PROPOSED ACCESSIBLE PAVEMENT MARKING VAN ACCSSSIBLE STALL PROPOSED TYPE 3 CURB RAMP (SEE DETAIL

SHEET. NOTE LINEWORK ON PLAN IS PROPOSED TYPE 3A CURB RAMP (SEE DETAIL SHEET. NOTE LINEWORK ON PLAN IS

PROPOSED 18" STANDARD CURB & GUTTER

(AS SHOWN ON SITE PLAN)

PROPOSED TYPE 4 CURB RAMP (SEE DETAIL SHEET. NOTE LINEWORK ON PLAN IS SYMBOLIC ONLY.)

PROPOSED TYPE 4A CURB RAMP (SEE DETAIL SHEET. NOTE LINEWORK ON PLAN IS PROPOSED TYPE 7 CURB RAMP (SEE DETAIL SHEET. NOTE LINEWORK ON PLAN IS

SYMBOLIC ONLY.)

STRUCTURAL RETAINING WALL - (DESIGNED BY

— −869.5 — PROPOSED 0.5−FOOT GRADE CONTOUR (ONLY USED WHEN CRITICAL) PROPOSED SPOT GRADE

PROPOSED TOP OF CURB PROPOSED FINISHED SURFACE GRADE ADJACENT TO TOP OF WALL

PROPOSED STONE TRACKING MAT

PROPOSED FINISHED SURFACE GRADE ADJACENT TO BASE OF WALL

PROPOSED EROSION CONTROL BALE PROPOSED INLET PROTECTION PROPOSED SILT FENCE - < - - PROPOSED TEMPORARY DIVERSION

SWALE & BERM ▽ ▽ ▽ ▽ ▼ PROPOSED LEVEL SPREADER

PROPOSED PERMANENT TURF REINFORCEMENT MAT EROSION CONTROL BLANKET

PROPOSED RIPRAP

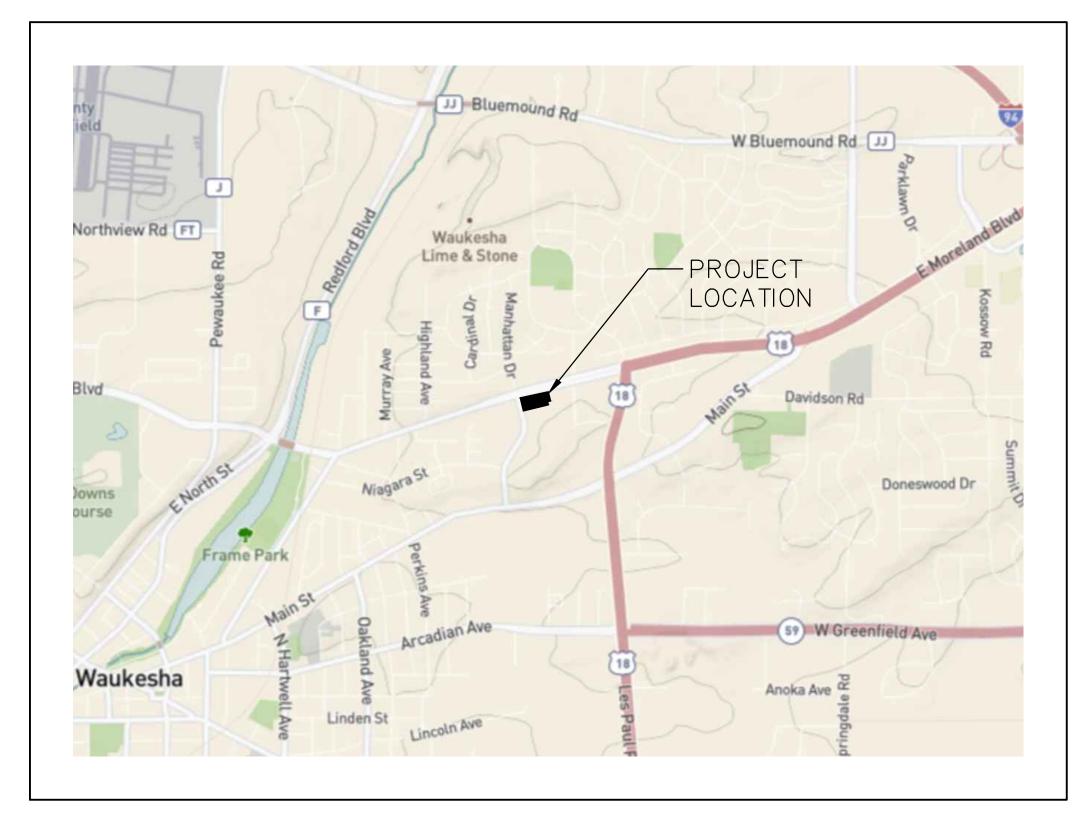
— — G— PROPOSED GAS LINE ----E---- PROPOSED ELECTRIC LINE --- w----- PROPOSED WATER MAIN ----sto------ PROPOSED STORM SEWER — ——s— PROPOSED SANITARY SEWER PROPOSED FIRE DEPARTMENT CONNECTION

PROPOSED WATER VALVE PROPOSED FIRE HYDRANT PROPOSED INLET/ CB

PROPOSED STORM MANHOLE PROPOSED AREA DRAIN PROPOSED SANITARY MANHOLE

CONSTRUCTION PLANS FOR WAUKESHA GENESIS CITY OF WAUKESHA, WISCONSIN

 $C \mid N \mid T \mid Y$



PLAN INDEX SHEET NO. DESCRIPTION C000 COVER SHEET EXISTING CONDITTIONS, DEMOLITION AND EROSION CONTROL PLAN C200 OVERALL SITE PLAN DIMENSIONED SITE PLAN C300 **GRADING PLAN** UTILITY PLAN C400 C500 **EROSION CONTROL DETAILS** SITE DETAILS C503 UNDERGROUND STORAGE DETAILS C504 UNDERGROUND STORAGE DETAILS C505 UNDERGROUND STORAGE DETAILS C600 SPECIFICATIONS L100 LANDSCAPE PLAN LANDSCAPE NOTES & DETAILS

ENGINEER AND LANDSCAPE ARCHITECT:

LEGEND

INDICATES RECORDED DIMENSION WHERE DIFFERENT FROM ACTUAL

🕽 or 🖫 Section or 1/4 Section CORNER AS DÉSCRIBED

1" DIA. IRON PIPE FOUND

FLAGPOLE

BILLBOARD AIR CONDITIONER

B CONTROL BOX

TRAFFIC SIGNAL

CABLE PEDESTAL

POWER POLE GUY POLE

GUY WIRE

LIGHT POLE

GAS VALVE GAS METER

ROUND INLET

SQUARE INLET

WATER VALVE

WATER MANHOLE

WATER SURFACE

WETLANDS FLAG

CONIFEROUS TREE

DECIDUOUS TREE

MAILBOX SIGN

(UNLESS OTHERWISE NOTED)

(UNLESS OTHERWISE NOTED)

RAILROAD CROSSING SIGNAL

SPOT/YARD/PEDESTAL LIGHT

HANDICAPPED PARKING

ELECTRIC TRANSFORMER TELEPHONE MANHOLE

TELEPHONE PEDESTAL

MARKED FIBER OPTIC

STORM SEWER END SECTION

MISCELLANEOUS MANHOLE

SANITARY CLEANOUT OR SEPTIC VENT

-EDGE OF TREES

-STORM SEWER

-SANITARY SEWER

-MARKED GAS MAIN

-MARKED ELECTRIC

-OVERHEAD WIRES

-BUREAU ELEC. SERV

-MARKED CABLE TV LINE

-MARKED FIBER OPTIC

INDICATES EXISTING SPOT ELEVATION

-EXISTING PROPERTY LINE

-EXISTING EASEMENT LINE

SANITARY INTERCEPTOR MANHOLE

GAS WARNING SIGN

SANITARY MANHOLE

ELECTRIC MANHOLE ELECTRIC PEDESTAL

ELECTRIC METER

SOIL BORING/MONITORING WELL

1" DIA. IRON PIPE, 18" LONG-SET

(262) 781-1000 rasmith.com

16745 W. Bluemound Road

Brookfield, WI 53005-5938

CREATIVITY BEYOND ENGINEERING

RYAN J. LANCOUR, P.E. PROJECT MANAGER PH: (262) 317-3259

PROPERTY OWNER:

BOUCHER HOLDINGS LLC 4141 S. 108TH STREET GREENFIELD, WI 53228 PH: (414) 427-4141

DEVELOPER:

CHAD KEMNITZ, PRESIDENT PROFESSIONAL CONSULTANTS, INC. 300 COTTONWOOD AVENUE, #7 HARTLAND, WI 53029 PH: (262) 367-6080

BENCHMARK 1: **SEWRPC BENCHMARK 1:**

SET "X" NW FLANGE BOLT ON CONC MON W/ BRASS CAP IN HYDRANT ON SOUTHERLY ROW CONC CURB ON NORTH SIDE OF E MORELAND BLVD EAST BOUND LANE OF USH 18 ELEVATION = 101.36NW CORNER SW 1 OF SEC 36 VERTICAL DATUM: CITY OF ELEVATION = 876.98'WAUKESHA DATUM N: 378,689.51 USFT E: 2,448,163.35 USFT

SEWRPC BENCHMARK 2:

CONC MON W/ BRASS CAP SW CORNER SW & OF SEC 36 ELEVATION = 841.03'N: 376,029.00 USFT E: 2,448,203.06 USFT



Know what's below. Call before you dig.

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ANY THIRD PARTY IN ANY MANNER WITHOUT OBTAINING THE EXPRESSED WRITTEN PERMISSION OF R.A.SMITH, INC. CITY OF WAUKESHA NOTE

ALL SITE IMPROVEMENTS AND CONSTRUCTION SHOWN ON PLANS SHALL CONFORM TO THE CITY OF WAUKESHA DEVELOPMENT HANDBOOK & INFRASTRUCTURE SPECIFICATIONS. WHERE THE PLANS DO NOT COMPLY, IT SHALL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE DEVELOPER TO MAKE REVISIONS TO THE PLANS AND/OR CONSTRUCTED INFRASTRUCTURE TO COMPLY.

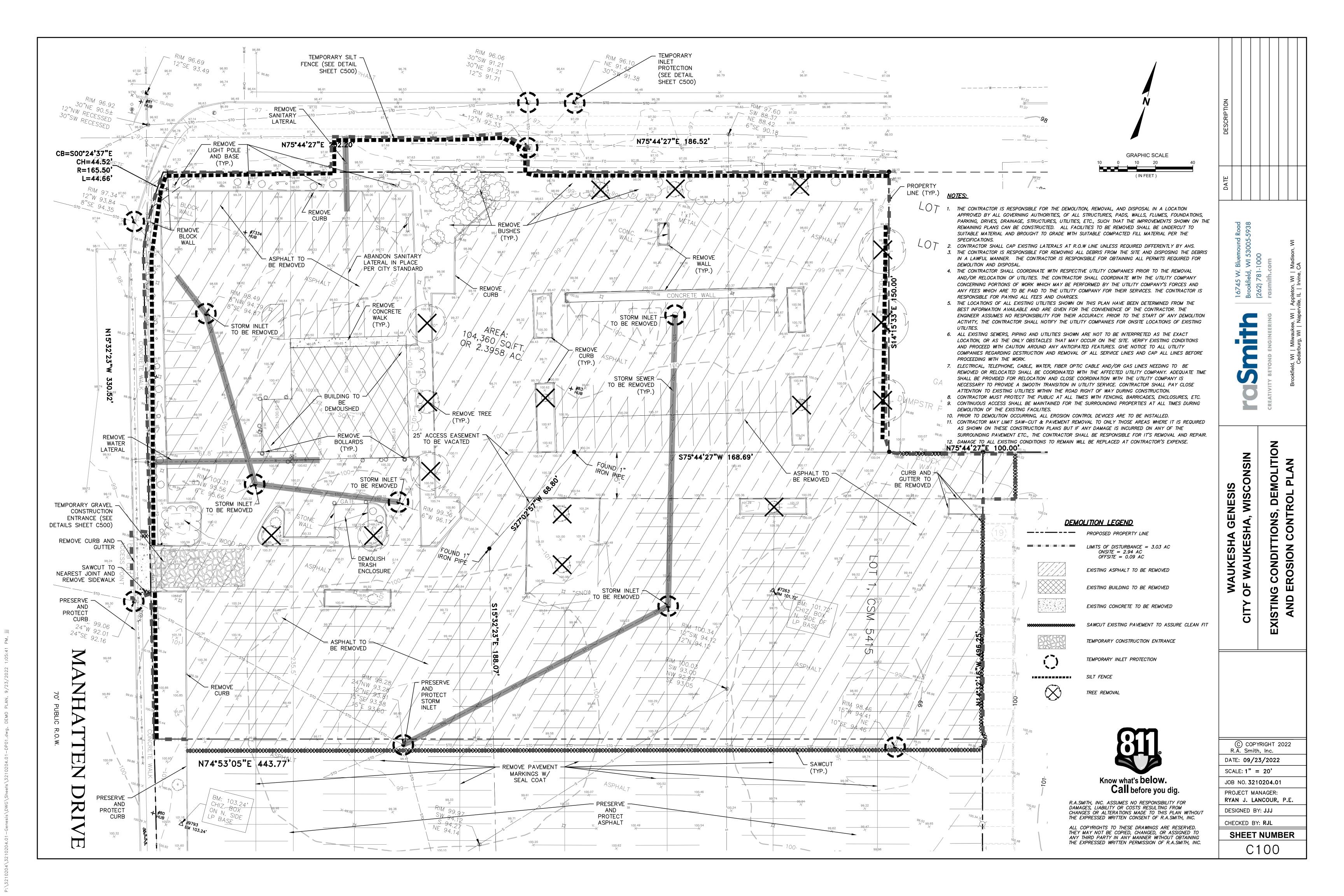
| PLAN DATE: 09/23/2022 | | |
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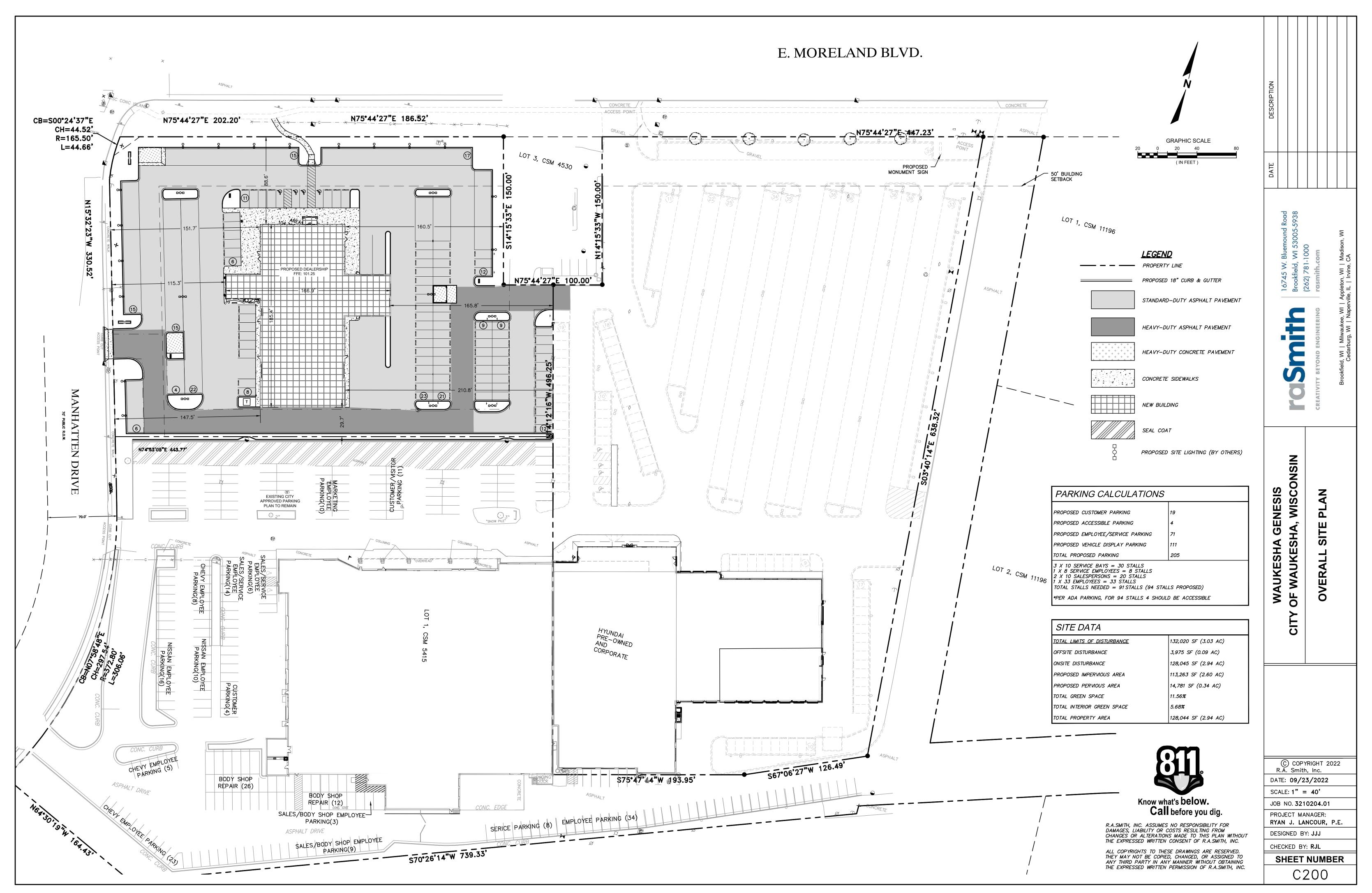
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JEREMY J. PRO BROUW

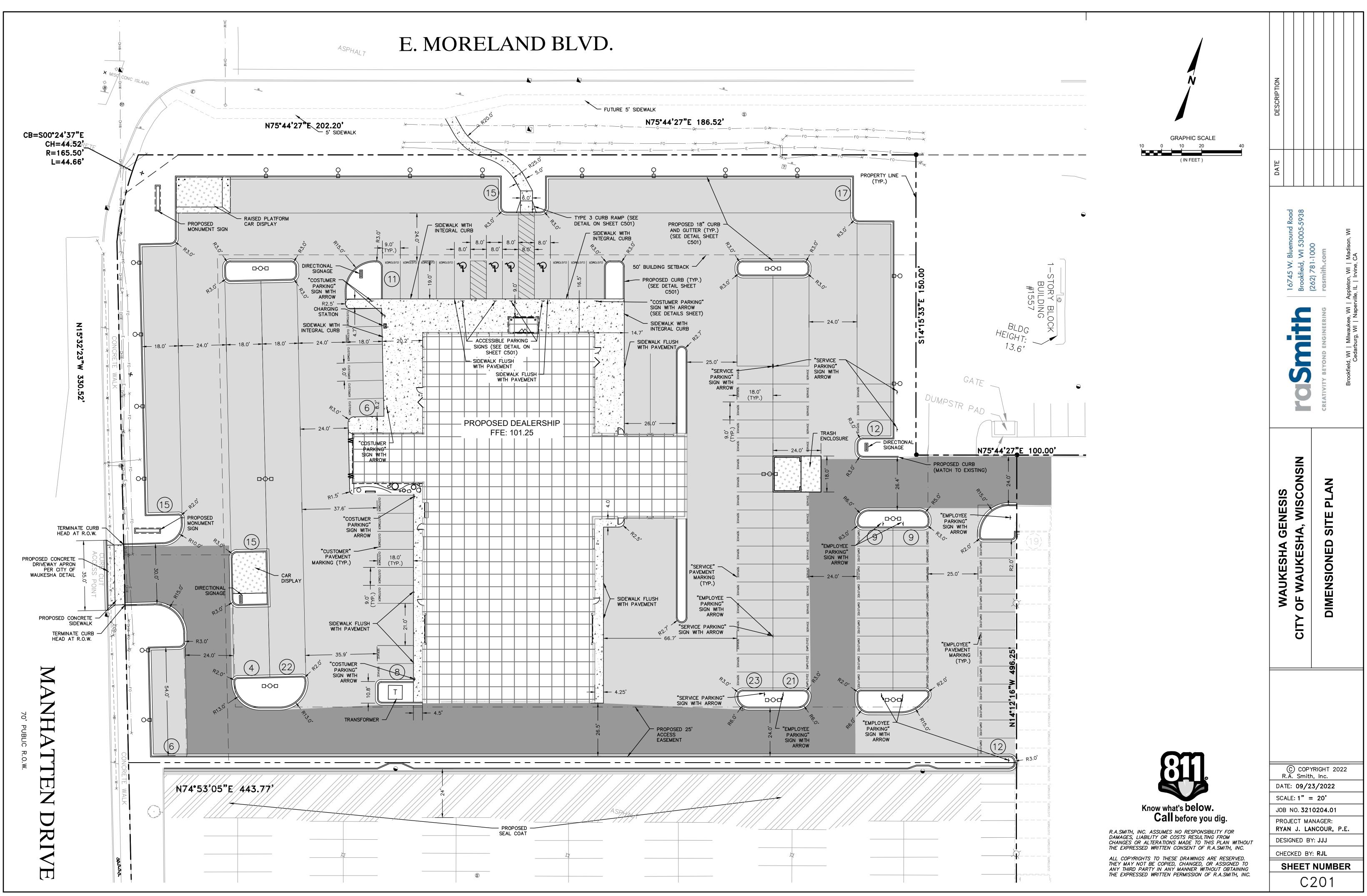
09/23/2022 © COPYRIGHT 2022 R.A. Smith, Inc. DATE: **09/23/2022** SCALE: NTS JOB NO. **3210204.01** PROJECT MANAGER: RYAN J. LANCOUR, P.E.

DESIGNED BY: JJJ CHECKED BY: RJL SHEET NUMBER



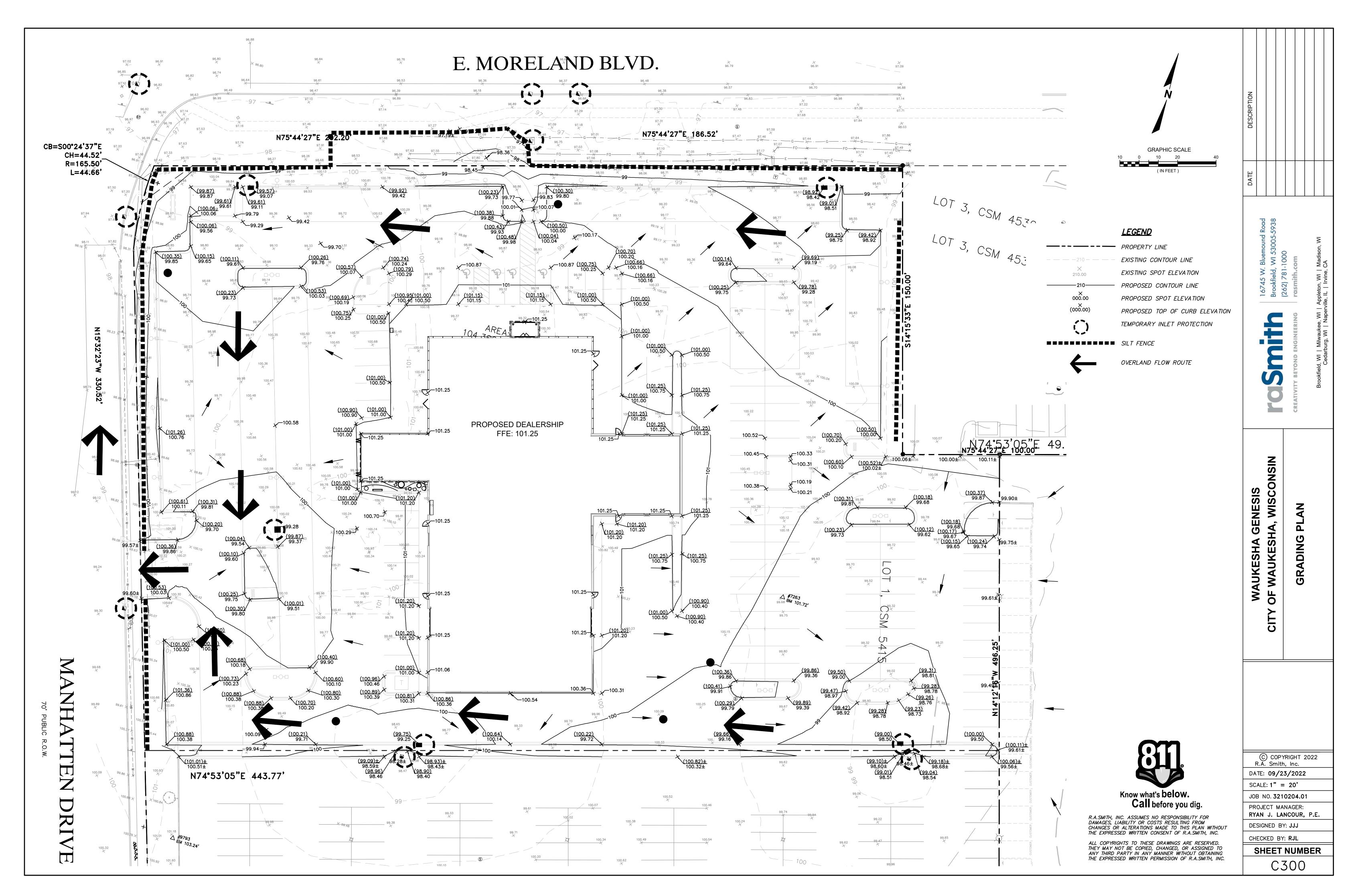


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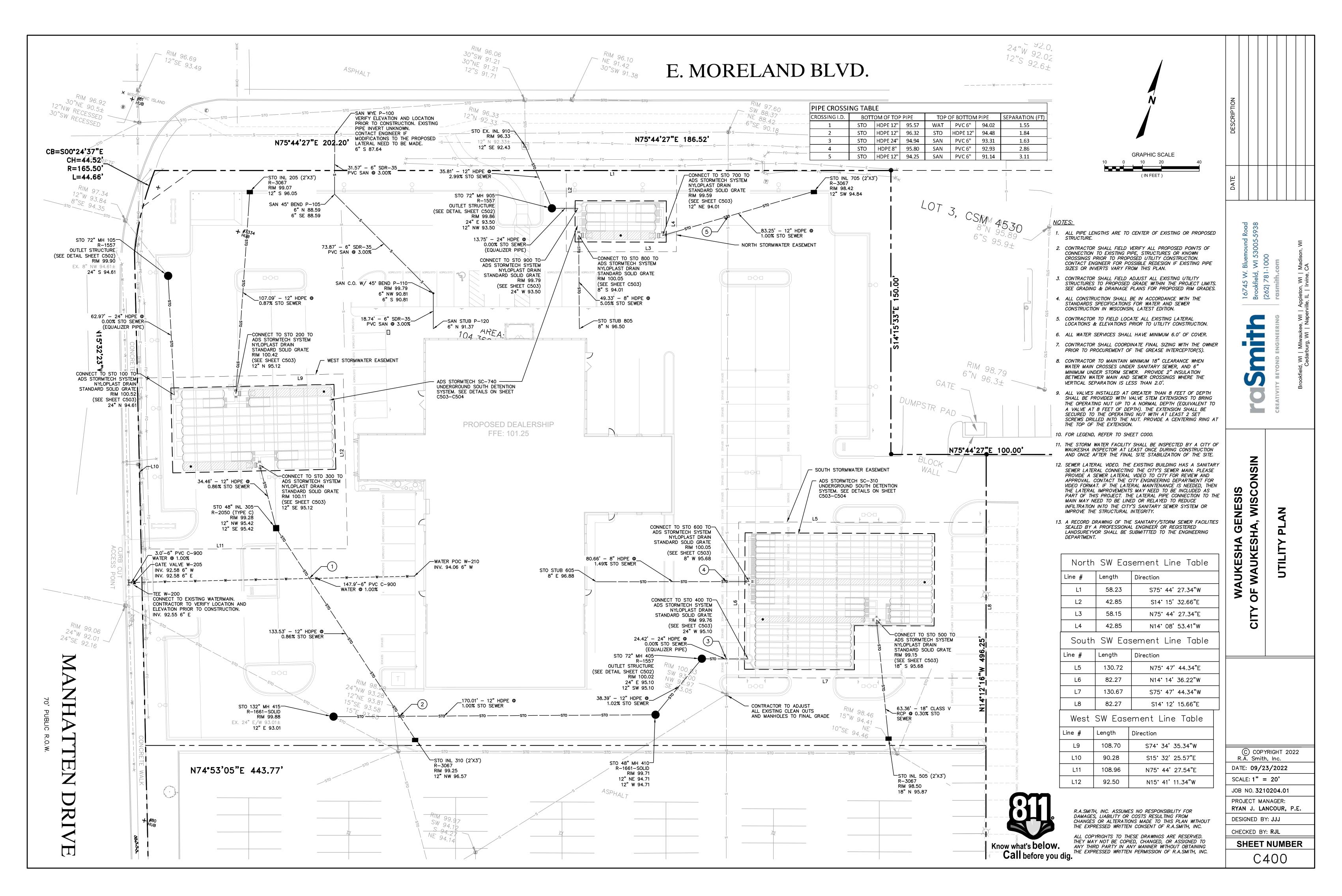
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FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL. FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

GENERAL NOTES:

INLET PROTECTION DEVICES SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD 1060 AND BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE WISDOT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED IF ALLOWED BY

TYPE A IS TO BE USED PRIOR TO PAVING AND TYPED B, C, AND D ARE TO USED AFTER PAVING IS PLACED.

TYPE A SHALL BE USED AROUND INLETS AND UNPAVED AREAS UNTIL PERMANENT STABILIZATION METHODS HAVE BEEN ESTABLISHED

TYPE B SHALL BE USED AFTER THE CASTING AND GRATE ARE IN PLACE.

TYPE C SHALL BE USED ON STREET INLETS WITH CURB HEADS.

TYPE D SHALL BE USED IN AREAS WHERE OTHER TYPES OF INLET PROTECTION ARE INCOMPATIBLE WITH ROADWAY AND TRAFFIC CONDITIONS (I.E. POSSIBLE SAFETY HAZARD IF PONDING OCCURS.)

INSTALLATION NOTES:

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN

FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

SILT FENCE DETAIL

(NOT TO SCALE)

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG. USING PLASTIC ZIP TIES. TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM

MAINTENANCE:

REMOVE INLET PROTECTION DEVICES ONCE THE CONTRIBUTING DRAINAGE AREA IS STABILIZED WITH APPROPRIATE VEGETATION OR IMPERVIOUS AREA.

INLET PROTECTION SHALL BE, AT A MINIMUM, INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24-HOUR PERIOD.

SEDIMENT DEPOSITS SHALL BE REMOVED AND THE INLET PROTECTION DEVICE RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED BETWEEN 1/3 TO 1/2 THE DESIGN DEPTH OF THE DEVICE, OR WHEN THE DEVICE IS NO LONGER FUNCTIONING AS DESIGNED. REMOVED SEDIMENT SHALL BE

WHEN REMOVING OR MAINTAINING INLET PROTECTION, DUE CARE SHALL BE TAKEN TO ENSURE SEDIMENT DOES NOT FALL INTO THE INLET AND IMPEDE THE INTENDED FUNCTION OF THE DEVICE. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

STORM DRAIN INLET PROTECTION DETAILS

1. SILT FENCE INSTALLATION AND MATERIALS SHALL CONFORM TO WONR CONSERVATION STANDARD 2. SILT FENCE SHALL BE PLACED ON THE CONTOUR AND NOT PERPENDICULAR TO THE CONTOUR. THE ENDS SHALL BE EXTENDED UPSLOPE TO PREVENT WATER FROM FLOWING AROUND THE ENDS OF

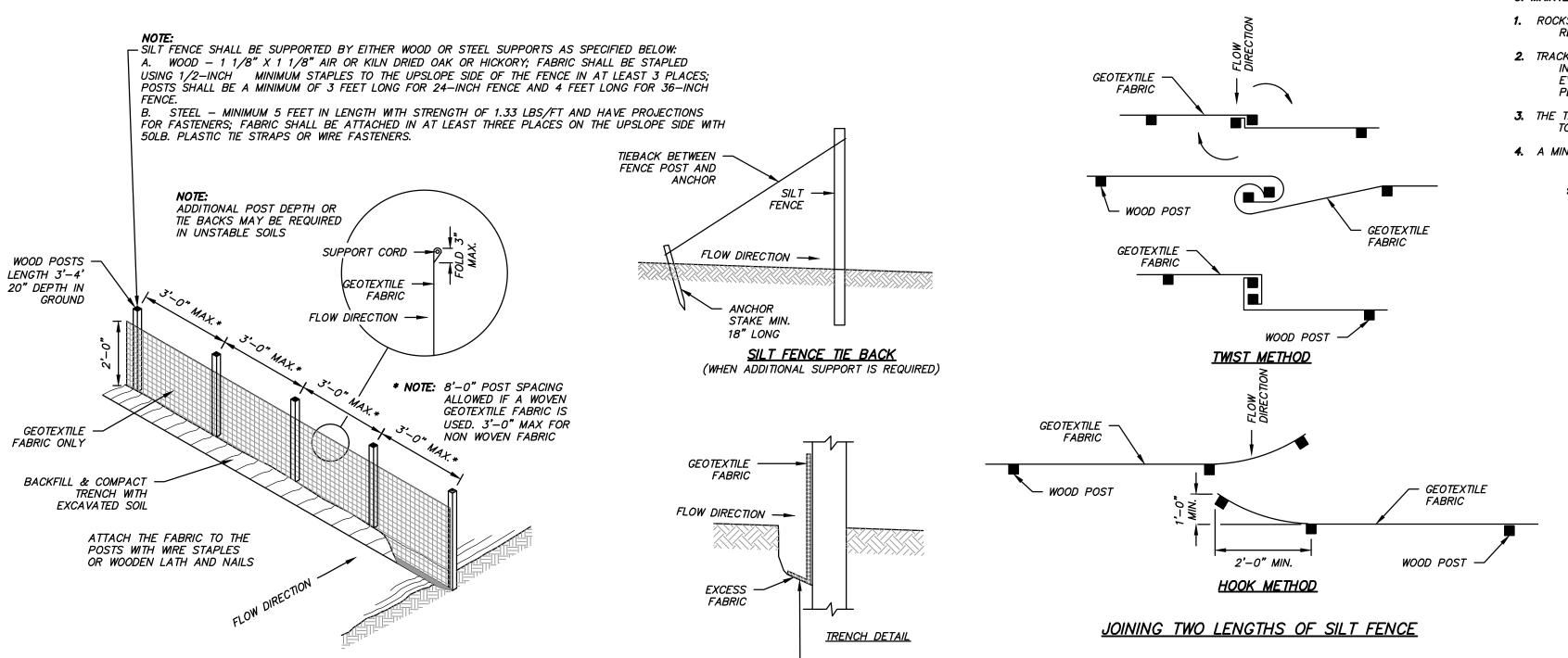
3. WHEN SILT FENCE IS INSTALLED ON A SLOPE, THE PARALLEL SPACING SHALL NOT EXCEED THE REQUIREMENTS IN THE TABLE BELOW:

| SLOPE | FENCE SPACING |
|-----------|---------------|
| < 2% | 100 FEET |
| 2 TO 5% | 75 FEET |
| 5 TO 10% | 50 FEET |
| 10 TO 33% | 25 FEET |
| > 33% | 20 FEET |

- 4. INSTALLED SILT FENCES SHALL BE MINIMUM 14 INCHES HIGH AND A MAXIMUM OF 28 INCHES IN HEIGHT MEASURED FROM THE INSTALLED GROUND ELEVATION.
- 5. A MINIMUM OF 20 INCHES OF THE POST SHALL EXTEND INTO THE GROUND AFTER INSTALLATION. 6. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8 INCHES OF THE FABRIC IN A 4-INCH TRENCH WIDE BY 6-INCH DEEP TRENCH, OR 6-INCH V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCH SHALL BE BACKFILLED AND COMPACTED. TRENCHES SHALL NOT BE EXCAVATED
- 7. 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:
- A) TWIST METHOD--OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES.
- HOOK METHOD--HOOK THE END OF EACH SILT FENCE LENGTH.

WIDER THAN NECESSARY FOR PROPER INSTALLATION.

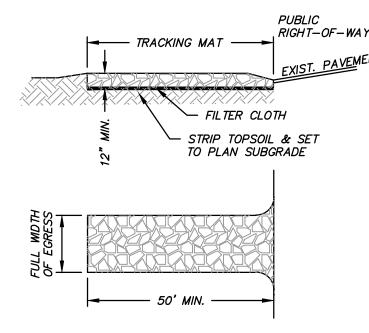
- 8. SILT FENCE SHALL AT A MINIMUM BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EACH PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24-HOUR PERIOD.
- 9. DAMAGED OR DECOMPOSED FENCES, UNDERCUTTING, OR FLOW CHANNELS AROUND THE END OF BARRIERS SHALL BE REPAIRED OR CORRECTED.
- 10. SEDIMENT SHALL BE PROPERLY DISPOSED OF ONCE THE DEPOSITS REACH ONE HALF THE HEIGHT
- 11. SILT FENCES SHALL BE REMOVED ONCE THE DISTURBED AREA IS PERMANENTLY STABILIZED AND IS NO LONGER SUSCEPTIBLE TO EROSION.



1. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY

AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH



CONSIDERATIONS:

- 1. TIRE WASHING AND TRACKING PAD TO CONFORM TO WONR CONSERVATION PRACTICE STANDARD 1057.
- 2. VEHICLES TRAVELING ACROSS THE TRACKING PAD SHOULD MAINTAIN A SLOW CONSTANT SPEED.
- 3. THE BEST APPROACH TO PREVENTING OFF-SITE TRACKING IS TO RESTRICT VEHICLES TO STABILIZED AREAS.
- 4. IT IS ALWAYS PREFERABLE TO PREVENT SEDIMENT FROM BEING DEPOSITED UPON THE ROAD THAN CLEANING THE ROAD LATER. SEDIMENT ON A ROAD CAN CREATE A
- SAFETY HAZARD AS WELL AS A POLLUTION PROBLEM. 5. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE
- ROAD SHOULD BE REMOVED BY STREET CLEANING, NOT FLUSHING, BEFORE THE END OF EACH WORKING DAY.

- A. TRACKING PAD:
- 1. THE TRACKING PAD SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE
- 2. THE AGGREGATE FOR TRACKING PADS SHALL BE 3"- 6" CLEAR OR WASHED STONE. ALL MATERIAL SHALL BE RETAINED ON A 3-INCH SIEVE.
- 3. THE AGGREGATE SHALL BE PLACED IN A LAYER AT LEAST 12 INCHES THICK. ON SITES WITH A HIGH WATER TABLE, OR WHERE SATURATED CONDITIONS ARE EXPECTED DURING THE LIFE OF THE PRACTICE, STONE TRACKING PADS SHALL BE UNDERLAIN WITH A WISDOT TYPE R GEOTEXTILE FABRIC TO PREVENT MIGRATION OF UNDERLYING SOIL INTO THE STONE.
- 4. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT. THE TRACKING PAD SHALL BE A MINIMUM OF 50 FEET LONG.
- 5. SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY FROM TRACKING PADS OR CONVEYED UNDER AND AROUND THEM BY USING A VARIETY OF PRACTICES, SUCH AS CULVERTS, WATER BARS, OR OTHER SIMILAR PRACTICES.

IF CONDITIONS ON THE SITE ARE SUCH THAT THE SEDIMENT IS NOT REMOVED FROM VEHICLE TIRES BY THE TRACKING PAD, THEN TIRES SHALL BE WASHED UTILIZING PRESSURIZED WATER BEFORE ENTERING A PUBLIC ROAD.

- 1. THE WASHING STATION SHALL BE LOCATED ON-SITE ON AN AREA THAT IS STABILIZED AND DRAINS INTO A SUITABLE SEDIMENT TRAPPING OR SETTLING
- 2. THE WASH RACK SHALL CONSIST OF A HEAVY GRATING OVER A LOWERED AREA. THE RACK SHALL BE STRONG ENOUGH TO SUPPORT THE VEHICLES THAT WILL CROSS IT.

C. MAINTENANCE

- 1. ROCKS LODGED BETWEEN THE TIRES IF DUAL WHEEL VEHICLES SHALL BE REMOVED PRIOR TO LEAVING THE CONSTRUCTION SITE.
- 2. TRACKING PADS AND TIRE WASHING STATIONS SHALL, AT AT MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24-HOUR
- 3. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
- 4. A MINIMUM 12-INCH THICK PAD SHALL BE MAINTAINED.

STONE TRACKING PAD AND TIRE WASHING DETAIL (NOT TO SCALE)



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DATE: **09/23/2022** SCALE: N.T.S.

JOB NO. **3210204.01** PROJECT MANAGER:

DESIGNED BY: JJJ CHECKED BY: RJL

RYAN J. LANCOUR. P.E.

SHEET NUMBER

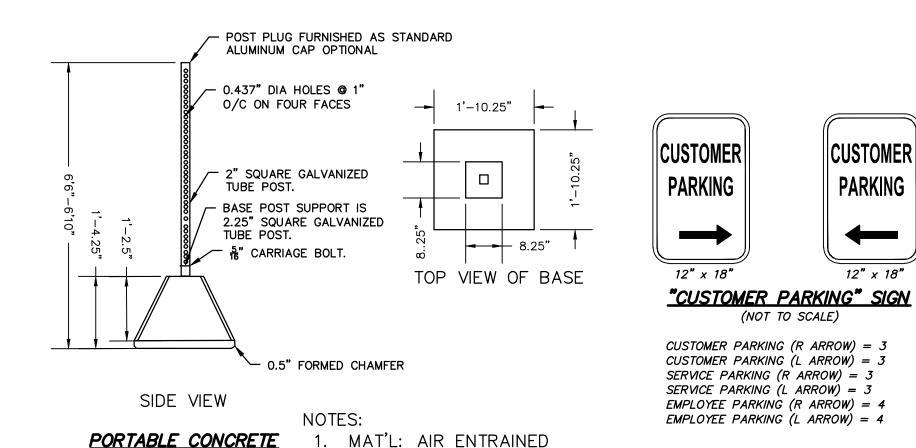
A) 3500 PSI CONCRETE SHALL BE USED IN CONSTRUCTION OF THE CURB & GUTTER.

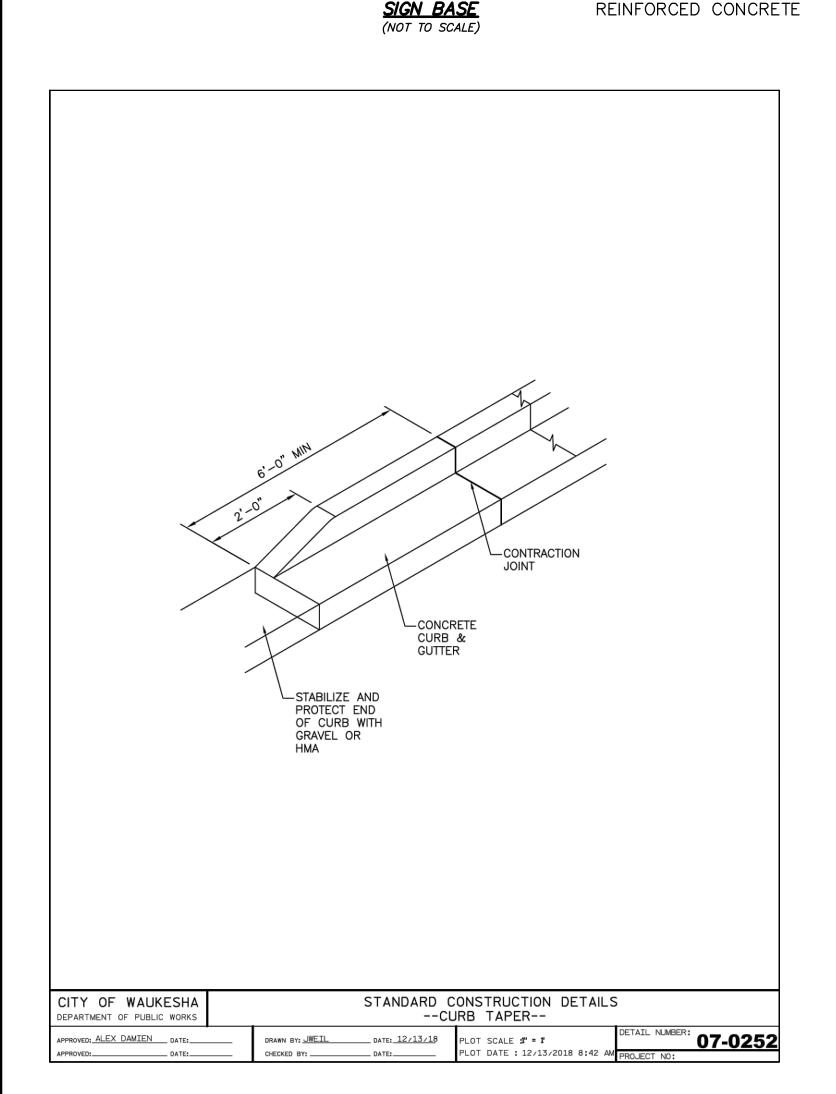
B) THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SLOPE OF THE GUTTER PAN. C) FOR DEPRESSED CURB HEAD SLOPE, USE THE SAME SLOPE AS ADJACENT SIDEWALK.

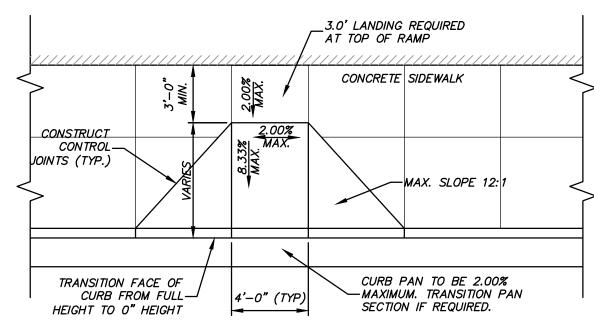
D) THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDE MINIMUM 6" GUTTER THICKNESS MAINTAINED. TRANSVERSE CONTRACTION JOINTS SHALL BE CUT OR SAWED AT MAXIMUM 20 FOOT INTERVALS.

E) 1/2" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED TRANSVERSELY IN THE CURB ABUTTING EXISTING CURB AND SIDEWALK, WALLS OR BUILDINGS, AND AT INTERVALS NOT TO EXCEED 300 FEET, WITH PREFERRED LOCATIONS BEING AT RADIUS POINTS OR ANGLE

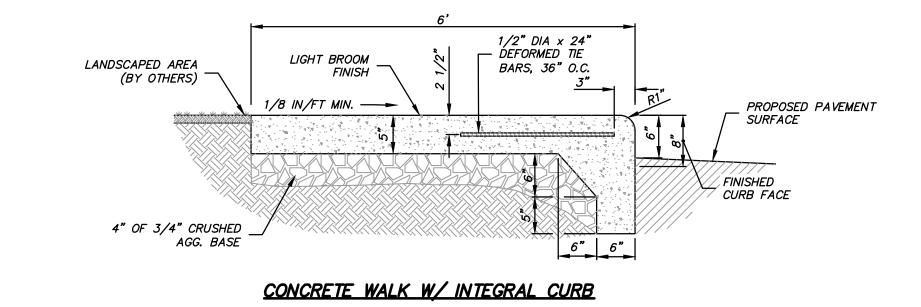
ON-SITE CONCRETE CURB & GUTTER DETAIL

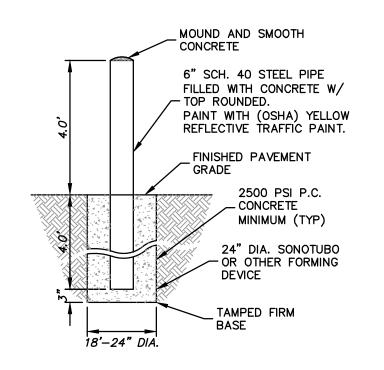




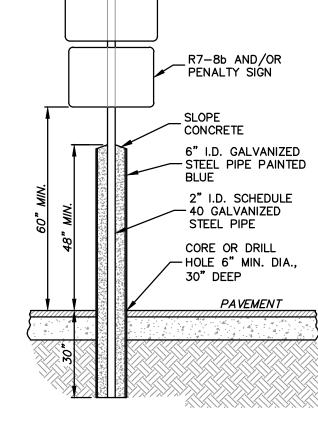


TYPE 3 CURB RAMP





BOLLARD DETAIL

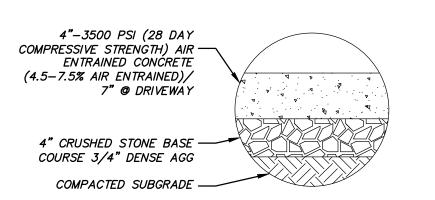


ACCESSIBLE

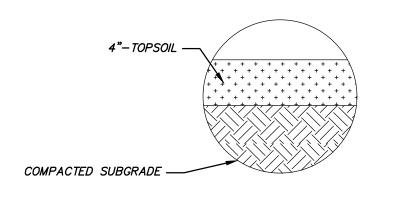
(12"x18")

PARKING SIGN

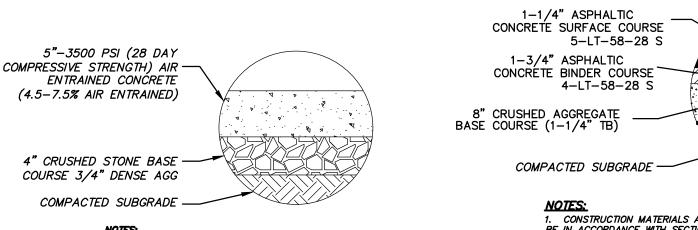
ACCESSIBLE PARKING SIGN AND POST INSTALLATION IN BOLLARD TYPE 2



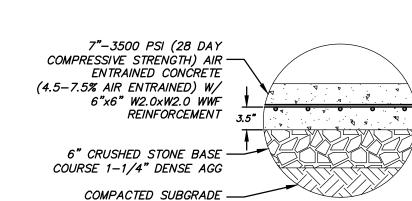
PUBLIC CONCRETE SIDEWALK SECTION



LANDSCAPED AREAS (ALL NON-PAVED AREAS)

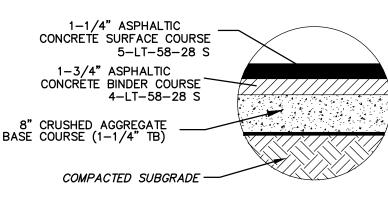


1. CONSTRUCTION MATERIALS AND PROCEDURES
SHOULD BE IN ACCORDANCE WITH SECTION 305 AND
415 OF THE WISDOT STANDARD SPECIFICATIONS. CONCRETE SIDEWALK PAVEMENT SECTION



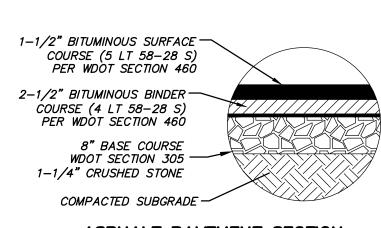
NOTES:

1. CONSTRUCTION MATERIALS AND PROCEDURES
SHOULD BE IN ACCORDANCE WITH SECTION 305 AND
415 OF THE WISDOT STANDARD SPECIFICATIONS. CONCRETE PAVEMENT SECTION



1. CONSTRUCTION MATERIALS AND PROCEDURES SHOULD BE IN ACCORDANCE WITH SECTION 460, TYPE E-0.3 AND SECTION 305 OF THE WISDOT STANDARD SPECIFICATIONS.
2. DEPTH OF PROPOSED CRUSHED AGGREGATE BASE COURSE WAS PROVIDED BY AND DIRECTED TO USE BY OWNER.

ASPHALT PAVEMENT SECTION (STANDARD DUTY)



ASPHALT PAVEMENT SECTION (HEAVY DUTY)



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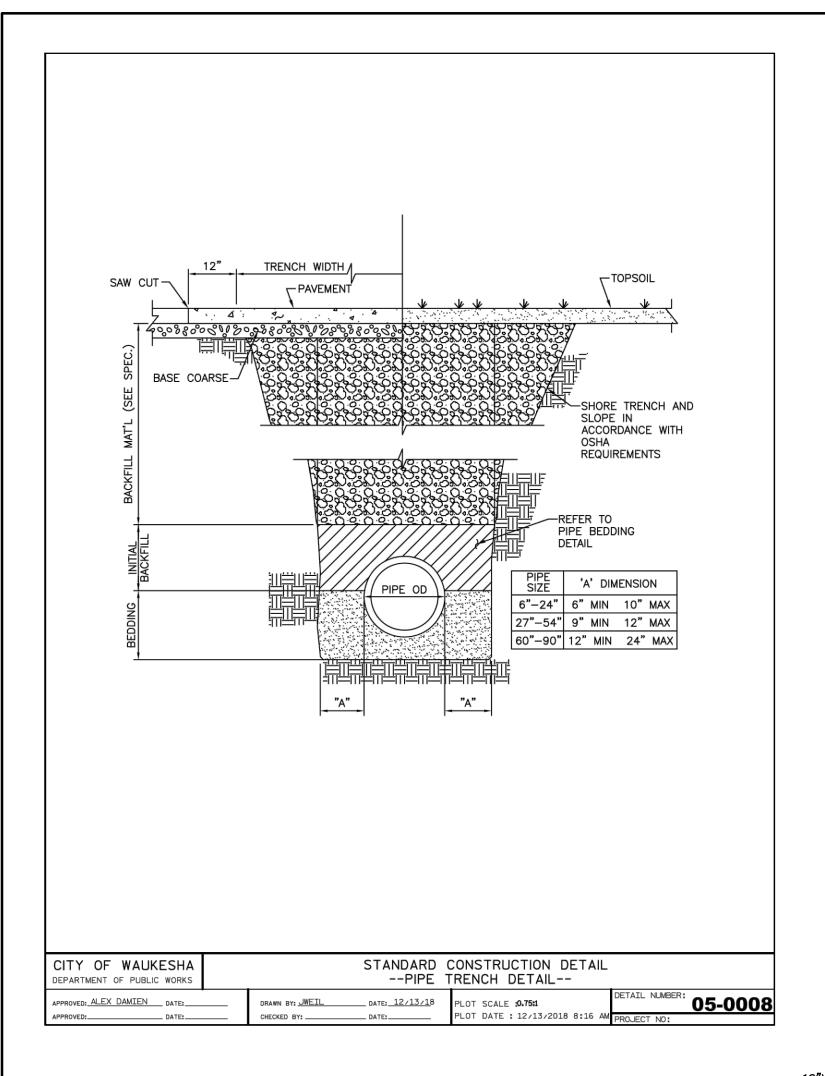
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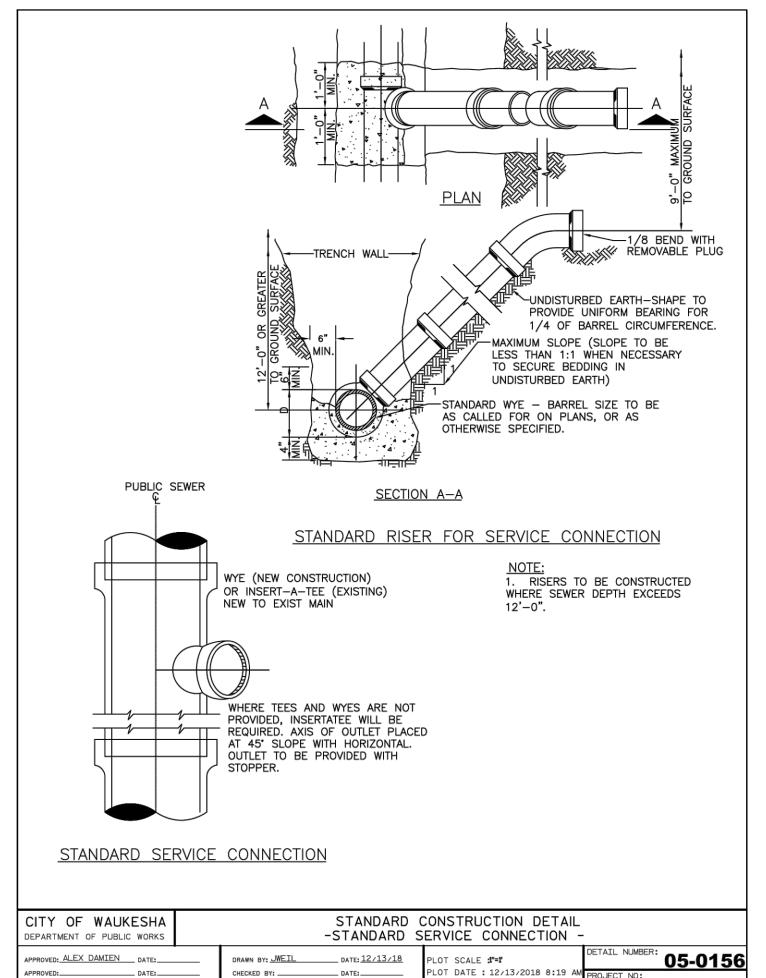
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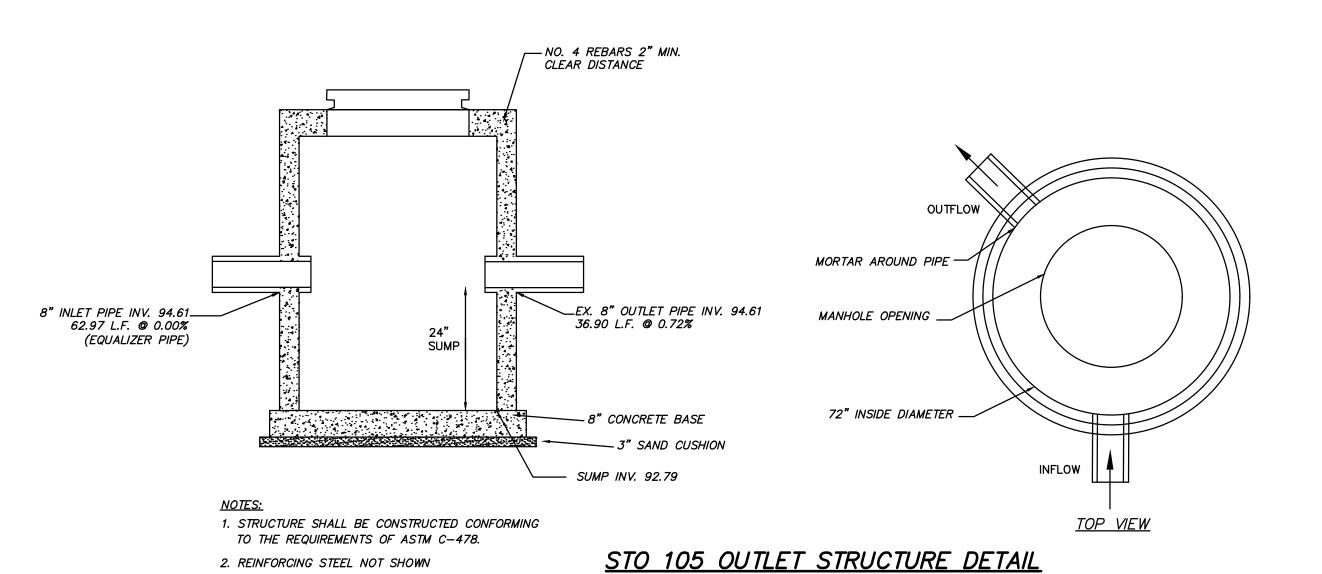
JOB NO. **3210204.01** PROJECT MANAGER:

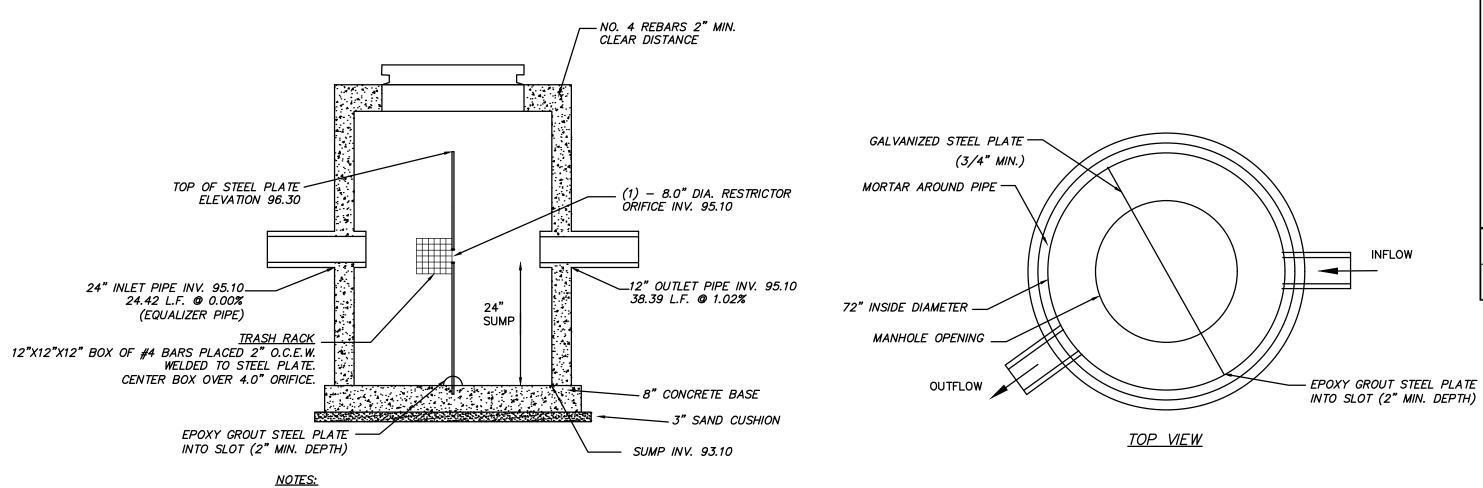
RYAN J. LANCOUR, P.E. DESIGNED BY: JJJ

CHECKED BY: RJL SHEET NUMBER







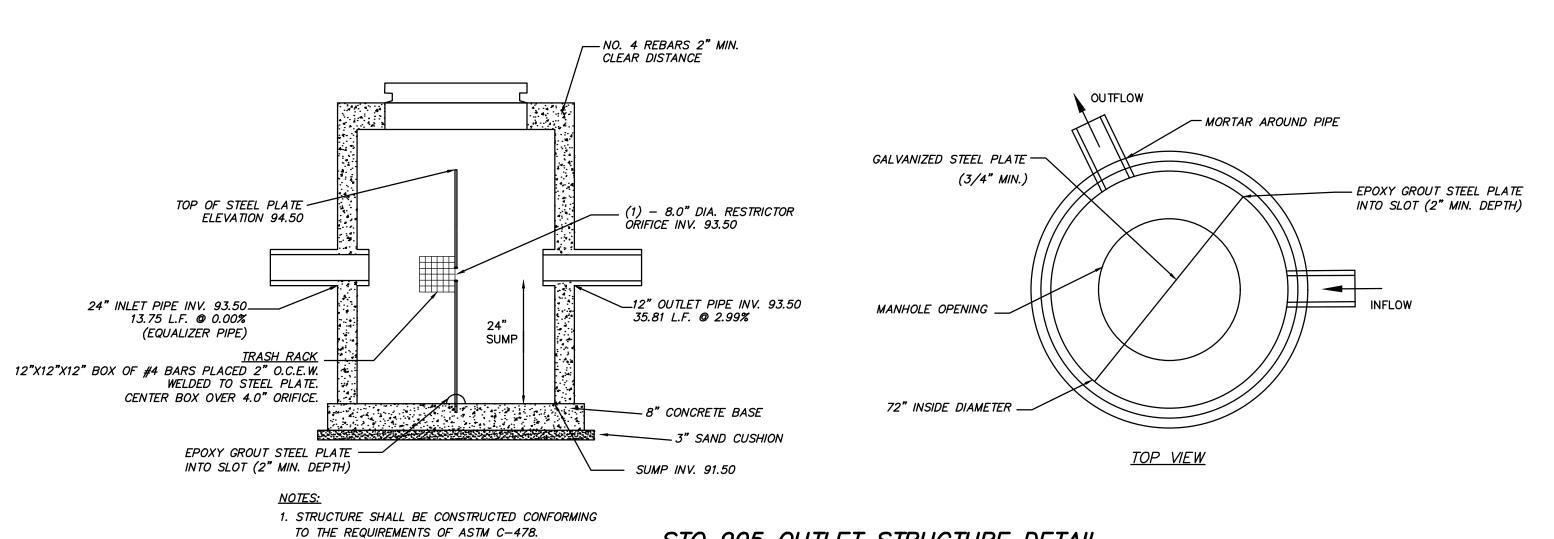


1. STRUCTURE SHALL BE CONSTRUCTED CONFORMING

TO THE REQUIREMENTS OF ASTM C-478.

2. REINFORCING STEEL NOT SHOWN

2. REINFORCING STEEL NOT SHOWN



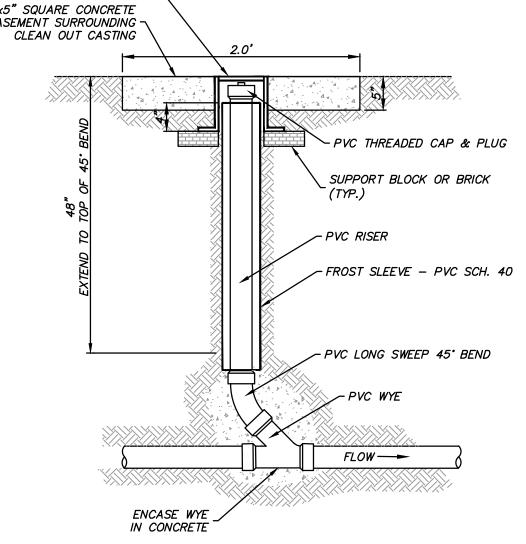
STO 410 OUTLET STRUCTURE DETAIL

STO 905 OUTLET STRUCTURE DETAIL

-BEDDING MATERIAL, SEE SPECIFICATION -DEEPEN TRENCH FOR JOINTS (OR ENLARGED OD) TO MAINTAIN FULĹ BEDDING DEPTH REFER TO PIPE TRENCH DETAIL. 2. TRANSITION OF BEDDING TYPES SHALL ONLY BE MADE AT PIPE JOINTS. 3. COMPACTION SHALL NOT BE DONE IN LAYERS MORE THAN 12" THICK. 4. BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 90% STANDARD PROCTOR. STANDARD CONSTRUCTION DETAIL
--PIPE BEDDING DETAIL--CITY OF WAUKESHA ¹ 05-0011 DRAWN BY: <u>JWEIL</u> DATE: 12/13/18 PLOT SCALE :0.800000 APPROVED: ALEX DAMIEN DATE: PLOT DATE : 12/13/2018 8:17 AM CLEAN-OUT CASTING NEENAH R-1977 OR ~ APPROVED EQUAL 2'x2'x5" SQUARE CONCRETE ENCASEMENT SURROUNDING ¬ CLEAN OUT CASTING

SHORE TRENCH AND SLOPE IN ACCORDANCE WITH OSHA REQUIREMENTS

-UNDISTURBED EARTH



CLEAN—OUT STRUCTURE
SECTION VIEW



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|--------------------------------------|
| DATE: 09/23/2022 |
| SCALE: N.T.S. |
| JOB NO. 3210204.01 |

GENESIS HA, WISCO

WAUKESHA GEN OF WAUKESHA, N

JOB NO. 3210204.01

PROJECT MANAGER:

RYAN I LANCOUR P.F.

RYAN J. LANCOUR, P.E.

DESIGNED BY: JJJ

SHEET NUMBER





WAUKESHA GENESIS

WAUKESHA, WI

SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, 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. 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) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2)

MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.

- 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.
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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 1.95 FOR
- DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD 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.

CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE". CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
- STORMTECH RECOMMENDS 3 BACKFILL METHODS: STONESHOOTER 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.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- 8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- 1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 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 SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 3. FULL 36" (900 mm) 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 THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

SC-310 STORMTECH CHAMBER SPECIFICATIONS

PROPOSED LAYOUT - WEST SYSTEM

- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD
- SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE
- THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. SECTION 12.12. 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.
- 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) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- 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 TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- 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 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.

THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 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 THE SC-310 SYSTEM

- 1. STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- 2. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
- STONESHOOTER 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 LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- 8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- 9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

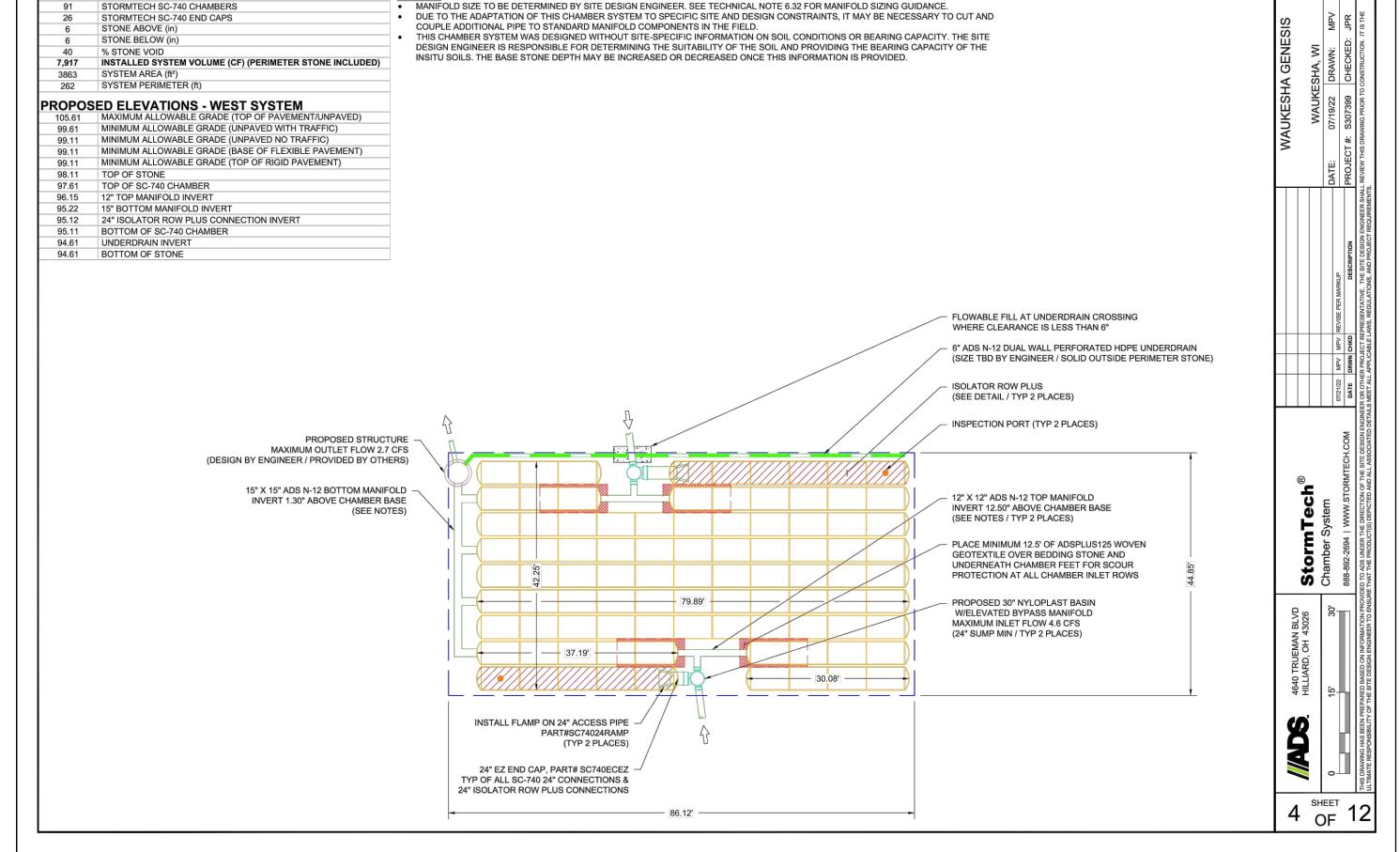
NOTES FOR CONSTRUCTION EQUIPMENT

- 1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 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 SC-310/SC-740/DC-780 CONSTRUCTION GUIDE". WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) 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 THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT - NORTH SYSTEM MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE. STORMTECH SC-740 END CAPS DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD. STONE ABOVE (in) THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE STONE BELOW (in SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY % STONE VOID OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED. INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) SYSTEM AREA (ft²) SYSTEM PERIMETER (ft) PROPOSED ELEVATIONS - NORTH SYSTEM MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC) MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC) MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT) MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT) TOP OF STONE 96.50 TOP OF SC-740 CHAMBER 12" TOP MANIFOLD INVERT 24" BOTTOM CONNECTION INVERT 24" ISOLATOR ROW PLUS CONNECTION INVERT BOTTOM OF SC-740 CHAMBER UNDERDRAIN INVERT 93.50 BOTTOM OF STONE PROPOSED STRUCTURE MAXIMUM OUTLET FLOW 7.0 CFS (DESIGN BY ENGINEER / PROVIDED BY OTHERS) PLACE MINIMUM 12.5' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR 24" X 24" ADS N-12 BOTTOM CONNECTION PROTECTION AT ALL CHAMBER INLET ROWS INVERT 0.10" ABOVE CHAMBER BASE (SEE NOTES) - 12" X 12" ADS N-12 TOP MANIFOLD 6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN INVERT 12.50" ABOVE CHAMBER BASE (SIZE TBD BY ENGINEER / SOLID OUTSIDE PERIMETER STONE) (SEE NOTES / TYP 2 PLACES) INSTALL FLAMP ON 24" ACCESS PIPE PART#SC74024RAMP (TYP 2 PLACES) 24" EZ END CAP, PART# SC740ECEZ TYP OF ALL SC-740 24" CONNECTIONS & 24" ISOLATOR ROW PLUS CONNECTIONS INSPECTION PORT PROPOSED 30" NYLOPLAST BASIN W/ELEVATED BYPASS MANIFOLD MAXIMUM INLET FLOW 3.45 CFS (24" SUMP MIN / TYP 2 PLACES) ISOLATOR ROW PLUS 13 OF



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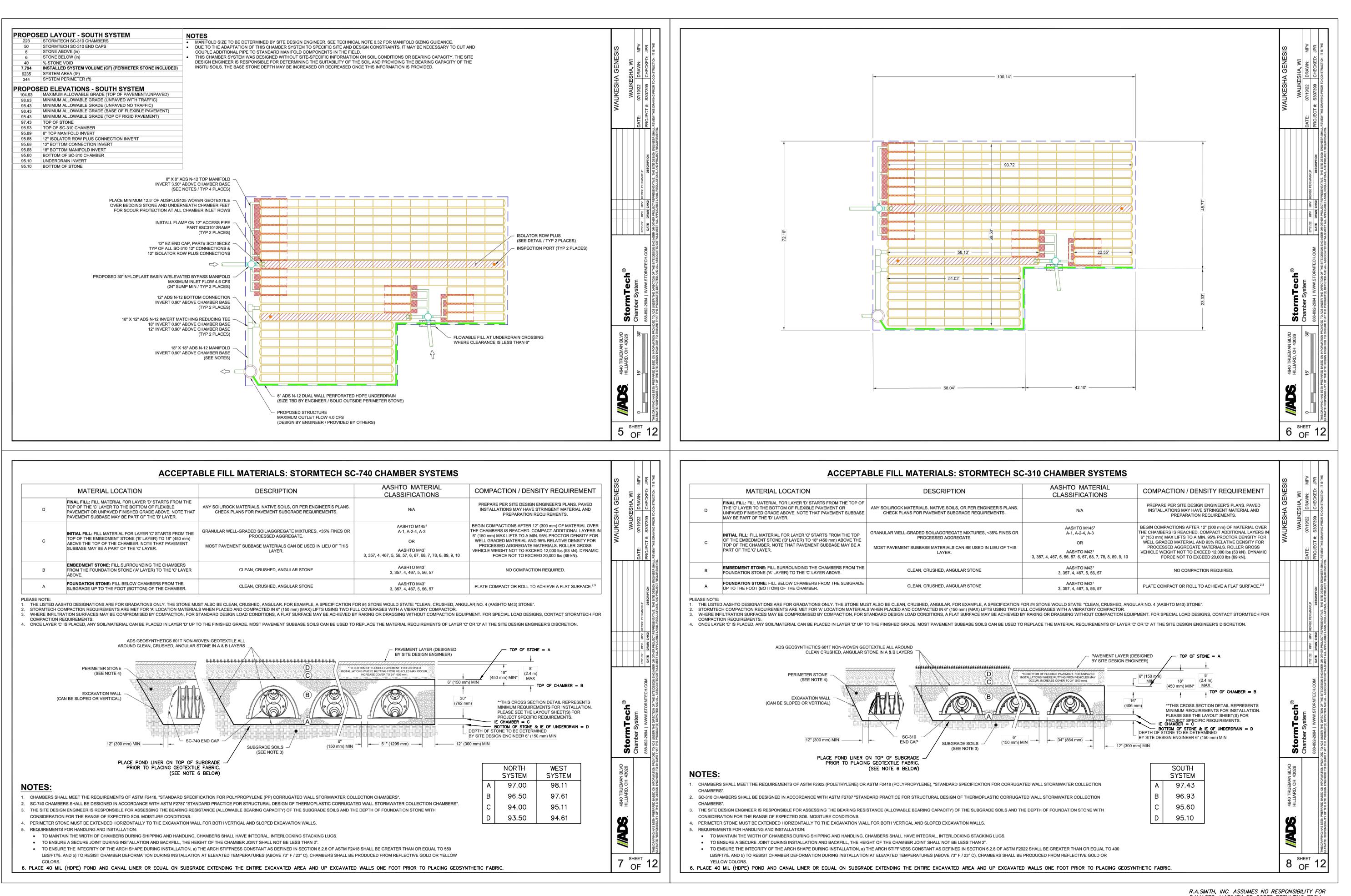
R.A. Smith, Inc. DATE: **09/23/2022** SCALE: N.T.S.

JOB NO. **3210204.01**

PROJECT MANAGER: RYAN J. LANCOUR, P.E.

DESIGNED BY: JJJ CHECKED BY: RJL

SHEET NUMBER



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WAUKESHA GENESIS
CITY OF WAUKESHA, WISCONSIN
UNDERGROUND STORAGE DETAILS

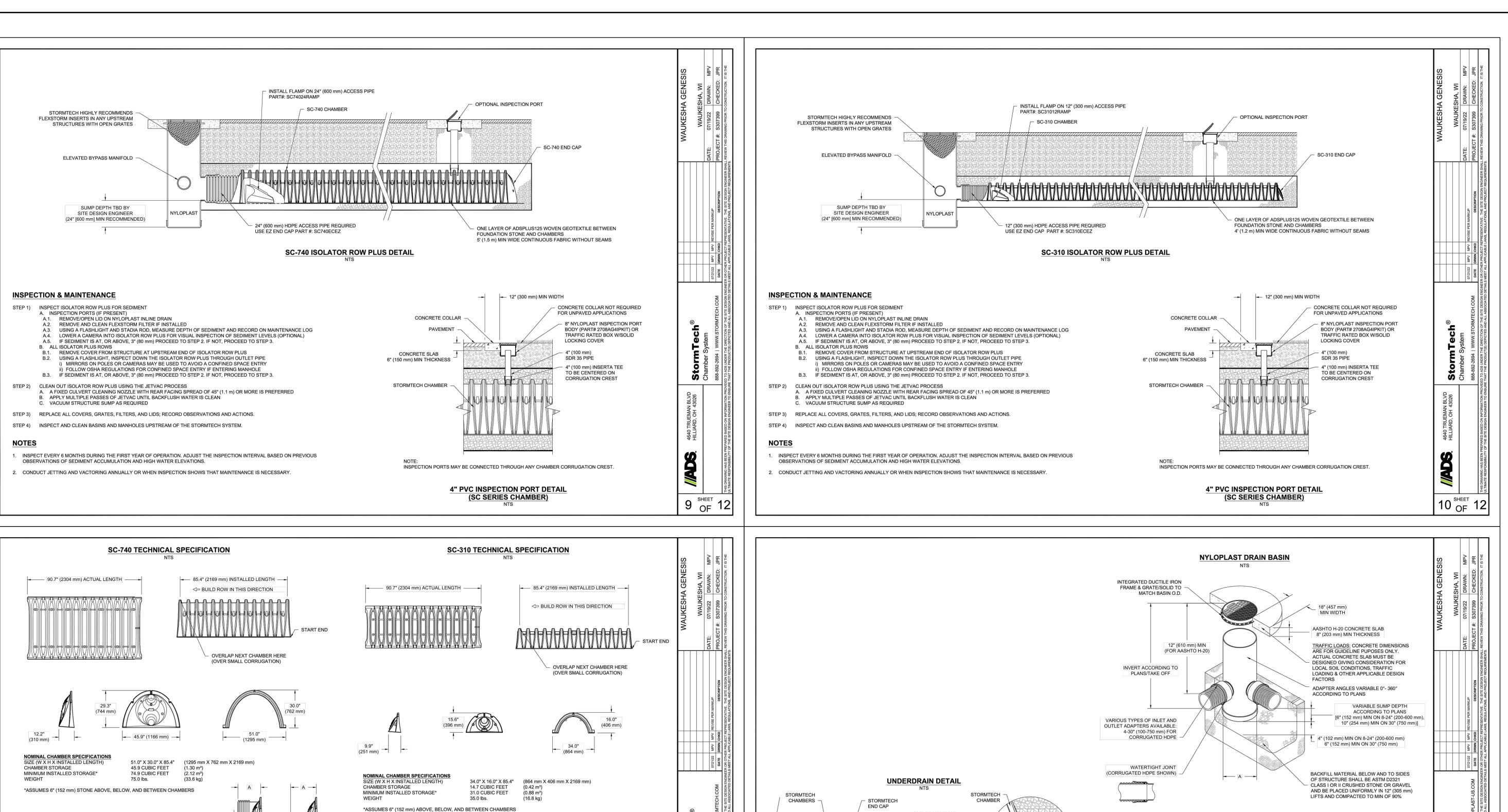
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JOB NO. **3210204.01**

PROJECT MANAGER:
RYAN J. LANCOUR, P.E.

DESIGNED BY: JJJ

CHECKED BY: RJL



PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

6" (150 mm)

10.9" (277 mm)

8" (200 mm) 12.2" (310 mm)

10" (250 mm) 13.4" (340 mm)

12" (300 mm) 14.7" (373 mm)

15" (375 mm) 18.4" (467 mm)

18" (450 mm) 19.7" (500 mm)

24" (600 mm) 18.5" (470 mm)

STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT

BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

ALL STUBS, EXCEPT FOR THE SC740ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE

* FOR THE SC740ECEZ THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm).

0.5" (13 mm)

0.6" (15 mm)

0.7" (18 mm)

1.2" (30 mm)

1.3" (33 mm)

1.6" (41 mm)

0.1" (3 mm)

9.0" (229 mm)

5.0" (127 mm)

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

STUB

6" (150 mm)

8" (200 mm)

10" (250 mm)

12" (300 mm)

9.6" (244 mm)

11.9" (302 mm)

12.7" (323 mm)

ALL STUBS, EXCEPT FOR THE SC310ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF

THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT

* FOR THE SC310ECEZ THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm).

BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

5.8" (147 mm)

0.5" (13 mm)

0.7" (18 mm)

0.9" (23 mm)

11 OF

PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PRE CORED END CAPS END WITH "PC"

SC310EPE06T / SC310EPE06TPC

SC310EPE06B / SC310EPE06BPC

SC310EPE08T / SC310EPE08TPC

SC310EPE08B / SC310EPE08BPC

SC310EPE10T / SC310EPE10TPC

SC310EPE10B / SC310EPE10BPC

SC310ECEZ*

NOTE: ALL DIMENSIONS ARE NOMINAL

1-888-892-2694.

PRE-CORED END CAPS END WITH "PC

PART #

SC740EPE06T / SC740EPE06TPC

SC740EPE06B / SC740EPE06BPC

SC740EPE08T /SC740EPE08TPC

SC740EPE08B / SC740EPE08BPC

SC740EPE10T / SC740EPE10TPC

SC740EPE10B / SC740EPE10BPC

SC740EPE12T / SC740EPE12TPC

SC740EPE12B / SC740EPE12BPC

SC740EPE15T / SC740EPE15TPC

SC740EPE15B / SC740EPE15BPC

SC740EPE18B / SC740EPE18BPC

SC740ECEZ*

NOTE: ALL DIMENSIONS ARE NOMINAL

SC740EPE18T / SC740EPE18TPC

OUTLET MANIFOLD

FOUNDATION STONE

BENEATH CHAMBERS

ADS GEOSYNTHETICS 601T

NON-WOVEN GEOTEXTILE

FOUNDATION STONE

BENEATH CHAMBERS

ADS GEOSYNTHETICS 601T

NUMBER AND SIZE OF UNDERDRAINS PER SITE DESIGN ENGINEER

6" (150 mm) TYP FOR SC-740, DC-780, MC-3500, MC-4500 & MC-7200 SYSTEMS

4" (100 mm) TYP FOR SC-310 & SC-160LP SYSTEMS

NON-WOVEN GEOTEXTILE

STORMTECH

END CAP

SECTION A-A

SECTION B-B

DUAL WAL

PERFORATED

UNDERDRAIN

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12 OF 12

8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536

2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05

5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST-US.COM

DUTY

DUTY

AASHTO H-10

AASHTO H-10

AASHTO H-10

AASHTO H-10

PEDESTRIAN

AASHTO H-20

GRATE/SOLID COVER OPTIONS

DUTY

DUTY

STANDARD AASHTO

H-20

H-20

H-20

H-20

H-20

STANDARD AASHTO

SOLID LIGHT DUTY

SOLID LIGHT DUTY

AASHTO H-20

SOLID

AASHTO H-20

AASHTO H-20

AASHTO H-20

EDESTRIAN LIGHT | STANDARD LIGHT

PEDESTRIAN LIGHT | STANDARD LIGHT

PEDESTRIAN STANDARD AASHTO

PEDESTRIAN STANDARD AASHTO

DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
 DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212

FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC

GRADE 70-50-05

(250 mm)

(300 mm)

(450 mm)

TO ORDER CALL: 800-821-6710

PART#

2808AG

2812AG

2815AG

2818AG

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01 41 00 - REGULATORY REQUIREMENTS

- . THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS AND ANY SUPPLEMENTS THERETO, SHALL GOVERN ALL
- CONSTRUCTION ITEMS ON THIS PLAN UNLESS OTHERWISE NOTED: a. WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) STORM WATER TECHNICAL STANDARDS b. WISCONSIN EROSION CONTROL PRODUCT ACCEPTABILITY LIST
- c. STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (SSSWCW) d. WISCONSIN ADMINISTRATIVE CODE. SECTIONS SPS 382-387
- e. WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND
- STRUCTURE CONSTRUCTION f. FEDERAL HIGHWAY ADMINISTRATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD) UNITED STATES DEPARTMENT OF JUSTICE ADA STANDARDS UNITED STATES DEPARTMENT OF TRANSPORTATION ADA STANDARDS FOR TRANSPORTATION FACILITIES
- MUNICIPALITY DEVELOPMENT STANDARDS COUNTY DEVELOPMENT STANDARDS
- 2. THE OWNER, ENGINEER AND MUNICIPALITY SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF PERFORMING ANY CONSTRUCTION ACTIVITIES.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF ALL PERMITS AND FOR ABIDING BY ALL PERMIT REQUIREMENTS AND RESTRICTIONS. 4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL
- SAFETY REQUIREMENTS TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION
- 5. SHOP DRAWINGS AND/OR MANUFACTURER'S PRODUCT DATA SUBMITTALS ARE REQUIRED ONLY IF THE PRODUCT OR METHOD OF CONSTRUCTION IS DIFFERENT FROM THAT SPECIFIED OR IF REQUIRED BY THE MUNICIPAL
- a. ALL DOCUMENTS SUBMITTED FOR REVIEW SHALL HAVE THE SPECIFIC MATERIAL, PART, SIZE, ETC. HIGHLIGHTED IN SOME FASHION. EXAMPLE: A FITTING CUT SHEET HAS MULTIPLE PRESSURE RATING FOR DIFFERENT SIZE BENDS. HIGHLIGHT THE PRESSURE CLASS & SIZE TO BE USED ON PROJECT. ALL
- SUBMITTALS NOT PROPERLY IDENTIFYING THE SPECIFIC MATERIAL BEING USED WILL BE REJECTED b. CONTRACTOR SHALL SUBMIT A PDF COPY AND AN EXPLANATION AS TO HOW THE SUBSTITUTION MEETS THE PROPOSED DESIGN (PRODUCT SPECIFICATION SHEETS WITHOUT EXPLANATION WILL NOT BE ACCEPTED) TO THE OWNER'S REPRESENTATIVE OR ENGINEER FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT PROCEED UNTIL THE OWNER'S APPROVAL IS GIVEN. IN PROJECT SCHEDULING CONTRACTOR SHALL ACCOUNT FOR 5 WORKING DAYS FOR SUBMITTAL REVIEW. IN THE EVENT SUCH SUBSTITUTION IS APPROVED. THE OWNER WILL REQUIRE FROM THE CONTRACTOR A CREDITED DEDUCTION FROM THE CONTRACT AMOUNT
- EQUAL TO ANY SAVINGS IN MATERIAL COST RESULTING FROM USE OF THE PROPOSED SUBSTITUTE. 6. THE CONTRACTOR SHALL ASSUME COMPLETE AND SOLE RESPONSIBILITY FOR THE QUALITY OF WORK. IF CHANGES OR ADJUSTMENTS ARE RECOMMENDED BY THE CONTRACTOR, THEY MAY BE MADE ONLY UPON WRITTEN
- APPROVAL OF THE OWNER OR HIS REPRESENTATIVE. a. ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE OWNER OR HIS REPRESENTATIVE SHALL DECIDE ALL QUESTIONS WHICH SHALL ARISE AS TO THE QUALITY AND ACCEPTABILITY OF MATERIALS FURNISHED, WORK PERFORMED, AND WORKMANSHIP, , INTERPRETATION OF THE PLANS AND SPECIFICATIONS HE SHALL DETERMINE THE AMOUNT OF WORK PERFORMED AND MATERIALS
- b. FAILURE OR NEGLIGENCE ON THE PART OF THE OWNER OR HIS REPRESENTATIVE TO CONDEMN OR REJECT SUBSTANDARD OR INFERIOR WORK OR MATERIALS SHALL NOT BE CONSTRUED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR MATERIALS. IF IT BECOMES EVIDENT AT ANY TIME PRIOR TO THE FINAL ACCEPTANCE OF THE WORK BY THE OWNER. NEITHER SHALL IT BE CONSTRUED AS BARRING THE OWNER, AT ANY SUBSEQUENT TIME, FROM THE RECOVERY OF DAMAGES OR OF SUCH A SUM OF MONEY AS MAY BE NEEDED TO BUILD ANEW ALL PORTIONS OF THE SUBSTANDARD OR INFERIOR WORK OR REPLACEMENT OF IMPROPER MATERIALS WHEREVER FOUND.
- c. INSPECTORS EMPLOYED BY THE OWNER SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND ALL MATERIAL FURNISHED. SUCH INSPECTION MAY EXTEND TO ALL OR ANY PART OF THE WORK AND TO THE PREPARATION, FABRICATION OR MANUFACTURE OF THE MATERIALS TO BE USED. THE INSPECTOR IS NOT AUTHORIZED TO REVOKE, ALTER OR WAIVE ANY REQUIREMENTS OF THE SPECIFICATIONS, NOR IS HE AUTHORIZED TO APPROVE OR ACCEPT ANY PORTION OF THE COMPLETED PROJECT. HE SHALL CALL THE ATTENTION OF THE CONTRACTOR TO ANY FAILURE OF THE WORK OR MATERIALS TO CONFORM TO THE SPECIFICATIONS AND CONTRACT, AND SHALL HAVE THE AUTHORITY TO REJECT MATERIALS. ANY DISPUTE BETWEEN THE INSPECTOR AND CONTRACTOR SHALL BE REFERRED TO THE OWNER OR HIS REPRESENTATIVE. ANY ADVICE WHICH THE INSPECTOR MAY GIVE THE CONTRACTOR SHALL IN NO WAY BE CONSTRUED AS BINDING THE ENGINEER IN ANY WAY OR RELEASING THE CONTRACTOR FROM FULFILLING ANY OF THE TERMS
- d. ALL MATERIALS AND EACH PART OF DETAIL OF THE WORK SHALL BE SUBJECT AT ALL TIMES TO INSPECTION BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE OR THE AUTHORITY HAVING JURISDICTION AND THE CONTRACTOR WILL BE HELD STRICTLY TO THE TRUE INTENT OF THE SPECIFICATIONS IN REGARD TO QUALITY OF MATERIALS, WORKMANSHIP, AND THE DILIGENT EXECUTION OF THE CONTRACT. SUCH INSPECTION MAY INCLUDE MILL. PLANT OR SHOP INSPECTION. AND ANY MATERIAL FURNISHED UNDER THESE SPECIFICATIONS IS SUBJECT TO SUCH INSPECTION. THE OWNER OR HIS REPRESENTATIVES SHALL BE ALLOWED ACCESS TO ALL PART OF THE WORK, AND SHALL BE FURNISHED WITH SUCH INFORMATION AND ASSISTANCE BY THE CONTRACTOR AS IS DETERMINED BY THE OWNER OR HIS REPRESENTATIVE, TO MAKE A COMPLETE AND DETAILED INSPECTION.
- ALL WORKMANSHIP SHALL CONFORM TO THE BEST STANDARD PRACTICE. UNLESS OTHERWISE SPECIFIED. THE SPECIFICATIONS OR RECOGNIZED ASSOCIATION OF MANUFACTURERS AND CONTRACTORS OR INDUSTRIAL MANUFACTURERS SHALL BE USED AS GUIDES FOR THE STANDARDS OF WORKMANSHIP.
- ALL EXPOSED ITEMS OF WORK SHALL PRESENT A NEAT WORKMANLIKE APPEARANCE AND SHALL BE AS TRUE TO SHAPE AND ALIGNMENT AS POSSIBLE TO OBTAIN WITH MEASURING OR LEVELING INSTRUMENTS GENERALLY USED IN THE RESPECTIVE TYPES OF WORK. ITEMS OF WORK SHALL BE SOUND AND FULLY PROTECTED AGAINST DAMAGE AND PREMATURE DETERIORATION. IT IS SPECIFICALLY UNDERSTOOD THAT IN ALL QUESTIONS OF QUALITY AND ACCEPTABILITY OF WORKMANSHIP, THE CONTRACTOR AGREES TO ABIDE BY THE DECISION OF THE OWNER OR HIS REPRESENTATIVE.
- a. ALL MATERIALS AND WORKMANSHIP NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE CONSIDERED AS DEFECTIVE. AND ALL SUCH MATERIALS. WHETHER IN-PLACE OR NOT. SHALL BE REJECTED AND SHALL BE REMOVED FROM THE WORK BY THE CONTRACTOR AT HIS EXPENSE. UPON FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH ANY ORDER OF THE OWNER RELATIVE TO THE PROVISIONS OF THIS ARTICLE, THE OWNER SHALL HAVE THE AUTHORITY TO REMOVE AND REPLACE SUCH DEFECTIVE MATERIAL AND TO DEDUCT THE COST OF REMOVAL AND REPLACEMENT FROM ANY MONIES DUE OR WHICH MAY BECOME DUE THE CONTRACTOR.
- h. THE CONTRACTOR SHALL KEEP A LEGIBLE COPY OF THE PLANS, SPECIFICATIONS, AND ALL PERMITS AT THE SITE OF THE WORK AT ALL TIMES. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE THE OWNER OR HIS REPRESENTATIVE WITH A MARKED-UP SET OF DRAWINGS SHOWING ALL CHANGES OR VARIATIONS FROM THE ORIGINAL DRAWINGS. THESE CHANGES SHALL BE MADE ON A SET OF FIFLD DRAWINGS AS THE WORK TAKES PLACE, AND NOT FROM MEMORY WHEN THE WORK IS DONE. THIS SET OF DRAWINGS SHOULD BE KEPT CLEAN IN A LOCATION AT THE SITE WHERE THE OWNER OR HIS
- THE MARKED-UP DRAWINGS SHALL BE ACCURATE. ARBITRARY MARKINGS ARE OF NO VALUE. CAREFUL MEASUREMENTS SHALL BE MADE TO LOCATE UNDERGROUND EXTERIOR AND UNDERGROUND INTERIOR SEWERS. GAS LINES. WATER LINES. ELECTRICAL CONDUIT AND MISCELLANEOUS PIPING. 7. CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRAFFIC CONTROL PLANS AND PERMITTING FOR ALL WORK TO BE COMPLETED ONSITE OR IN THE PUBLIC RIGHT-OF WAY.

01 70 00 - EXECUTION & CLOSEOUT REQUIREMENTS

REPRESENTATIVE MAY EXAMINE THEM.

THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL EXISTING SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE WITH THIS PLAN. 2. EXISTING UTILITY INFORMATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, BASED ON BEST AVAILABLE

PUBLIC RECORDS, AS-BUILT DRAWINGS, AND FIELD OBSERVATIONS. NO RESPONSIBILITY IS ASSUMED BY THE

OWNER OR ENGINEER FOR ACCURACY OR COMPLETENESS. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR

OWN DETERMINATION AS TO THE TYPE AND NATURE OF EXISTING UTILITIES, AS MAY BE NECESSARY TO AVOID

- DAMAGE THERETO 3. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS, ELEVATIONS, AND SIZES OF EXISTING UTILITIES AND SHALL CHECK ALL PROPOSED UTILITY CONNECTIONS AND CROSSINGS PRIOR TO PROCEEDING WITH ANY WORK. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER SO REDESIGN MAY OCCUR IF NEEDED. COST OF REPLACEMENT OR REPAIR OF EXISTING UTILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE THE
- SOLE RESPONSIBILITY OF THE CONTRACTOR. 4. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL ABIDE BY THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SUBSEQUENT RECOMMENDATIONS OF THE GEOTECHNICAL
- ENGINEER DURING CONSTRUCTION THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS OF THE BENCHMARKS AND HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES, AND SHALL NOTIFY THE ENGINEER OF DISCREPANCIES IN FITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH ANY WORK.
- . SURVEY BENCHMARKS AND CONTROL POINTS SHALL BE MAINTAINED AND PROTECTED FROM DISTURBANCE PROPERTY CORNERS SHALL BE CAREFULLY PROTECTED AT ALL TIMES. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. 8. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE
- RESTORED BY THE CONTRACTOR. THE COST OF RESTORATION IS CONSIDERED INCIDENTAL AND SHALL BE 9. PUBLIC ROADS SHALL NOT BE FULLY CLOSED TO TRAFFIC AT ANY TIME. ALL INGRESS AND EGRESS TRAFFIC TO THE PROJECT SITE SHALL BE LIMITED TO THE CONSTRUCTION ENTRANCE.
- 10. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES, SHALL BID ON THEIR OWN ESTIMATE OF THE WORK REQUIRED, AND SHALL NOT RELY ON THE ENGINEER'S ESTIMATE.
- 11. REQUESTS FOR CLARIFICATION WILL BE INTERPRETED BY THE OWNER/ENGINEER PRIOR TO AWARD OF CONTRACT. AND WHEN NECESSARY, OFFICIAL WRITTEN RESPONSES WILL BE ISSUED. OFFICIAL WRITTEN RESPONSES SHALL BE BINDING TO THE WORK. IN NO WAY SHALL VERBAL DIALOGUE CONSTITUTE OFFICIAL RESPONSE. 12. SHOULD ANY DISCREPANCIES BE DISCOVERED BY THE CONTRACTOR AFTER AWARD OF CONTRACT, NOTIFY
- OWNER/ENGINEER IN WRITING IMMEDIATELY. CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES SHALL NOT COMMENCE OR CONTINUE UNTIL AN OFFICIAL WRITTEN RESPONSE IS ISSUED.
- 13. ALL WORK SHALL BE GUARANTEED BY THE CONTRACTOR FOR A MINIMUM PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL INCLUDE ALL DEFECTS IN MATERIALS AND WORKMANSHIP. 14. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS

DIVISION 31 - EARTHWORK

31 10 00 - SITE CLEARING & DEMOLITION

- 1. WORK SHALL CONSIST OF DEMOLITION, ABANDONMENT, AND REMOVAL OF EXISTING FOUNDATIONS, WALLS, SLABS, FENCES, PIPING, PAVEMENTS, AND OTHER MANMADE ITEMS INTERFERING WITH NEW CONSTRUCTION. WORK SHALL ALSO CONSIST OF CLEARING AND GRUBBING OF TREES, SHRUBS, VEGETATION, ROOTS, STUMPS, RUBBISH, AND OTHER PERISHABLE MATTER INTERFERING WITH NEW CONSTRUCTION.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. 3. CALL 811 TO NOTIFY UTILITY PROVIDERS AND REQUEST FIELD LOCATION OF EXISTING UTILITIES WITHIN PROJECT LIMITS PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES. 4. INSTALL PERIMETER FENCING AS INDICATED PRIOR TO COMMENCING ANY CONSTRUCTION RELATED ACTIVITY.
- 5. CLEARLY IDENTIFY ALL VEGETATION TO BE PRESERVED AND/OR RELOCATED PRIOR TO CLEARING AND GRUBBING. 5. PROTECT EXISTING IMPROVEMENTS TO REMAIN DURING CONSTRUCTION. ANY DAMAGED IMPROVEMENTS SHALL BE RESTORED TO ORIGINAL CONDITION, OR AS OTHERWISE ACCEPTABLE TO THE OWNER. 7. REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO
- CONSTRUCT PROPOSED IMPROVEMENTS. 8. SAWCUT ALL PAVEMENT TO BE REMOVED IN STRAIGHT LINES TO FULL DEPTH. 9. DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS. BREAK UP CONCRETE SLABS THAT ARE 2 FEET OR MORE BELOW PROPOSED SUBGRADE TO PERMIT DRAINAGE.
- 10. DISCONNECT AND SEAL/CAP EXISTING UTILITIES TO BE REMOVED, RELOCATED, OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF UTILITY PROVIDERS. 11. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING OWNERSHIP OF AND COORDINATING NECESSARY REMOVAL
- AND/OR RELOCATION OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS. 12. DO NOT INTERRUPT UTILITY SERVICE TO EXISTING FACILITIES UNLESS PERMITTED BY THE OWNER. 13. VOIDS LEFT BY REMOVALS SHALL BE LEVELED TO PREVENT PONDING OF WATER.

14. REMOVE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS, TRASH, AND DEBRIS FROM THE PROJECT SITE.

31 20 00 - EARTH MOVING

1. WORK SHALL CONSIST OF STRIPPING AND STORAGE OF TOPSOIL, EXCAVATION, EMBANKMENT, IMPORTING OR EXPORTING MATERIAL TO ACHIEVE LAND BALANCE, COMPACTION, FINISH GRADING, SUBGRADE PREPARATION, AND

RUBBISH, TRASH, GARBAGE, AND LITTER SHALL BE PLACED IN SEALED CONTAINERS THROUGHOUT CONSTRUCTION.

- 2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SUBSEQUENT RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION BASED ON FIELD
- CONDITIONS, AND THESE REQUIREMENTS. THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER SHALL GOVERN. EXCAVATE TO SUBGRADE REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED, EXCAVATED MATERIAL MAY INCLUDE ROCK AND UNCLASSIFIED OBSTRUCTIONS. WHICH IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE WORK.
- 5. EXISTING FOUNDATIONS, BUILDING REMNANTS, AND UNSATISFACTORY MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND BUILDING PAD AREAS. ANY RELATED EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL MATERIAL.
- 6. EXISTING FOUNDATIONS. BUILDING REMNANTS. AND UNSATISFACTORY MATERIAL SHALL BE REMOVED TO A MINIMUM OF 2 FEET BELOW PROPOSED SUBGRADE WITHIN GREENSPACE AND PAVEMENT AREAS. ANY RELATED EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL MATERIAL. AREAS SHALL BE GRADED TO WITHIN 1 INCH, MORE OR LESS, OF PROPOSED SUBGRADE. DEVIATIONS SHALL NOT
- BE CONSISTENT IN ONE DIRECTION. 8. DISKING, HARROWING, AND AERATION TECHNIQUES SHALL BE USED TO DRY SUBGRADE PRIOR TO PROOF ROLLING 9. IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER, PROOF ROLL SUBGRADE BELOW BUILDING PAD AND PAVEMENT AREAS DURING DRY WEATHER WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK WHERE COHESIVE SOILS ARE PREDOMINANT, AND WITH A SMOOTH DRUMMED VIBRATORY ROLLER WHERE GRANULAR SOILS ARE PREDOMINANT.
- SUBGRADE WHICH IS OBSERVED TO RUT OR DEFLECT EXCESSIVELY SHALL BE UNDERCUT IN ACCORDANCE WITH RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. DO NOT PROOF ROLL WET OR SATURATED SUBGRADE. 10. THE CONTRACTOR SHALL MAINTAIN POSITIVE SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE EXCAVATION OF TEMPORARY DITCHES OR PUMPING TO ALLEVIATE WATER PONDING. SURFACE WATER AND GROUNDWATER SHALL BE PREVENTED FROM ENTERING EXCAVATIONS, PONDING ON PREPARED SUBGRADES, AND
- FLOODING PROJECT SITE AND/OR SURROUNDING AREAS. 11. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR ALL EARTHWORK COMPUTATIONS AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS
- NECESSARY TO COMPLETE THE PROJECT. 12. TOPSOIL REPLACEMENT DEPTH SHALL BE AS CALLED OUT ON THE CIVIL OR LANDSCAPE PLANS, OR A MINIMUM OF FOUR INCHES IF NOT CALLED OUT ON LANDSCAPE PLAN.

31 25 00 - EROSION & SEDIMENTATION CONTROLS

- 1. WORK SHALL CONSIST OF INSTALLATION OF TEMPORARY AND PERMANENT PRACTICES FOR SEDIMENTATION CONTROL, EROSION CONTROL, SLOPE PROTECTION, AND REMOVAL OF PRACTICES UPON FINAL SITE STABILIZATION. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- INSTALLATION AND MAINTENANCE OF PRACTICES SHALL BE IN ACCORDANCE WITH THE APPLICABLE WIDNR TECHNICAL STANDARD, OR THE WISCONSIN CONSTRUCTION SITE BEST MANAGEMENT PRACTICE HANDBOOK IF A TECHNICAL
- STANDARD IS NOT AVAILABLE. ALL PRACTICES SHALL BE INSTALLED PRIOR TO COMMENCING ANY LAND DISTURBING CONSTRUCTION RELATED ACTIVITY. EARTHWORK ASSOCIATED WITH INSTALLATION OF PRACTICES MAY OCCUR CONCURRENTLY. 5. ALL PRACTICES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT AND WARRANTY PERIOD IN
- CONFORMANCE WITH PERMIT REQUIREMENTS ALL PRACTICES SHALL BE ROUTINELY INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL GREATER THAN 0.5 INCHES. THE CONTRACTOR IS REQUIRED TO PERFORM INSPECTIONS, KEEP A LOG, AND CONDUCT REPAIRS
- ALL DISTURBED AREAS SHALL DRAIN TO A CONTROL PRACTICE AT ALL TIMES DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. DEPENDING UPON HOW THE CONTRACTOR GRADES THE SITE, IT MAY BE NECESSARY TO INSTALL ADDITIONAL CONTROL PRACTICES IN VARIOUS LOCATIONS THROUGHOUT THE PROJECT SITE. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL PRACTICES NECESSARY TO PREVENT EROSION AND SEDIMENTATION. 8. ALL DISTURBED GROUND LEFT INACTIVE FOR 7 DAYS SHALL BE STABILIZED WITH A TEMPORARY SEED MIXTURE AND
- MULCH. THE TEMPORARY SEED MIXTURE SHALL BE IN ACCORDANCE WITH SECTION 630 OF WISDOT STANDARD SPECIFICATIONS. WINTER WHEAT OR RYE SHALL BE USED FOR TEMPORARY SEED AFTER SEPTEMBER 1. 9. DISTURBED AREAS THAT CAN NOT BE STABILIZED WITH A DENSE GROWTH OF VEGETATION DUE TO TEMPERATURE OR TIMING OF CONSTRUCTION SHALL BE STABILIZED BY APPLYING ANIONIC POLYACRYLAMIDE (PAM) 10. ALL ACTIVITIES ON THE PROJECT SITE SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE AREA OF
- BARE SOIL EXPOSED AT ANY ONE TIME. 11. DUST GENERATED BY CONSTRUCTION RELATED ACTIVITIES SHALL BE MINIMIZED BY USE OF WATERING, CALCIUM CHLORIDE SURFACE TREATMENT, CONSTRUCTION SCHEDULING, OR OTHER APPROPRIATE MEASURES. 12. THE CONTRACTOR SHALL BE PREPARED FOR DEWATERING CONDITIONS BY HAVING APPROPRIATE PUMPS AND FILTER
- BAGS ONSITE. ALL WATER FROM CONSTRUCTION DEWATERING SHALL BE TREATED PRIOR TO DISCHARGE FROM THE PROJECT SITE. 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF THE PROJECT SITE AND PUBLIC ROADS DURING CONSTRUCTION. PUBLIC ROADS SHALL BE KEPT FREE OF SEDIMENT TRACKED FROM AREAS UNDER CONSTRUCTION BY DAILY SWEEPING OR OTHER APPROPRIATE MEASURES.
- 14. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN. 15. ALL SEEDED AREAS SHALL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN TO MAINTAIN A VIGOROUS DENSE VEGETATIVE COVER.

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 12 00 - ASPHALT PAVING

- 1. WORK SHALL CONSIST OF FINE GRADING SUBGRADE, EXCAVATION BELOW SUBGRADE (IF NECESSARY), PLACEMENT OF CRUSHED STONE BASE, INSTALLATION OF HOT-MIX ASPHALT, PAVEMENT MARKING, SIGNAGE, AND CLEANUP. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. CRUSHED STONE BASE SHALL BE IN ACCORDANCE WITH SECTION 305 OF WISDOT STANDARD SPECIFICATIONS. ASPHALTIC MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 455 OF WISDOT STANDARD SPECIFICATIONS.
- AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 460 OF WISDOT STANDARD SPECIFICATIONS. 6. DO NOT CONDUCT ASPHALT PAVING IF ANY OF THE FOLLOWING CONDITIONS EXIST: CRUSHED STONE BASE IS WET OR EXCESSIVELY DAMP: TEMPERATURE IS BELOW 30 DEGREES FAHRENHEIT AT TIME OF BINDER COURSE INSTALLATION; TEMPERATURE HAS BEEN BELOW 35 DEGREES FAHRENHEIT WITHIN 12 HOURS PRIOR TO TACK COAT APPLICATION; TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AT TIME OF SURFACE COURSE INSTALLATION.
- 7. COMPACT ASPHALT IN ACCORDANCE WITH SECTION 450 OF WISDOT STANDARD SPECIFICATIONS. COMPACT ASPHALT TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS 1/4-INCH FOR BINDER COURSE, AND WITHIN PLUS 1/4-INCH FOR SURFACE COURSE (NO MINUS). 8. APPLY TACK COAT BETWEEN ASPHALT COURSES AT A MINIMUM RATE OF 0.25 GAL/SY. 9. NO TRAFFIC SHALL BE ALLOWED ON ASPHALT AFTER FINAL ROLLING UNTIL IT HAS COOLED AND HARDENED.

10. FINAL ASPHALT SURFACE SHALL BE WITHIN A 1/8-INCH TOLERANCE AS DETERMINED BY USING A 10-FOOT

STRAIGHTEDGE APPLIED LONGITUDINALLY OR TRANSVERSELY. REMOVE AND REPLACE ALL RAISED AND DEPRESSED AREAS EXCEEDING TOLERANCE. 11. A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS AT ADA PARKING STALLS AND ADJACENT UNLOADING AREAS IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. 12. A SLOPE NO GREATER THAN 5% ALONG THE LENGTH OF THE ACCESSIBLE ROUTE IS REQUIRED. A SLOPE NO GREATER THAN 2% ACROSS THE WIDTH OF THE ACCESSIBLE ROUTE IS REQUIRED. NOTIFY ENGINEER OF ANY

DISCREPANCIES PRIOR TO COMMENCING WORK. 32 13 00 - CONCRETE PAVING

- 1. WORK SHALL CONSIST OF FINE GRADING SUBGRADE, EXCAVATION BELOW SUBGRADE (IF NECESSARY), PLACEMENT OF CRUSHED STONE BASE, INSTALLATION OF CONCRETE, AND CLEANUP. 2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. CRUSHED STONE BASE SHALL BE IN ACCORDANCE WITH SECTION 305 OF WISDOT STANDARD SPECIFICATIONS. CONCRETE SHALL BE GRADE A AIR-ENTRAINED IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD
- AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS. 6. WATER SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM C94 /

SPECIFICATIONS. WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4.000 PSI

- 8. LIQUID CURING COMPOUND SHALL BE IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS AND AASHTO M 148. 9. CURBING SHALL BE IN ACCORDANCE WITH SECTION 601 OF WISDOT STANDARD SPECIFICATIONS.
- WITHOUT DAMAGE TO CONCRETE
- 12. CONSTRUCTION AND CONTRACTION JOINTS SHALL BE IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS. JOINT PATTERN SHALL FOLLOW ARCHITECTURAL PLANS IF AVAILABLE. 13. ISOLATION JOINTS SHALL CONSIST OF PREFORMED JOINT FILLER STRIPS ABUTTING CURBING, INLETS, CATCH BASINS, MANHOLES, STRUCTURES, AND OTHER FIXED OBJECTS.

DIVISION 32 - EXTERIOR IMPROVEMENTS

- 14. EDGES OF CONCRETE PAVEMENT, CURBING, SIDEWALK, PATIOS, AND JOINTS SHALL BE TOOLED IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING AFTER APPLYING SURFACE FINISHES AND ELIMINATE TOOL MARKS ON SURFACES.
- 15. FINISH, CURE, AND PROTECT CURBING IN ACCORDANCE WITH SECTION 601 OF WISDOT STANDARD SPECIFICATIONS. 16. FINISH (LIGHT BROOM), CURE, AND PROTECT SIDEWALK AND PATIOS IN ACCORDANCE WITH SECTION 602 OF WISDOT STANDARD SPECIFICATIONS.
- 17. FINISH (ARTIFICIAL TURF DRAG), CURE, AND PROTECT VEHICULAR PAVEMENT AND PADS IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS. 18. MAINTAIN CONCRETE FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE
- PRIOR TO SUBSTANTIAL COMPLETION INSPECTION. 19. MAXIMUM DIFFERENCE BETWEEN CONCRETE SIDEWALKS AND ADJACENT PAVEMENT SURFACES SHALL NOT EXCEED 1/4-INCH VERTICAL
- 20. A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS AT ADA PARKING STALLS AND ADJACENT UNLOADING AREAS IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK. 21. A SLOPE NO GREATER THAN 5% ALONG THE LENGTH OF THE ACCESSIBLE ROUTE IS REQUIRED. A SLOPE NO GREATER THAN 2% ACROSS THE WIDTH OF THE ACCESSIBLE ROUTE IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- 22. ALL HANDICAP ACCESSIBLE DOORWAYS REQUIRE AN EXTERIOR LANDING THAT IS A MINIMUM OF 5 FEET BY 5 FEET WITH A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK
- 23. REMOVE AND REPLACE CONCRETE THAT IS BROKEN, DAMAGED, DEFECTIVE, OR DOES NOT COMPLY WITH THE REQUIREMENTS LISTED ABOVE.

32 17 00 - PAVEMENT MARKING & SIGNAGE

- 1. WORK SHALL CONSIST OF INSTALLATION OF PARKING LOT STRIPING, DIRECTION ARROWS, HANDICAP ACCESSIBLE SYMBOLS AND SITE SIGNAGE.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. PAVEMENT MARKING PAINT SHALL BE IN ACCORDANCE WITH SECTION 646 OF WISDOT STANDARD SPECIFICATIONS AND WISDOT APPROVED PRODUCTS LIST. COLOR SHALL BE WHITE UNLESS NOTED OTHERWISE ON THIS PLAN. MARKINGS SEPARATING OPPOSING TRAFFIC SHALL BE YELLOW.
- 4. ALL PARKING LOT STRIPING SHALL BE 4-INCH WIDTH UNLESS NOTED OTHERWISE ON THIS PLAN. 5. BARRICADE WORK AREA DURING INSTALLATION AND UNTIL PAVEMENT MARKING PAINT IS DRIED. PROTECT ADJACENT AREAS FROM RECEIVING PAINT
- 6. APPLY PAINT IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS TO PRODUCE MARKINGS AS INDICATED WITH UNIFORM, STRAIGHT EDGES. TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. APPLY PAINT TO CLEAN AND DRY SURFACE. FREE FROM FROST. TO ENSURE PROPER BONDING.
- 8. NOTIFY OWNER OF ANY UNSOUND CONDITIONS PRIOR TO COMMENCING WORK. APPLYING PAVEMENT MARKING PAINT CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.

32 32 00 - RETAINING WALLS

- WORK SHALL CONSIST OF FURNISHING DETAILED DESIGN. MATERIALS, LABOR, EQUIPMENT, SUPERVISION, AND DIRECTION TO CONSTRUCT RETAINING WALL SYSTEMS IN REASONABLY CLOSE CONFORMITY TO THE LINES, GRADES, AND DIMENSIONS SHOWN ON THIS PLAN. RETAINING WALLS SHOWN ON THIS PLAN ARE FOR GENERAL LOCATION AND MATERIAL REFERENCE ONLY.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. THE CONTRACTOR SHALL PROCURE DETAILED DESIGN CALCULATIONS AND DRAWNGS, PREPARED AND SEALED BY A PROFESSIONAL ENGINEER EXPERIENCED WITH RETAINING WALL DESIGN AND LICENSED IN THE STATE IN WHICH THE
- RETAINING WALLS ARE TO BE CONSTRUCTED. 4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SURROUNDING STRUCTURES AND UTILITIES ARE PROTECTED FROM THE EFFECTS OF EXCAVATION AND PROVIDING ANY NECESSARY EXCAVATION SUPPORT.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION ADJACENT TO THE RETAINING WALLS DOES NOT DISTURB OR PLACE TEMPORARY LOADS ON THE RETAINING WALLS THAT EXCEED DESIGN LOADS.

DIVISION 33 — UTILITIES

33 10 00 - WATER DISTRIBUTION

- WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE WATER DISTRIBUTION SYSTEM AND ALL APPURTENANCES. 2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. 3. ALL PUBLIC WATER DISTRIBUTION WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS. 4. ALL PRIVATE WATER DISTRIBUTION WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND
- MUNICIPALITY DEVELOPMENT STANDARDS. 5. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE SDR 18, CLASS 150 CONFORMING TO AWWA C900 WITH INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS IN ACCORDANCE WITH SECTION 8.20.0 OF SSSWCW. 6. DUCTILE IRON PIPE (DIP) SHALL BE CLASS 150 CONFORMING TO AWWA C151 WITH RUBBER GASKETED JOINTS IN
- ACCORDANCE WITH SECTION 8.18.0 OF SSSWCW. 7. POLYETHYLENE TUBING SHALL BE SDR 9 IN ACCORDANCE WITH SECTION 8.24.0 OF SSSWCW AND CONFORM TO AWWA 8. COPPER TUBING SHALL BE TYPE "K" IN ACCORDANCE WITH SECTION 8.24.0 OF SSSWCW AND CONFORM TO ASTM B88.
- 9. BALL VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.30.0 OF SSSWCW AND CONFORM TO AWWA C800 AND ASTM 10. GATE VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.27.0 OF SSSWCW AND CONFORM TO AWWA C500. 11. BUTTERFLY VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.28.0 OF SSSWCW AND CONFORM TO AWWA C504. 12. VALVE BOXES SHALL BE IN ACCORDANCE WITH SECTION 8.29.0 OF SSSWCW AND CONFORM TO ASTM A48. VALV
- BOXES SHALL BE SIZE DD. SCREW TYPE. 3 PIECE ASSEMBLY, WITH COVERS MARKED "WATER". ALL VALVE BOXES SHALL RE SET TO PROPOSED GRADE TRULY VERTICAL AND SUPPORTED BY USE OF ADAPTOR 13. HYDRANTS SHALL BE IN ACCORDANCE WITH SECTION 8.26.0 OF SSSWCW AND CONFORM TO AWWA C502. PUMPER NOZZLE SHALL BE PERPENDICULAR TO AND ORIENTED TOWARDS THE PAVEMENT. HYDRANTS SHALL BE ATTACHED BY MEANS OF TEE AND HAVE A GROUND LINE TO CENTER DISTANCE OF 18 TO 21 INCHES.
- 14. FITTINGS SHALL BE CLASS 150 IN ACCORDANCE WITH SECTION 8.22.0 OF SSSWCW, CONFORMING TO AWWA C110, AND PROVIDED WITH MECHANICAL JOINTS. 15. MECHANICAL JOINTS SHALL BE MADE WITH "COR TEN" NUTS AND BOLTS, OR CORROSION-RESISTANT EQUIVALENTS
- CONFORMING TO AWWA C111. 16. POLYETHYLENE WRAP SHALL BE IN ACCORDANCE WITH SECTION 8.21.0 OF SSSWCW AND PROVIDED FOR ALL METAL PIPES AND FITTINGS.
- 17. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH SECTION 4.3.13 OF SSSWCW AND PROVIDED FOR ALL BENDS, CAPS. PLUGS. AND TEES.
- 18. TRENCH SECTION SHALL BE IN ACCORDANCE WITH FILE NO. 36 OF SSSWCW. MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES. 19. PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF SSSWCW. MINIMUM COVER OVER PIPE SHALL BE 12 INCHES.
- 20. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF SSSWCW BENEATH AND WITHIN 5 FEET OF PAVEMENT AREAS, AND SHALL BE SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF SSSWCW BENEATH GREENSPACE AREAS. UNLESS ALTERNATIVE COMPACTION IS RECOMMENDED IN THE GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION, IN WHICH CASE THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- 21. CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED. 22. TRACER WIRE SHALL BE BLUE AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC WATER MAIN PIPE, PRIVATE WATER MAIN PIPE, AND BUILDING WATER SERVICE PIPE. TRACER WIRE SHALL BE INSULATED. SINGLE-CONDUCTOR. 12 GAUGE SOLID COPPER OR COPPER COATED STEEL WIRE, SECURED
- AT LEAST EVERY 10 FEET AND AT ALL BENDS. WITH ACCESS POINTS AT LEAST EVERY 300 FEET. 23. PROPOSED WATER SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. 24. THE CONTRACTOR IS RESPONSIBLE FOR THE SIZE, TYPE AND NUMBER OF BENDS REQUIRED TO COMPLETE
- CONSTRUCTION, WHICH SHALL BE INCIDENTAL AND INCLUDED IN THE COST OF WORK. . THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS. 26. THE CONTRACTOR IS RESPONSIBLE FOR PRESSURE TESTING AND SAFE WATER SAMPLING. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH SECTION 4.15.0 OF SSSWCW. DISINFECTION SHALL BE IN ACCORDANCE WITH SECTION 4.16.0

OF SSSWCW AND CONFORM TO AWWA C651. WATER MAINS SHALL BE FLUSHED AND TESTED IN THE PRESENCE OF THE

33 30 00 - SANITARY SEWERAGE

WATER UTILITY OPERATOR.

- 1. WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE SANITARY SEWERAGE SYSTEM AND ALL APPURTENANCES.
- 2. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. 3. ALL PUBLIC SANITARY SEWERAGE WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT
- 4. ALL PRIVATE SANITARY SEWERAGE WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS. 5. POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 CONFORMING TO ASTM D3034 FOR DEPTHS LESS THAN 18 FEET, AND SHALL BE SDR 18 CONFORMING TO AWWA C900 FOR DEPTHS GREATER THAN 18 FEET, BOTH WITH
- PUSH-ON RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTIONS 8.10.6 AND 8.41.4 OF SSSWCW. 6. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 8.39.0 OF SSSWCW AND CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
- WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES. 8. PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF SSSWCW. MINIMUM COVER OVER PIPE SHALL BE 12 INCHES. 9. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF SSSWCW BENEATH AND WITHIN 5 FEET OF PAVEMENT AREAS, AND SHALL BE SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF SSSWCW BENEATH GREENSPACE AREAS, UNLESS ALTERNATIVE COMPACTION IS

7. TRENCH SECTION SHALL BE CLASS B IN ACCORDANCE WITH SECTION 3.2.6 OF SSSWCW. MAXIMUM ALLOWABLE TRENCH

- RECOMMENDED IN THE GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION, IN WHICH CASE THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. 10. CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
- 11. ALL CONNECTIONS TO EXISTING SANITARY SEWER PIPES AND STRUCTURES SHALL BE CORED CONNECTIONS, UNLESS NOTED OTHERWISE. PREFABRICATED WYE CONNECTIONS ARE REQUIRED FOR ALL BUILDING SANITARY SERVICE PIPES, UNLESS NOTED OTHERWISE. 12. CLEANOUTS AND RISER EXTENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPS 382.35 FROM SEWER PIPES TO GROUND SURFACE. LIGHT DUTY LOADING CLASSIFICATION SHALL BE USED IN UNPAVED AREAS. MEDIUM DUTY LOADING
- CLASSIFICATION SHALL BE USED IN PAVED FOOT TRAFFIC AREAS. HEAVY DUTY LOADING CLASSIFICATION SHALL BE USED IN PAYED VEHICULAR TRAFFIC AREAS, FRAMES AND COVERS SHALL BE SET FLUSH WITH SURFACE. 13. TRACER WIRE SHALL BE GREEN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC SANITARY SEWER PIPE, PRIVATE SANITARY INTERCEPTOR PIPE, AND BUILDING SANITARY SERVICE PIPE. TRACER WIRE SHALL BE INSULATED, SINGLE-CONDUCTOR, 12 GAUGE SOLID COPPER OR COPPER COATED STEEL WIRE, SECURED AT LEAST EVERY 10 FEET AND AT ALL BENDS, WITH ACCESS POINTS AT LEAST EVERY 300

DIVISION 33 - UTILITIES

- 13. TRACER WIRE SHALL BE GREEN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC SANITARY SEWER PIPE, PRIVATE SANITARY INTERCEPTOR PIPE, AND BUILDING SANITARY SERVICE PIPE. TRACER WIRE SHALL BE INSULATED, SINGLE—CONDUCTOR, 12 GAUGE SOLID COPPER OR COPPER COATED STEEL WIRE, SECURED AT LEAST EVERY 10 FEET AND AT ALL BENDS, WITH ACCESS POINTS AT LEAST
- 14. PROPOSED SANITARY SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE **EXTERIOR BUILDING WALL**
- 15. THE CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS. 16. AFTER INSTALLATION OF SANITARY SEWERAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE. CONDUCT TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SSSWCW. REPAIR ANY DAMAGE AND REPLACE ANY PIPE NOT PASSING TESTING.

33 40 00 - STORMWATER DRAINAGE

- WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE STORMWATER DRAINAGE SYSTEM AND ALL APPURTENANCES. ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- ALL PUBLIC STORMWATER DRAINAGE WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS. 4. ALL PRIVATE STORMWATER DRAINAGE WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
- 5. REINFORCED CONCRETE PIPE (RCP) AND END SECTIONS SHALL BE IN ACCORDANCE WITH SECTION 8.6.0 OF SSSWCW AND CONFORM TO ASTM C76 WITH RUBBER GASKETED JOINTS CONFORMING TO ASTM C443. UNLESS NOTED OTHERWISE, 12-INCH DIAMETER PIPE SHALL BE CLASS V, 15-INCH DIAMETER PIPE SHALL BE CLASS IV, AND 18-INCH DIAMETER PIPE AND LARGER SHALL BE CLASS III.
- 6. CORRUGATED METAL PIPE (CMP) AND END SECTIONS SHALL BE 16 GAUGE CONFORMING TO ASTM A760. 7. HIGH-DENSITY POLYETHYLENE (HDPE) PIPE AND FITTINGS SHALL BE ADS N12 WT AS APPROVED BY THE WISCONSIN DEPARTMENT OF SAFETY AND PROFÉSSIONAL SERVICES PLUMBING PRODUCTS REGISTER.
- 8. POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 CONFORMING TO ASTM D3034 WITH PUSH-ON RUBBER GASKETED JOINTS CONFORMING TO ASTM D3212. 9. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 8.39.0 OF SSSWCW AND CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
- 10. CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 3.6.0 OF SSSWCW AND CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING. 11. INLETS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 3.6.0 OF SSSWCW AND
- CONFORM TO ASTM C913. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING. 12. AREA DRAINS SHALL BE ADS NYLOPLAST AS APPROVED BY THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCTS REGISTER. 13. FRAMES AND GRATES SHALL BE AS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FRAMES AND

GRATES ARE COMPATIBLE WITH PRECAST STRUCTURES PRIOR TO ORDERING.

- 14. TRENCH SECTION SHALL BE CLASS B IN ACCORDANCE WITH SECTION 3.2.6 OF SSSWCW. MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES. 15. PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF SSSWCW. MINIMUM COVER OVER PIPE SHALL BE 12 INCHES.
- 16. TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF SSSWCW BENEATH AND WITHIN 5 FEET OF PAVEMENT AREAS, AND SHALL BE SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF SSSWCW BENEATH GREENSPACE AREAS, UNLESS ALTERNATIVE COMPACTION IS RECOMMENDED IN THE GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION, IN WHICH CASE THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL
- ENGINEER. 17. CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
- 18. ALL CONNECTIONS TO EXISTING STORM SEWER PIPES AND STRUCTURES SHALL BE CORED CONNECTIONS, UNLESS NOTED OTHERWISE. 19. FLEXIBLE COMPRESSION COUPLINGS SHALL BE USED IN THE CONNECTION OF DISSIMILAR PIPE MATERIALS. 20. CLEANOUTS AND RISER EXTENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPS 382.35 FROM SEWER PIPES
- TO GROUND SURFACE. LIGHT DUTY LOADING CLASSIFICATION SHALL BE USED IN UNPAVED AREAS. MEDIUM DUTY LOADING CLASSIFICATION SHALL BE USED IN PAVED FOOT TRAFFIC AREAS. HEAVY DUTY LOADING CLASSIFICATION SHALL BE USED IN PAVED VEHICULAR TRAFFIC AREAS. FRAMES AND COVERS SHALL BE SET FLUSH WITH SURFACE. 21. TRACER WIRE SHALL BE BROWN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.1 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC STORM SEWER PIPE, PRIVATE STORM INTERCEPTOR PIPE, AND BUILDING STORM SERVICE PIPE. TRACER WIRE SHALL BE INSULATED, SINGLE-CONDUCTOR, 12 GAUGE SOLID COPPER OR COPPER COATED
- STEEL WIRE, SECURED AT LEAST EVERY 10 FEET AND AT ALL BENDS, WITH ACCESS POINTS AT LEAST EVERY 300 22. FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE CONNECTED TO THE STORMWATER DRAINAGE SYSTEM. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH NEW PIPE OF SIMILAR SIZE AND MATERIAL.
- DOCUMENTATION OF SUCH FIELD TILE SHALL BE PROVIDED TO THE OWNER. 23. PROPOSED STORM SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. CONNECTIONS TO DOWNSPOUTS SHALL BE PER DETAILS ON THE BUILDING PLUMBING PLANS. THE EXACT LOCATION OF DOWNSPOUTS SHALL BE PER THE ARCHITECTURAL PLANS.
- 24. THE CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS AND INLETS TO FINISHED SURFACE UPON COMPLETION OF PAVING OPFRATIONS 25. AFTER INSTALLATION OF STORMWATER DRAINAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE. REPAIR ANY DAMAGE.

SEQUENCE OF CONSTRUCTION

ON SITE RUNOFF WILL BE CONTAINED WITHIN THE LIMITS OF THE PROJECT. ALL DEWATERING SHALL BE DONE IN ACCORDANCE TO WDNR AND LOCAL SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY TRAFFIC CONTROL FOR TRAFFIC ENTERING AND LEAVING THE SITE. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STATE, COUNTY AND LOCAL REGULATIONS. SEQUENCE AND TIMING FOR INSTALLATION OF EROSION CONTROL MEASURES & SITE IMPROVEMENTS SHALL BE AS LISTED BELOW OR AS SITE CONDITIONS WARRANT DURING CONSTRUCTION ADDITIONAL BMPS SHALL BE INSTALLED TO REDUCE THE MIGRATION OF SEDIMENT TO THE MOST EXTENT PRACTICABLE. (ALL CONSTRUCTION DATES ARE BEST ESTIMATES)

- TO OBTAIN CITY STORM WATER PERMIT AND PERFORM WEEKLY EROSION CONTROL INSPECTIONS AND SUBMIT INSPECTIONS TO
- CITY EROSION CONTROL INSPECTOR.
- 2. INSTALL ROCK CONSTRUCTION ENTRANCES.
- 3. INSTALL SILT FENCE AS SHOWN ON THE PLAN.
- 4. INSTALL STORM DRAIN INLET PROTECTION ON EXISTING INDICATED STORM INLETS. 5. STRIP TOPSOIL AND GRADE SITE IN INCREMENTS APPROPRIATE TO WORK WHILE MAINTAINING SEDIMENTATION AND EROSION CONTROL PRACTICES IN CONFORMANCE WITH LOCAL AND STATE GUIDELINES.
- 6. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL BMPS AS NOTED WHEN SITE WORK AND GRADING ALLOWS. 7. CONSTRUCT UTILITIES AND INSTALL ADDITIONAL STORM DRAIN INLET PROTECTION TO INLETS AS SOON AS THEY ARE
- TEMPORARILY SEED AND MULCH SITE
- 9. PREPARE PARKING LOT SUBGRADE. INSTALL CURB AND GUTTER AND PAVE SITE. 10. APPLY SEED, FERTILIZER, AND MULCH TO LANDSCAPE LAWN AREAS AS SOON AS POSSIBLE. (THROUGHOUT CONSTRUCTION)
- 11. FLUSH STORM SEWER.
- 13. AT END OF PROJECT, COORDINATE PERMIT TERMINATION WITH CITY EROSION INSPECTOR. ONCE THE PROJECT SITE IS 80% STABILIZED, ALL REMAINING TEMPORARY EROSION CONTROL BMPS SHALL BE REMOVED AND RESTORED AS NECESSARY.

Call before you dig

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R.A. Smith, Inc. SCALE: N.T.S.

PROJECT MANAGER: RYAN J. LANCOUR, P.E.

C600

7. AIR—ENTRAINING SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM

10. SIDEWALK AND PATIO SHALL BE IN ACCORDANCE WITH SECTION 602 OF WISDOT STANDARD SPECIFICATIONS. 11. CONCRETE FORMS SHALL REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE INSTALLATION AND SHALL BE CLEANED AFTER EACH USE. CONCRETE FORMS SHALL BE COATED WITH RELEASE AGENT TO ALLOW SEPARATION

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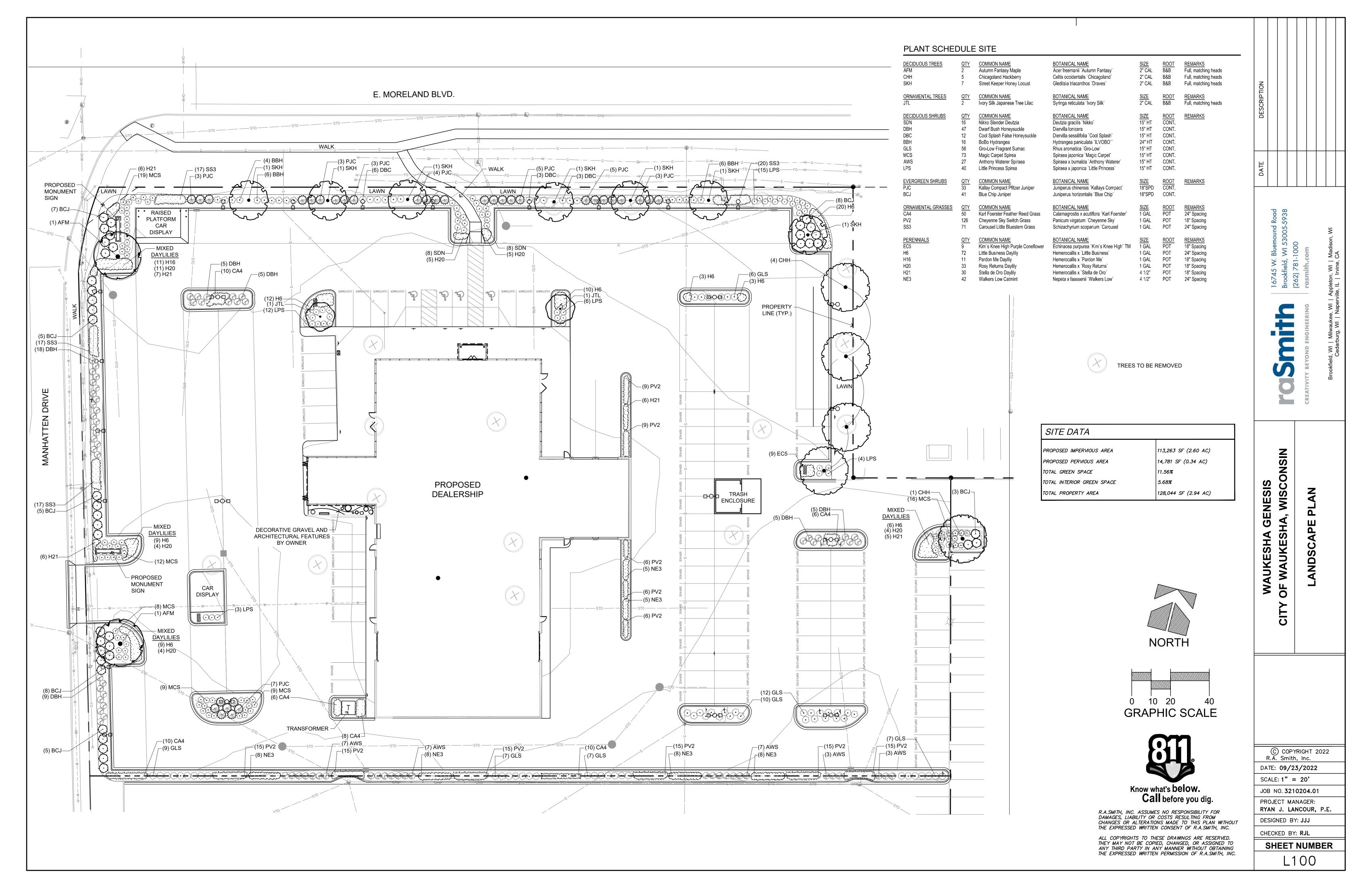
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DATE: **09/23/2022**

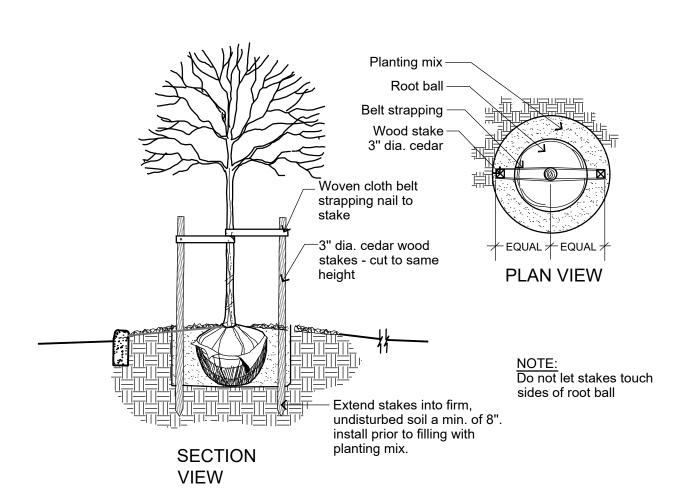
JOB NO. **3210204.01**

DESIGNED BY: JJJ CHECKED BY: RJL

SHEET NUMBER

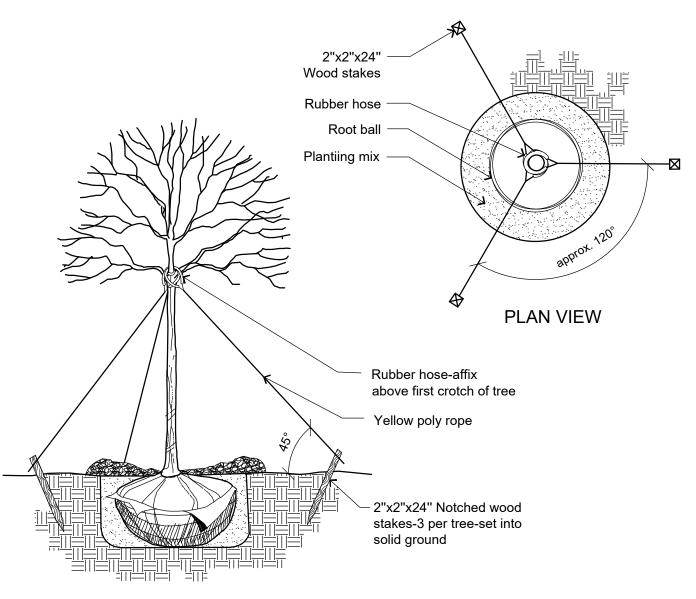


\3210204.01-Genesis\DWG\Sheets\3210204.01-LSP01.dwg, L100 LANDSCAPE PLAN



DECIDUOUS TREE PLANTING DETAIL

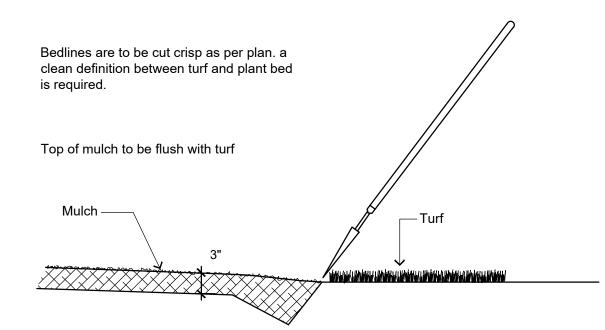
DECIDUOUS TREE STAKING FOR RESTRICTED AREAS NOT TO SCALE



 Prune cut dead and broken branches retain natural plant shape – Plant at same depth as previous level — Do not bury any bottom branches Prune out any brown branches Dig hole 2x wider – than dia. of root ball —Finished grade-− (see specifications) Container grown Balled & Burlapped Remove burlap and twine from top 1/3 Carefully remove from plastic pot and of root ball and score remaining 2/3 score roots 1" deep with a sharp knife

DECIDUOUS TREE STAKING DETAIL

SHRUB PLANTING DETAIL



Know what's **below**. Call before you dig.

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DIVISION 1 - GENERAL REQUIREMENTS

01 5 00 Substitution Procedures 1. Any potential plant substitutions must be submitted in writing and approved by the general contractor or owner's representative prior to installation. All plants must be installed as per sizes shown on plant material schedule, unless approved by general contractor or owner's representative. Any potential changes to sizes shown on plan and appropriate cost credits / adjustments must be submitted in writing to the landscape architect and general contractor

01 11 13 Work Covered by Contract Documents

1. All trees, evergreens, and shrubs to be guaranteed (100% replacement free of cost to owner) for a minimum of one (1) year from the date of substantial project completion. Only one replacement per plant will be required during the warranty period, except for losses or replacements due to failure to comply with specified requirements. Replacements shall be plants of the same variety specified on the plan and closely match adjacent specimens in size.

2. Upon substantial completion of the project, landscape contractor is responsible to conduct a final review of the project with the owner's representative and the general contractor to answer questions and insure that all specifications have been met. The landscape contractor shall provide watering and general ongoing maintenance instructions (in writing) for the new plantings and seeded/sodded areas.

012 16 Work Sequence 1. Contractor responsible for contacting public and private underground utility locating service to have site marked prior to any digging or earthwork.

2. Contractor to verify all plant quantities shown on plant list and verify with plan. Report any discrepancies immediately to general contractor. Inform

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 91 00 - PLANTING PREPARATION

32 91 13 Soil Preparation

1. Areas to be seeded: remove / kill off any existing unwanted vegetation prior to seeding with a glyphosate herbicide, applied only by a state certified applicator no sooner than 2 weeks prior to seed installation. Prepare seed bed areas to a maximum depth of 1 inch. Prepare the topsoil by removing all surface stones 1" or larger. Soil's surface should be loose and free of any soil clumps exceeding 1 inch in diameter. Do not fertilize native seeding areas.

2. Erosion control measures are to be used in swales and on steep grades, where applicable.

landscape architect and general contractor of date(s) when planting shall commence.

3. Plant bed preparation: all perennial, ornamental grass, annual and groundcover areas are required to receive a blend of organic soil amendments prior to installation. Rototill the following materials, at the ratio given, into the required 18" of topsoil to a depth of approx. 8" -

Per every 100 square feet of bed area add:

2 cu. ft. bale of peat moss 2 lbs. of 5-10-5 slow release fertilizer 1/4 cu. yard of composted manure

1. All tree and shrub planting beds to receive a 3" deep layer of high quality shredded hardwood bark mulch (not enviromulch). All perennial and ornamental grass planting areas to receive a 2" layer and groundcover areas a 1-2" layer of the same mulch. Do not mulch annual flower beds (if applicable). Do not allow mulch to contact plant stems and tree trunks.

2. If straw mulch is used as a mulch covering for seeding, a tackifier may be necessary to avoid wind damage.

32 91 19 LANDSCAPE GRADING

32 91 19.13 Topsoil Placement and Grading

1. The subsequent requirements regarding topsoil should be coordinated between the general contractor, grading contractor and landscape contractor.

2. Topsoil should be placed to within 3" of finish grade by general / grading contractor during rough grading operations. Planting islands and planting beds to be backfilled with screened topsoil (per note below) to a minimum depth of 18" by general / grading contractor to insure long term plant health.

3. Topsoil shall be: screened existing stockpiled topsoil, screened existing in-place soil, or screened soil from an off-site source that will support plant growth, and meets the following requirements. The soil shall closely match the mechanical analysis (percentage sand, silt and clay) of the existing subsoil. Soil shall be free of rocks, coarse fragments, gravel, sticks, trash, roots, debris over 3/4" and any substances harmful to plant growth. It also must be free of plants or plant parts of any noxious weeds.

4. Planting beds and parking lot islands: Landscape contractor is responsible for ensuring that unwanted material (gravel, debris, roots and other extraneous material harmful to plant growth) has been removed from the topsoil and the fine grading of all landscaped areas. The fine grading of planting beds and parking lot islands may require additional topsoil to bring to finish grade. Crown all planting islands and planting beds not adjacent to buildings, a minimum of 6" to provide proper drainage, unless otherwise specified. All other finished landscaped areas to be smooth, uniform and provide positive drainage away from structures and pavement.

5. Seeded areas: to receive a settled minimum depth of 3" of blended, prepared and non-compacted topsoil. Landscape contractor is responsible for excavation and removal of unwanted material (gravel, debris, roots and other extraneous material harmful to plant growth) to the specified depth, supplementing with additional topsoil (if necessary) and the fine grading of all seeded areas.

32 92 00 - TURF AND GRASSES

32 92 19 Seeding

1. Seed lawn areas - use only a premium quality seed mix. Premium blend seed mix example (or equivalent): 50% blended bluegrass, 25% creeping red fescue, 25% perennial rye applied at 5 lbs per 1,000 SF or at recommended rates from supplier. Provide seed specifications to general contractor prior to

2. Erosion control measures are to be used in swales and on steep grades, where applicable.

3. Methods of installation may vary at the discretion of the landscape contractor on his/her responsibility to establish and guarantee a smooth, uniform, quality turf and evenly seeded native areas.

4. An acceptable quality seed installation is defined as having:

a. No bare spots larger than 1 square foot

b. No more than 10% of the total area with bare spots larger than 1 square foot c. A uniform coverage throughout all areas

32 93 00 - PLANTS

1. All plantings shall comply with standards as described in American Standard of Nursery Stock - ANSI Z60.1 (latest version). General contractor or owner's representative reserves the right to inspect and potentially reject any plants that are inferior, compromised, undersized, diseased, improperly transported, installed incorrectly or damaged.

2. The landscape contractor is responsible for the watering and maintenance of all landscape areas at time of planting, throughout construction and for a period of 60 days after the substantial completion of the installation. This includes all trees, shrubs, evergreens, perennials, ornamental grasses, turf grass, meadow grass and wildflower areas. Work also includes weeding, edging, mulching (only if required), fertilizing, trimming, sweeping up grass clippings, pruning and deadheading. Refer to the maintenance sections and specifications for more information.

32 93 43 Trees

Trees shall be planted per planting details.

2. Plant all trees slightly higher than finished grade at root flare. Remove excess soil from top of root ball, if needed.

3. Scarify side walls of tree pit prior to installation.

4. Remove and discard non-biodegradable ball wrapping and support wire. Remove biodegradable burlap and wire cage (if applicable) from top one-third (1/3) of root ball. Carefully bend remaining wire down to the bottom of the hole once the tree has been placed into the hole and will no longer be moved. Biodegradable burlap and twine is preferred over non-biodegradable ball-wrapping.

5. Score the remaining two-thirds of burlap and remove twine. 6. Backfill tree planting holes with 80% existing soil removed from excavation and 20% plant starter mix blended prior to backfilling holes. Avoid any air

pockets and do not tamp soil down. Discard any gravel, heavy clay or stones.

7. When hole is two-thirds full, trees shall be watered thoroughly and water left to soak in before proceeding.

8. Provide a 3" deep, 4 ft. Diameter shredded hardwood bark mulch ring around all trees. Do not build up any mulch onto trunk of any tree.

9. Trees that are installed incorrectly will be replaced at the time and expense of the landscape contractor. 10. If Trees too large for two people to lift in and out of holes shall be placed with sling. Do not rock the trees in holes to raise them.

11. Stake trees if site conditions warrant, to promote the long term establishment of the tree.

32 94 00 - PLANTING ACCESSORIES

32 94 13 Landscape Edging

1. Edge all planting beds with a 4" deep spaded edge (shovel cut or mechanical). Bedlines are to be cut crisp, as per plan. A clean definition between lawn and plant bed is required.

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SCALE: NOT TO SCALE JOB NO. **3210204.01**

PROJECT MANAGER:

RYAN J. LANCOUR, P.E. DESIGNED BY: JJJ

CHECKED BY: RJL

SHEET NUMBER

L200

SHOVEL CUT PLANT BED EDGING DETAIL