METHOD - OVERLAP THE END POSTS & TWIST, OR ROTATE AT LEAST 180°.
 - HOOK METHOD - HOOK END OF EACH SILT FENCE LENGTH.

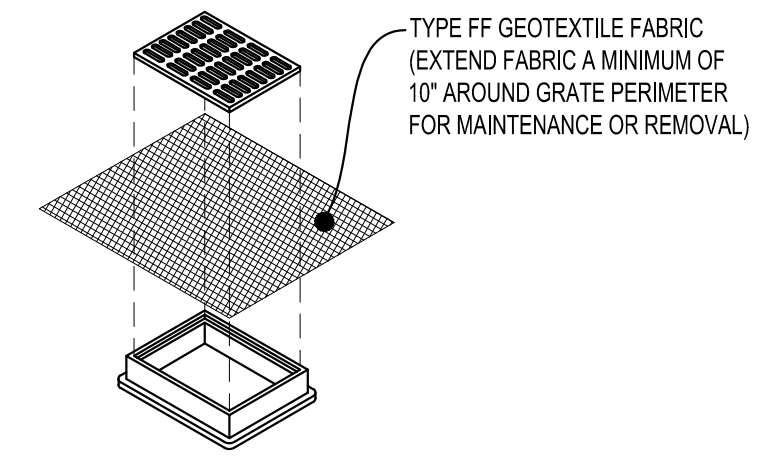
SILT FENCE
NTS



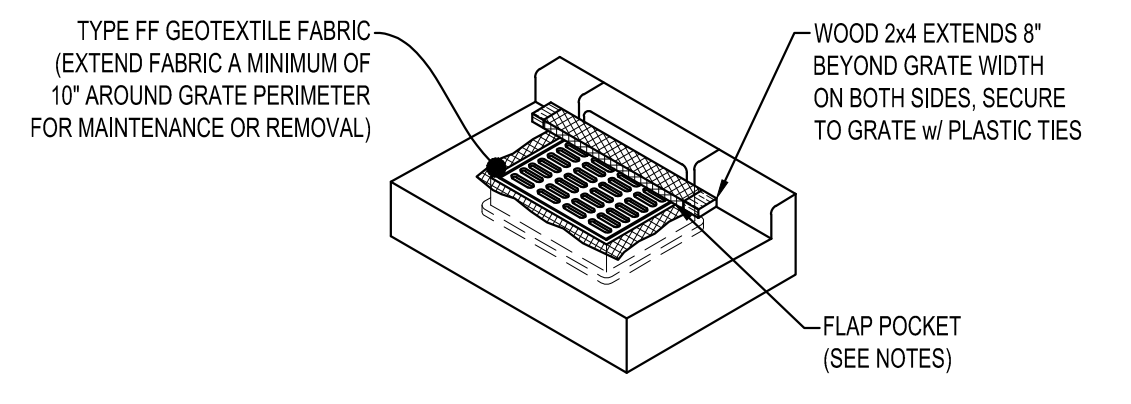
NOTES:

- CONTRACTOR SHALL INSTALL A SIGN INDICATING THE CONCRETE WASHOUT AREA.
- CONTRACTOR SHALL MAINTAIN WASHOUT AREA TO REMOVE MATERIALS BEYOND 75% CAPACITY.
- WASHOUT AREA SHALL NOT BE PLACED WITHIN 50' OF STORM DRAINS, OPEN DITCHES OR BODIES OF WATER.
- CONTRACTOR SHALL INSPECT WASHOUT AREA AS NECESSARY TO PREVENT LEAKS AND OVER TOPPING.
- WASHOUT AREA SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETE.

CONCRETE WASHOUT
NTS



TYPE B
(WITHOUT CURB BOX)

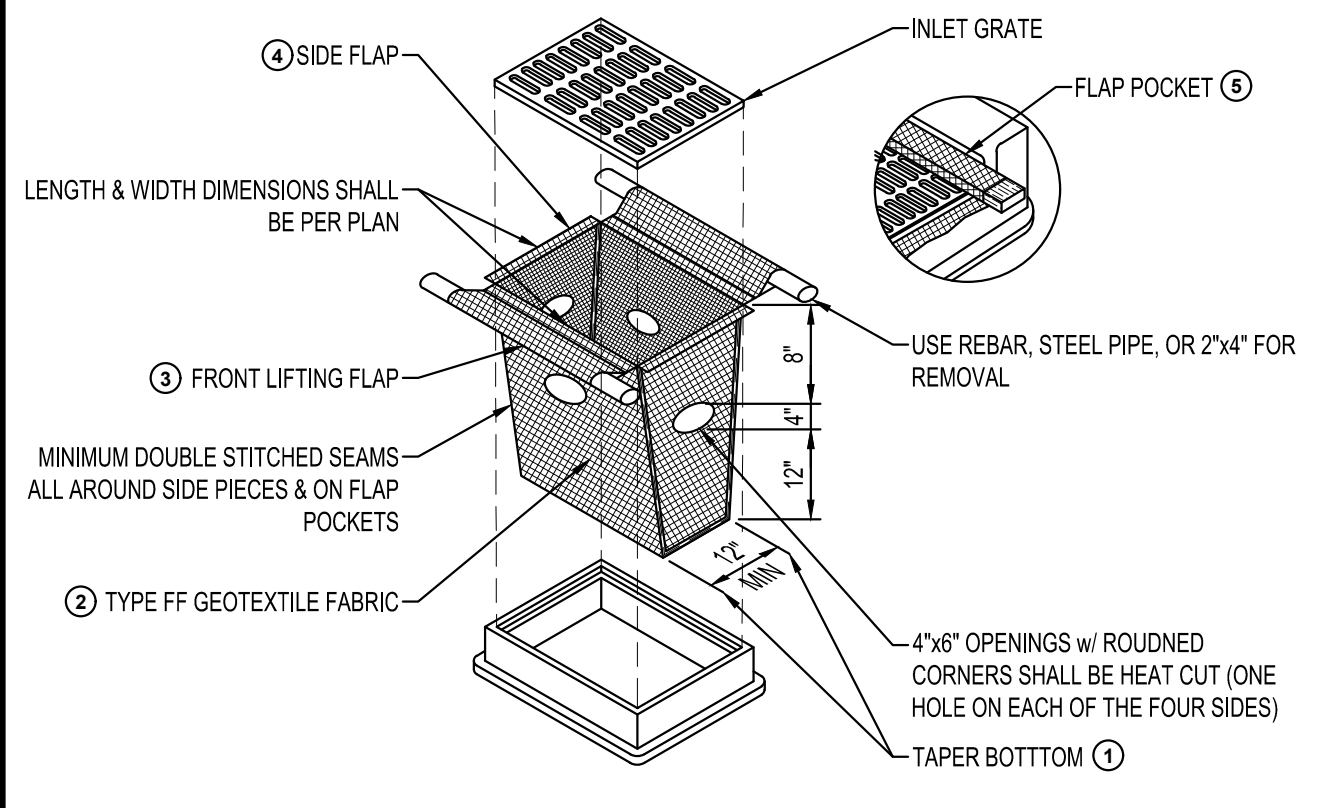


TYPE C
(WITH CURB BOX)

NOTES:

- FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2" x 4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REBAR FLAP AND SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING.
- WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE INLET SHALL BE IMMEDIATELY REMOVED.

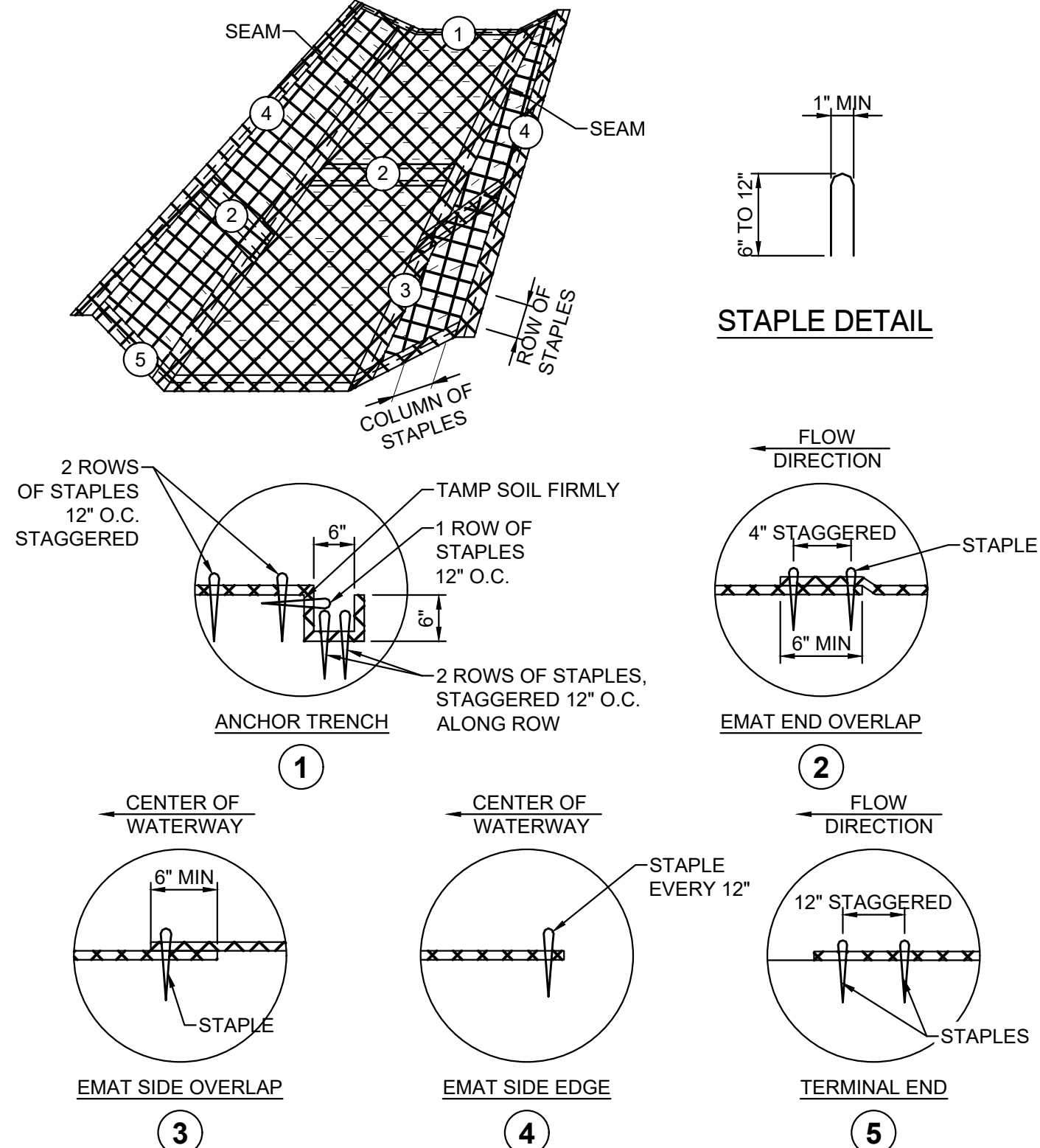
TYPES B & C
INLET PROTECTION
NTS



NOTES:

- TAPER BOTTOM OF BAG TO MAINTAIN THREE INCHES OF CLEARANCE BETWEEN THE BAG & THE STRUCTURE MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
- GEOTEXTILE FABRIC TYPE FF FOR FLAPS, TOP & BOTTOM OF OUTSIDE OF FILTER BAG. FRONT, BACK & BOTTOM OF FILTER BAG BEING ONE PIECE.
- FRONT LIFTING FLAP IS TO BE USED WHEN REMOVING & MAINTAINING FILTER BAG.
- SIDE FLAPS SHALL BE A MAXIMUM OF TWO INCHES LONG. FOLD THE FABRIC OVER & REINFORCE WITH MULTIPLE STITCHES.
- FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2" x 4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REBAR FLAP & SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING. CAN BE INSTALLED IN INLETS WITH OR WITHOUT CURB BOXES.
- WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE INLET SHALL BE IMMEDIATELY REMOVED.

TYPE D
INLET PROTECTION
NTS



NOTES:

- INSTALL EROSION MAT (EMAT) OVER WATERWAYS AS SHOWN IN THE EROSION CONTROL PLAN.
- THE EMAT SHALL CONFORM TO W6DOT STANDARD SPECIFICATIONS SECTION 628.
- PREPARE SOIL PRIOR TO INSTALLING EMAT, INCLUDING SEEDING AND FERTILIZING.
- THE EMAT SHALL BE PLACED IN FIRM CONTACT WITH THE SOIL AND NOT BE ALLOWED TO BRIDGE OVER SURFACE IRREGULARITIES. THE MAT SHALL NOT BE STRETCHED.
- START LAYING THE MATS BY ROLLING CENTER MAT IN THE DIRECTION OF FLOW, CENTERED ON THE CENTERLINE OF WATERWAY. THERE SHALL NOT BE AN OVERLAP OF MATS AT THE CENTER OF THE WATERWAY.
- THE EMAT SHALL BE ANCHORED, OVERLAPPED, AND STAPLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. IF NO MANUFACTURER'S INSTRUCTIONS ARE AVAILABLE, INSTALL THE MAT AS FOLLOWS:
 - STAPLES SHALL BE 1" SHAPED, 0.12" DIAMETER WIRE OR GREATER (#11 GAUGE). (SEE STAPLE DETAIL FOR DIMENSIONS)
 - BURY UPSTREAM END OF MAT IN A TRENCH 6" WIDE BY 6" DEEP AND STAPLED IN STAGGERED ROWS ACROSS THE WIDTH AS SHOWN IN DETAIL 1.
 - FOR JOINING ENDS OF ROLLS, OVERLAP END OF UP SLOPE MAT A MINIMUM OF 6" OVER DOWN SLOPE MAT (SHINGLE STYLE). USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART, AS SHOWN IN DETAIL 2.
 - MATS ON SIDE SLOPES SHALL OVERLAP A MINIMUM OF 6" OVER THE MAT BELOW (SHINGLE STYLE). STAPLE OVERLAP AT 12" INTERVALS. (SEE DETAIL 3)
 - THE OUTER EDGE ALONG SIDES OF THE MAT SHALL BE STAPLED EVERY 12". (SEE DETAIL 4)
 - STAPLES ARE TO BE PLACED ALTERNATELY IN COLUMNS (IN THE DIRECTION OF THE WATERWAY) 2' APART AND IN ROWS (ACROSS THE WATERWAY) 3' APART THROUGHOUT THE AREA COVERED BY THE EMAT.
 - DOWNSTREAM (TERMINAL) END OF BLANKET SHALL BE STAPLED WITH A DOUBLE ROW OF STAGGERED STAPLES 12" APART. (SEE DETAIL 5)

EROSION MAT INSTALLATION
NTS

DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT
COPPER ROCKS DEVELOPMENT

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

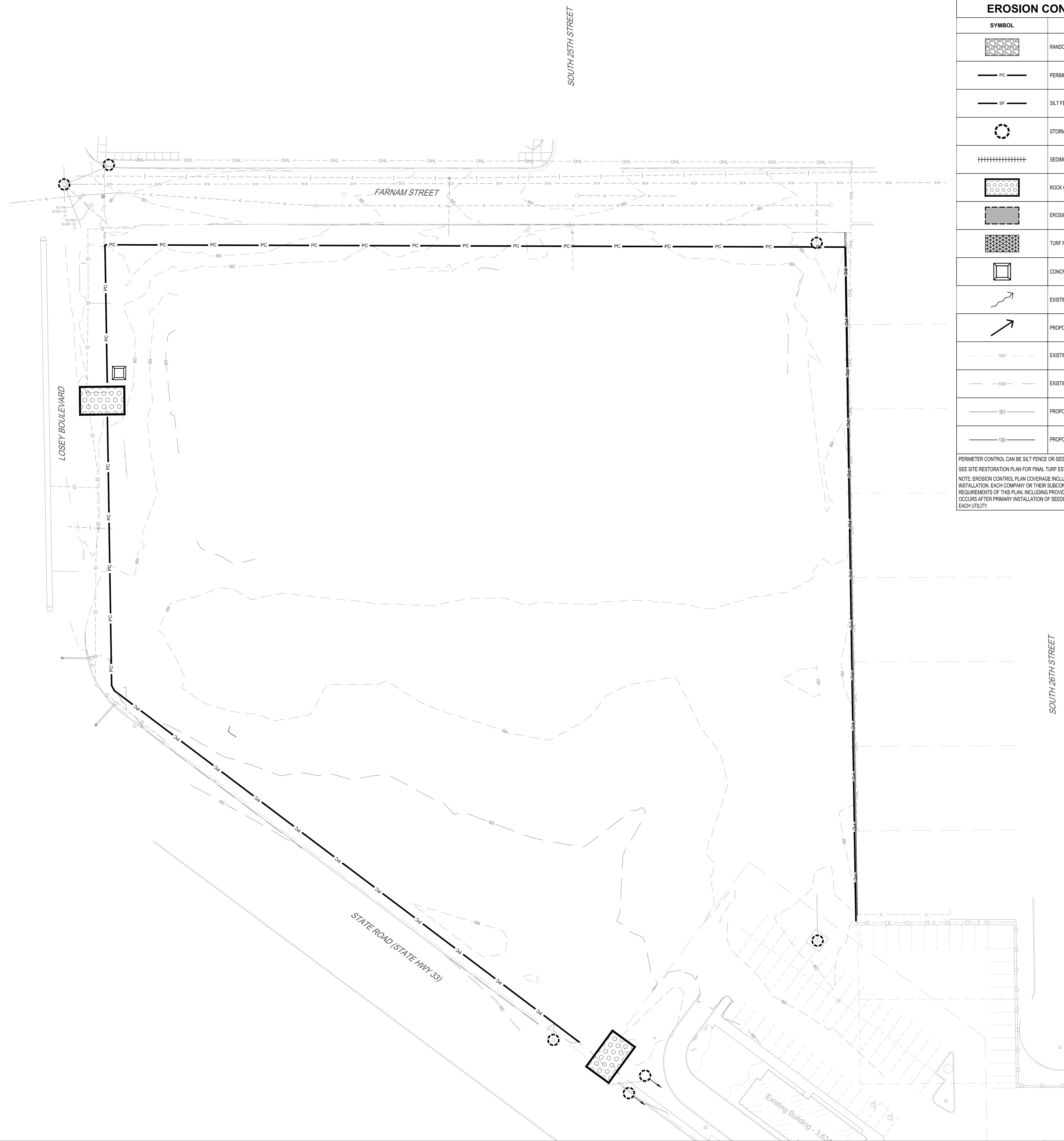
PROJECT NO.	21-25290
FILE NAME	25290 C1-SWPPP
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	
CLIENT PROJECT NO.	

TITLE
STORMWATER POLLUTION PREVENTION PLAN DETAILS

SHEET
C1-20

PRELIMINARY NOT FOR CONSTRUCTION

FILE DATE: 5/20/2022 2:54 PM



EROSION CONTROL LEGEND	
SYMBOL	DESCRIPTION
	RANDOM RIPRAP, CLASS __
	PERIMETER CONTROL
	SILT FENCE, PREASSEMBLED
	STORM DRAIN INLET PROTECTION
	SEDIMENT CONTROL LOG
	ROCK CONSTRUCTION EXIT
	EROSION CONTROL BLANKET, CATEGORY __
	TURF REINFORCEMENT MAT, CATEGORY __
	CONCRETE WASHOUT AREA
	EXISTING DRAINAGE ARROW
	PROPOSED DRAINAGE ARROW
	EXISTING CONTOUR (MINOR INTERVAL)
	EXISTING CONTOUR (MAJOR INTERVAL)
	PROPOSED CONTOUR (MINOR INTERVAL)
	PROPOSED CONTOUR (MAJOR INTERVAL)

PERIMETER CONTROL CAN BE SILT FENCE OR SEDIMENT CONTROL LOG.
SEE SITE RESTORATION PLAN FOR FINAL TURF ESTABLISHMENT.
NOTE: EROSION CONTROL PLAN COVERAGE INCLUDES ELECTRIC, GAS, TELEPHONE, AND CABLE INSTALLATION. EACH COMPANY OR THEIR SUBCONTRACTOR IS RESPONSIBLE TO FOLLOW THE REQUIREMENTS OF THIS PLAN, INCLUDING PROVIDING THEIR OWN RESTORATION IF INSTALLATION OCCURS AFTER PRIMARY INSTALLATION OF SEEDING/SODDING/MULCHING DURING CONSTRUCTION OF EACH UTILITY.



DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

COPPER ROCKS DEVELOPMENT

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 C1-SWPPP
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	5/20/2022
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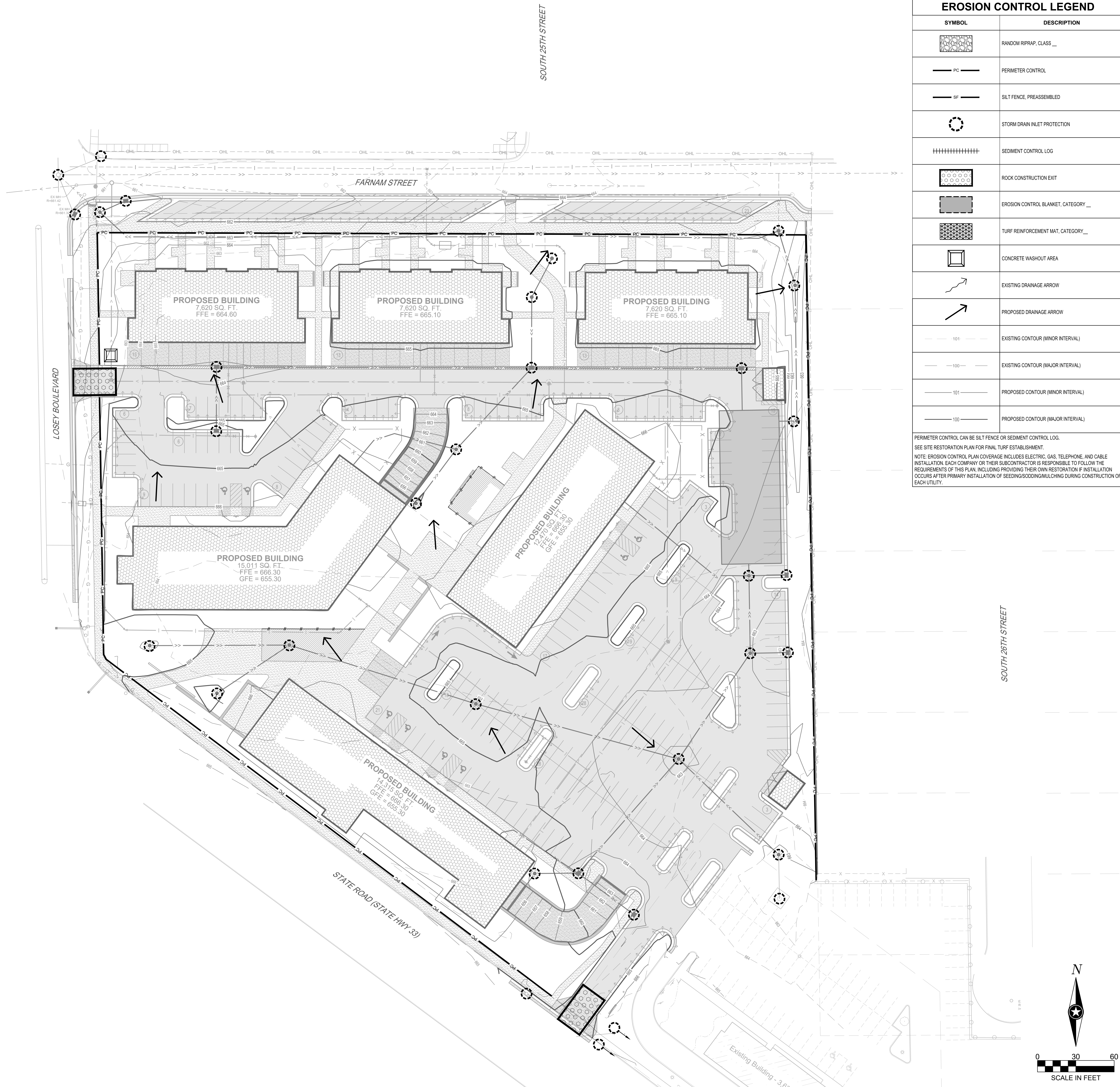
TITLE

PRE CONSTRUCTION POLLUTION PREVENTION PLAN

SHEET
C1-30

PRELIMINARY NOT FOR CONSTRUCTION

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EROSION CONTROL LEGEND	
SYMBOL	DESCRIPTION
	RANDOM RIPRAP, CLASS __
	PERIMETER CONTROL
	SILT FENCE, PREASSEMBLED
	STORM DRAIN INLET PROTECTION
	SEDIMENT CONTROL LOG
	ROCK CONSTRUCTION EXIT
	EROSION CONTROL BLANKET, CATEGORY __
	TURF REINFORCEMENT MAT, CATEGORY __
	CONCRETE WASHOUT AREA
	EXISTING DRAINAGE ARROW
	PROPOSED DRAINAGE ARROW
	EXISTING CONTOUR (MINOR INTERVAL)
	EXISTING CONTOUR (MAJOR INTERVAL)
	PROPOSED CONTOUR (MINOR INTERVAL)
	PROPOSED CONTOUR (MAJOR INTERVAL)

PERIMETER CONTROL CAN BE SILT FENCE OR SEDIMENT CONTROL LOG.
SEE SITE RESTORATION PLAN FOR FINAL TURF ESTABLISHMENT.
NOTE: EROSION CONTROL PLAN COVERAGE INCLUDES ELECTRIC, GAS, TELEPHONE, AND CABLE INSTALLATION. EACH COMPANY OR THEIR SUBCONTRACTOR IS RESPONSIBLE TO FOLLOW THE REQUIREMENTS OF THIS PLAN, INCLUDING PROVIDING THEIR OWN RESTORATION IF INSTALLATION OCCURS AFTER PRIMARY INSTALLATION OF SEEDING/SODDING/MULCHING DURING CONSTRUCTION OF EACH UTILITY.



DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT

COPPER ROCKS DEVELOPMENT

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 C1-SWPPP
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	
CLIENT PROJECT NO.	

TITLE

STORMWATER POLLUTION PREVENTION PLAN

SHEET
C1-40

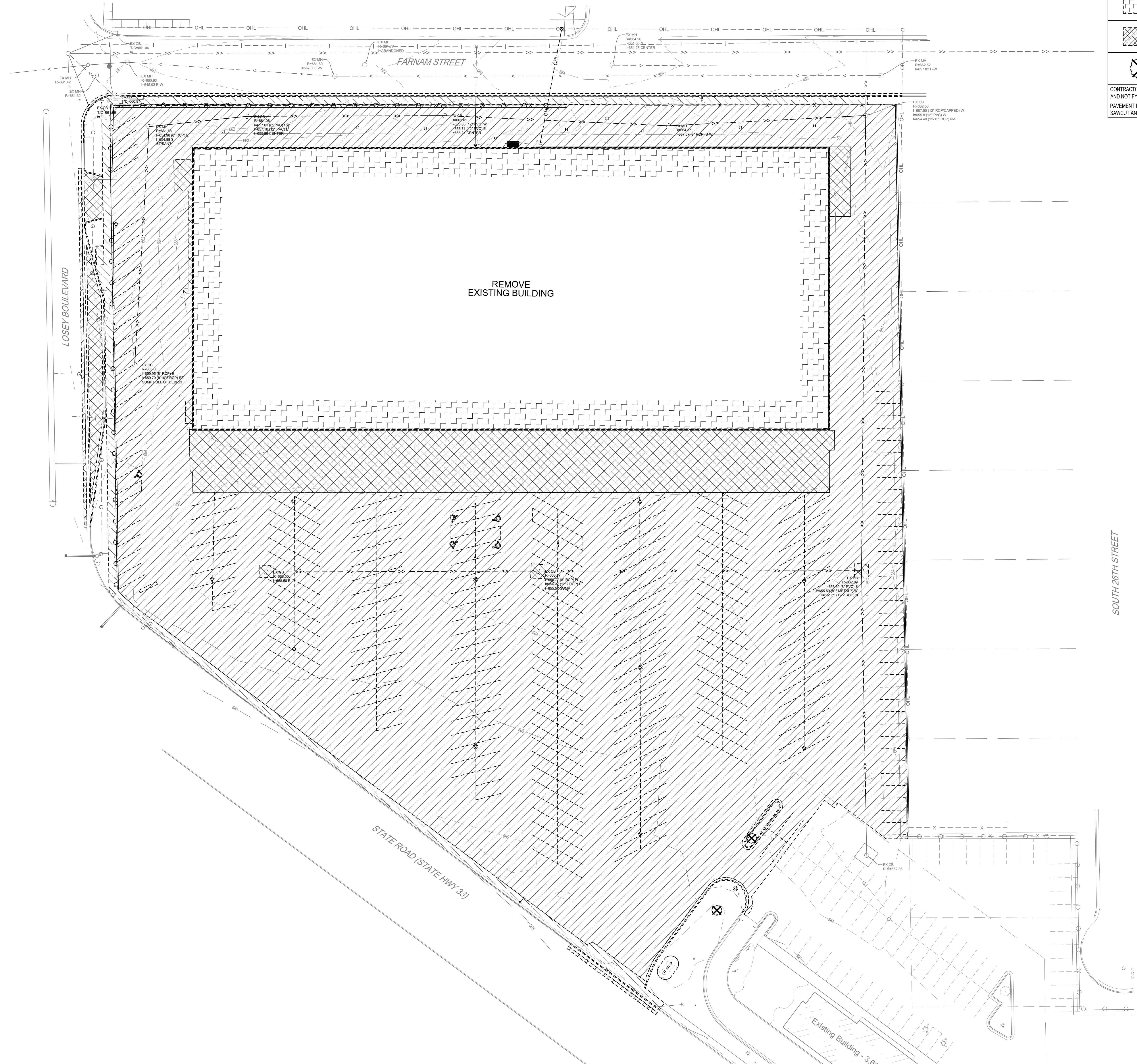
PRELIMINARY NOT FOR CONSTRUCTION



REMOVAL LEGEND

SYMBOL	DESCRIPTION
	REMOVE BITUMINOUS PAVEMENT
	REMOVE CONCRETE PAVEMENT
	REMOVE CONCRETE WALK
	DEMOLISH BUILDING
	REMOVE LANDSCAPING
	REMOVE DECIDUOUS TREE (CLEAR AND GRUB)

CONTRACTOR SHALL VERIFY EXISTING PAVEMENT SECTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES. PAVEMENT REMOVALS SHALL INCLUDE FULL DEPTH SAWCUT AND SECTION REMOVAL.



DESIGN REVIEW PLAN SUBMITTAL
05/20/2022

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PROJECT
COPPER ROCKS DEVELOPMENT

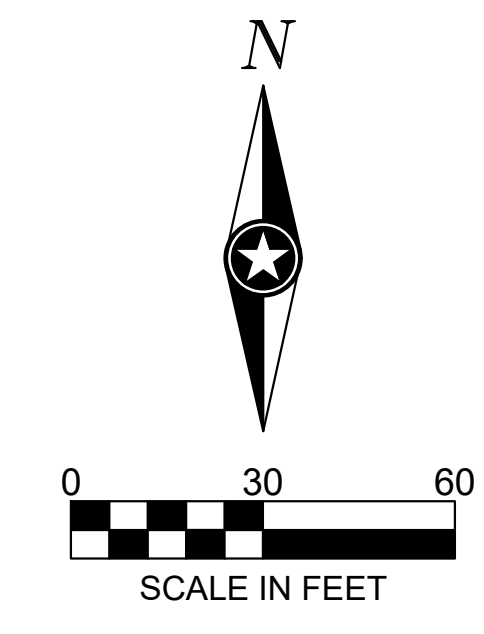
LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 C2-REMOVAL
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	5/20/22
CLIENT PROJECT NO.	-

TITLE
EXISTING SITE AND REMOVALS PLAN

SHEET
C2-10



PRELIMINARY NOT FOR CONSTRUCTION

DENSITY COMPUTATIONS

PROPOSED UNITS	216
SITE AREA (AC)	6.30
DENSITY (UNITS/AC)	35

TOWNHOME PARKING DATA

TYPE	STALLS PROVIDED
TOWNHOME (OUTSIDE)	39
TOWNHOME (GARAGE)	39
TOTAL	78

MIXED-USE PARKING DATA

TYPE	STALLS PROVIDED
PROPOSED STALLS (OUTSIDE)	225
PROPOSED STALLS (UNDERGROUND)	105
ACCESSIBLE STALLS (INCLUDED IN OUTSIDE)	8
TOTAL	338

SITE AREA SUMMARY

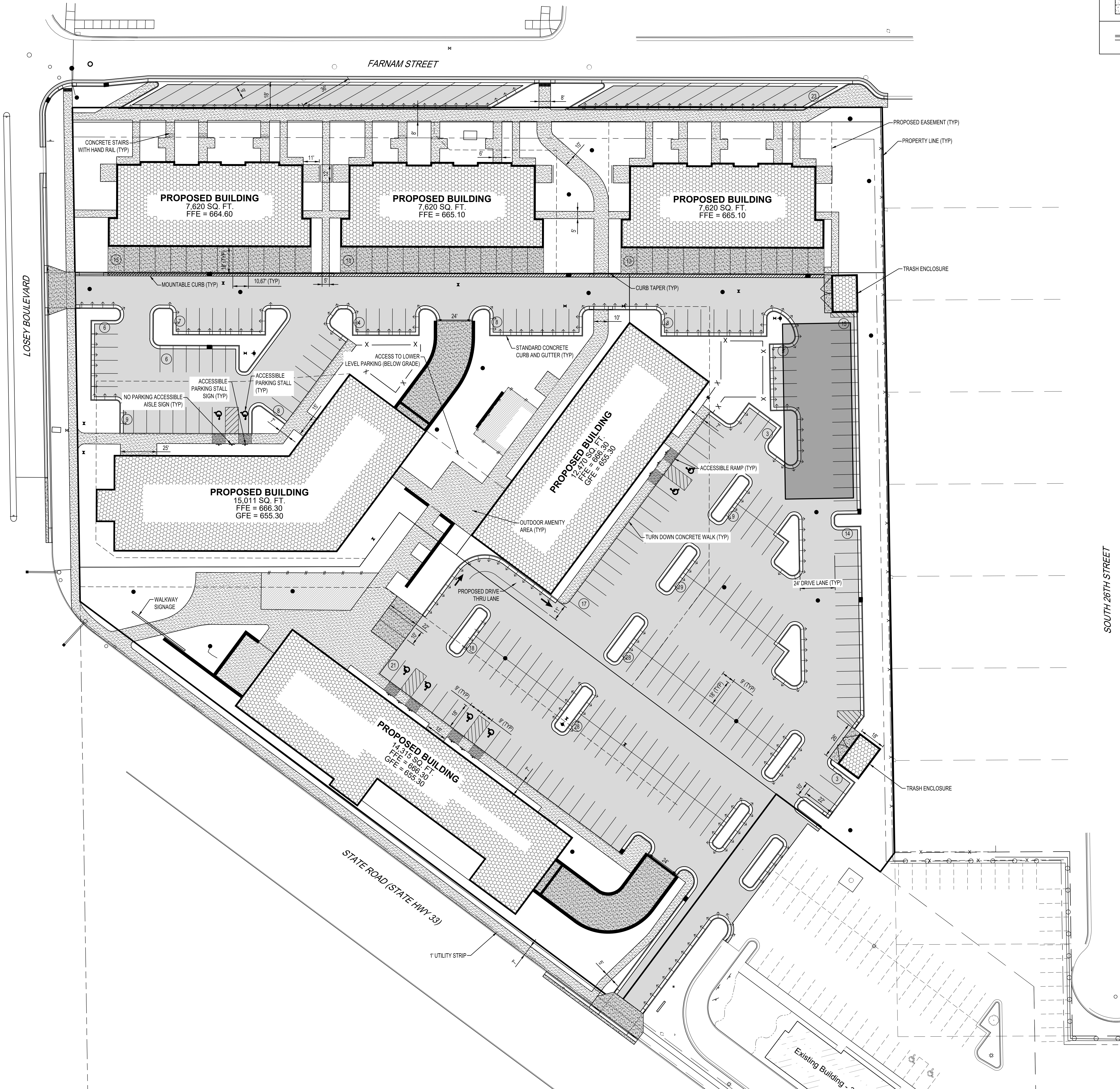
	UNITS	UNITS	PERCENT
PROPOSED BUILDINGS	66,306	SF	1.52 AC 25%
IMPERVIOUS AREA (PARKING/SIDEWALK)	139,705	SF	3.21 AC 51%
OPEN AREA	66,773	SF	1.53 AC 24%
PROPOSED AREA	272,784	SF	6.26 AC 100%
PROPOSED ROW	5,557	SF	0.13 AC
TOTAL AREA	278,341	SF	6.39 AC

BICYCLE PARKING DATA

TYPE	SPACES PROVIDED
PROPOSED SPACES (OUTSIDE)	18
TOWNHOME (GARAGE)	60
PROPOSED SPACES (GARAGE)	39
TOTAL	117

PAVEMENT LEGEND

SYMBOL	DESCRIPTION
	BITUMINOUS PAVEMENT
	CONCRETE PAVEMENT
	HEAVY DUTY CONCRETE PAVEMENT
	CONCRETE WALK
	REVERSE PITCH CURB AND GUTTER



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05/20/2022

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PROJECT

**COPPER ROCKS
DEVELOPMENT**

LA CROSSE WISCONSIN

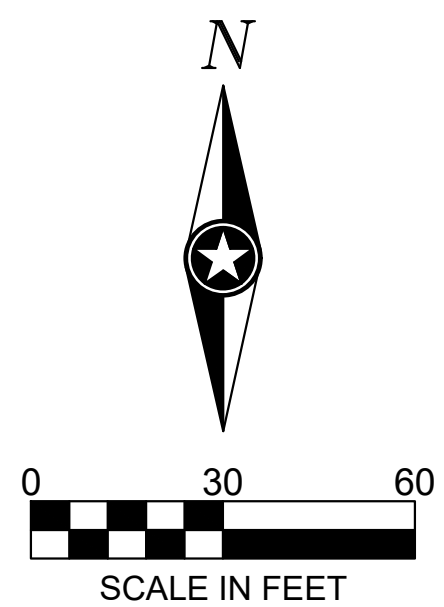
REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 C3-SITE
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	05/20/2022
CLIENT PROJECT NO.	-

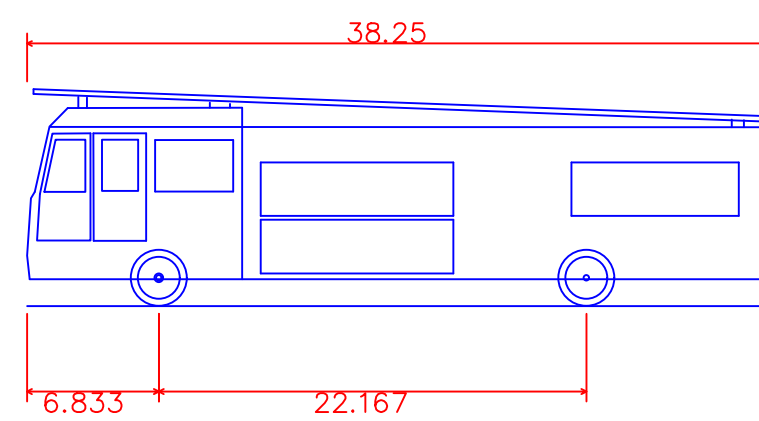
TITLE

SITE PLAN

SHEET
C3-10



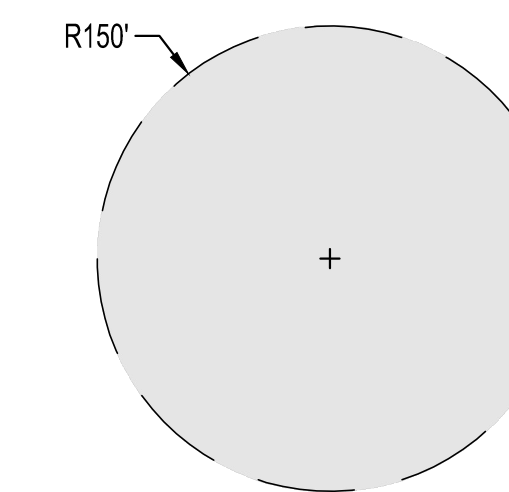
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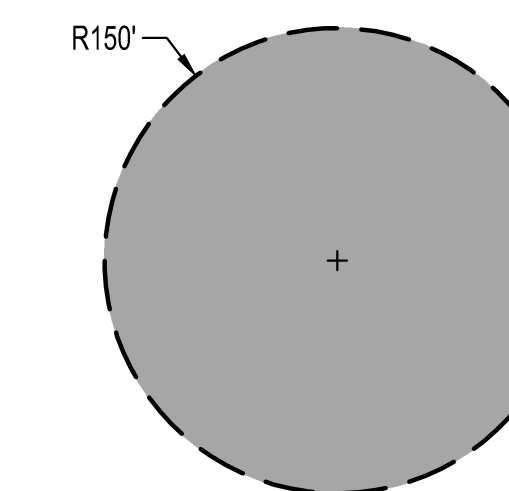
E-ONE Combination Unit
 Overall Length 38.25ft
 Overall Width 6.833ft
 Overall Body Height 22.167ft
 Min Body Ground Clearance 1.3933ft
 Track Width 6.833ft
 Lock-to-lock time 0.00s
 Max Wheel Angle 45.00°

38.250ft
 6.833ft
 22.167ft
 1.3933ft
 6.833ft
 0.00s
 45.00°

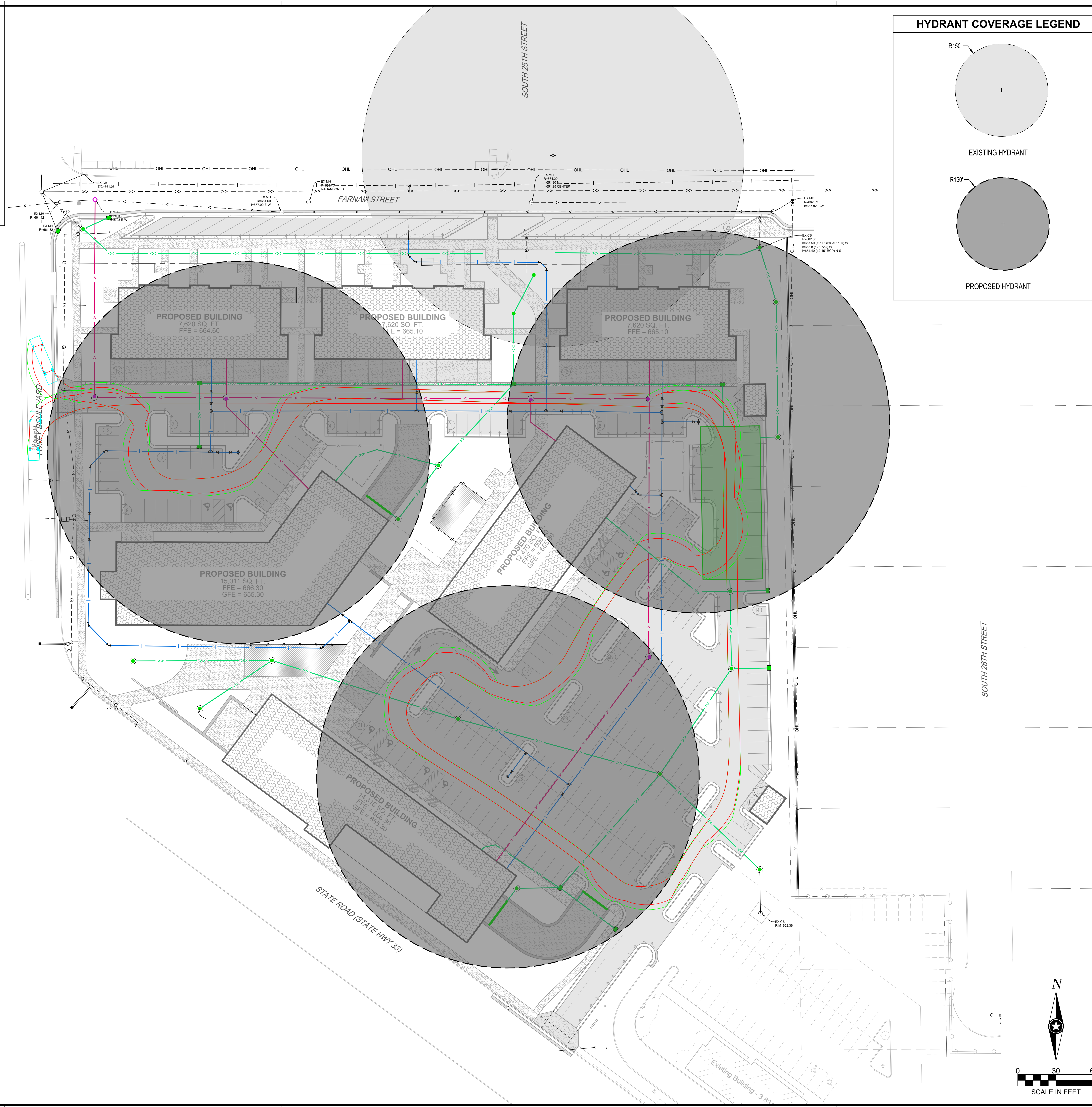
HYDRANT COVERAGE LEGEND



EXISTING HYDRANT



PROPOSED HYDRANT



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 05/20/2022

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PROJECT

**COPPER ROCKS
 DEVELOPMENT**

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

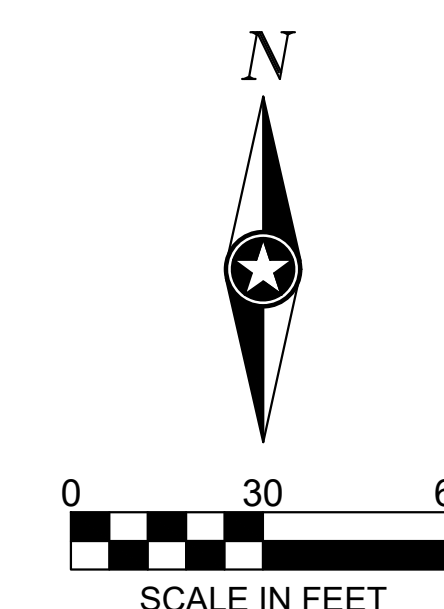
PROJECT NO.	21-25290
FILE NAME	25290 C3-HYDRANT MAP
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	
CLIENT PROJECT NO.	

TITLE

**HYDRANT
 COVERAGE MAP**

SHEET

C3-12

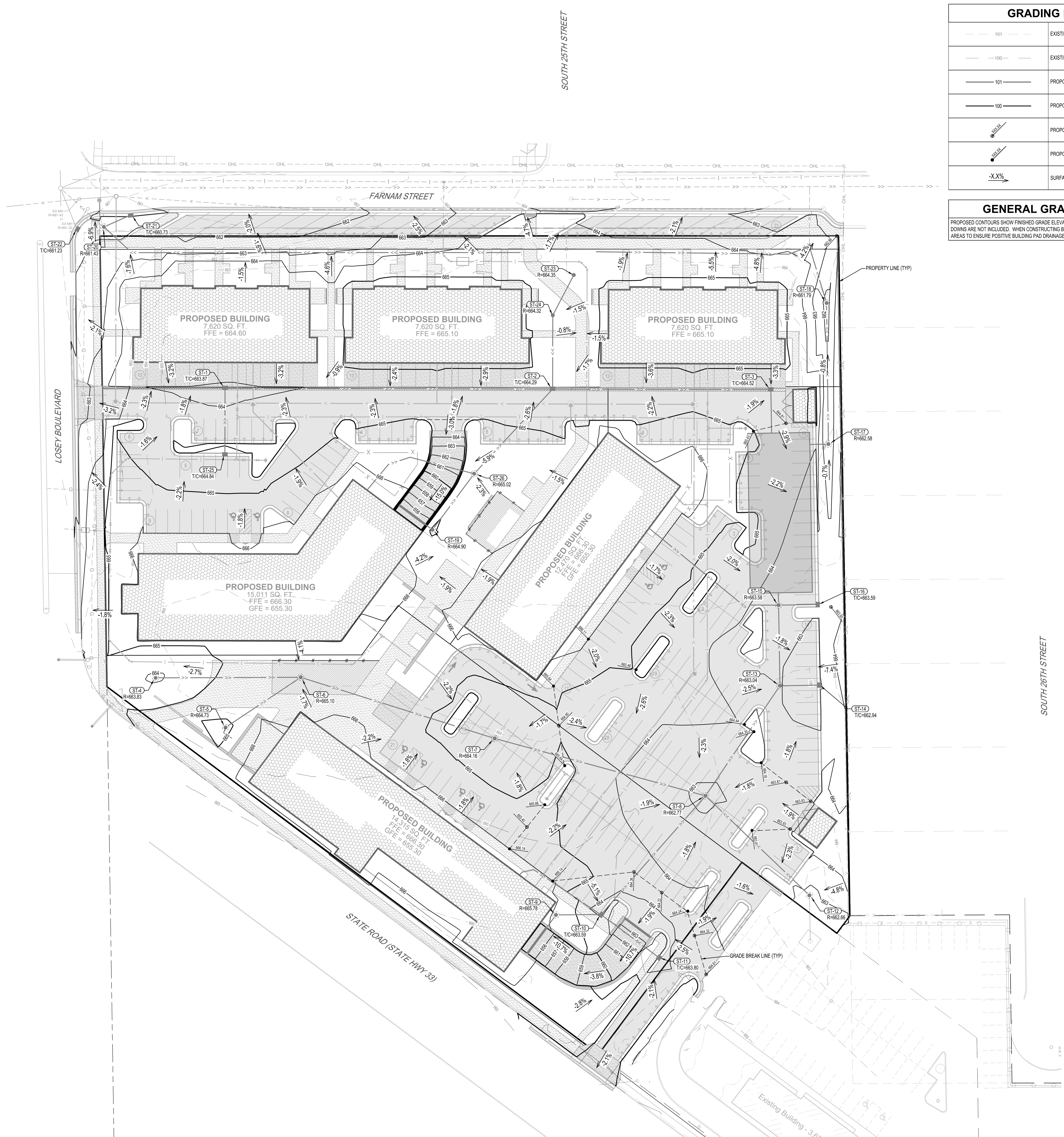


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GRADING LEGEND	
--- 101 ---	EXISTING CONTOUR (MINOR INTERVAL)
--- 100 ---	EXISTING CONTOUR (MAJOR INTERVAL)
— 101 —	PROPOSED CONTOUR (MINOR INTERVAL)
— 100 —	PROPOSED CONTOUR (MAJOR INTERVAL)
● 55.0	PROPOSED SPOT ELEVATION
● 55.0	PROPOSED TOP BACK OF CURB SPOT ELEVATION
-X.X%	SURFACE GRADE / DIRECTION

GENERAL GRADING NOTES
 PROPOSED CONTOURS SHOW FINISHED GRADE ELEVATIONS. BUILDING PAD AND PAVEMENT HOLD DOWNS ARE NOT INCLUDED. WHEN CONSTRUCTING BUILDING PADS WITH A HOLD DOWN, GRADE AREAS TO ENSURE POSITIVE BUILDING PAD DRAINAGE.



DESIGN REVIEW PLAN SUBMITTAL
 05/20/2022

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PROJECT
COPPER ROCKS DEVELOPMENT

LA CROSSE WISCONSIN

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	21-25290
FILE NAME	25290 C4-GRADING
DRAWN BY	AAG/SMW
DESIGNED BY	AAG/SMW/KBR
REVIEWED BY	KBR
ORIGINAL ISSUE DATE	
CLIENT PROJECT NO.	

TITLE
GRADING PLAN

SHEET
C4-10

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