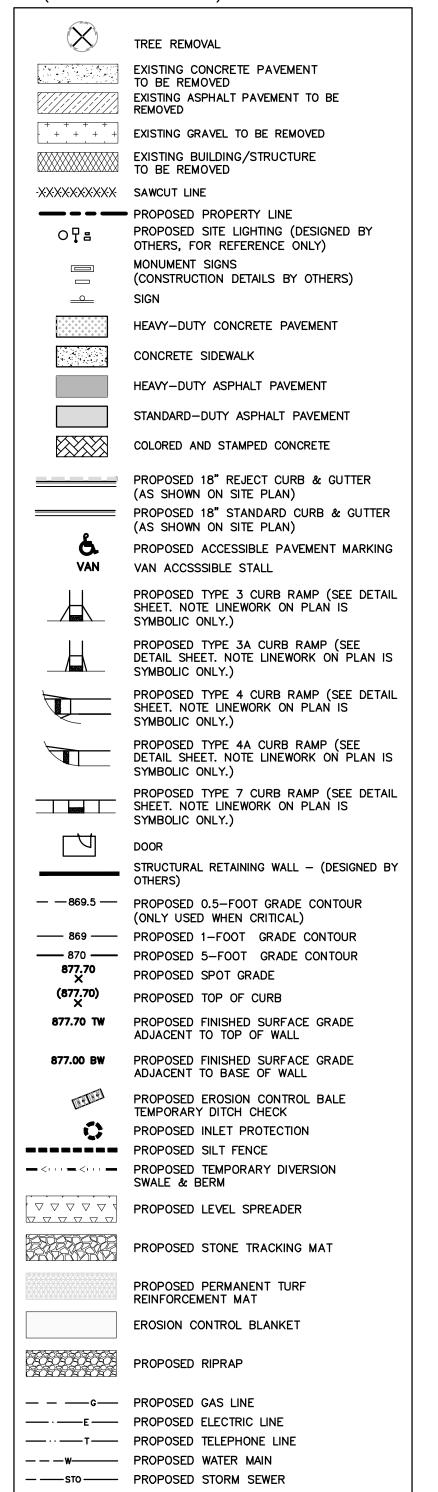
LEGEND (PROPOSED FEATURES)



PROPOSED FIRE DEPARTMENT CONNECTION

PROPOSED WATER VALVE

PROPOSED FIRE HYDRANT

PROPOSED STORM MANHOLE

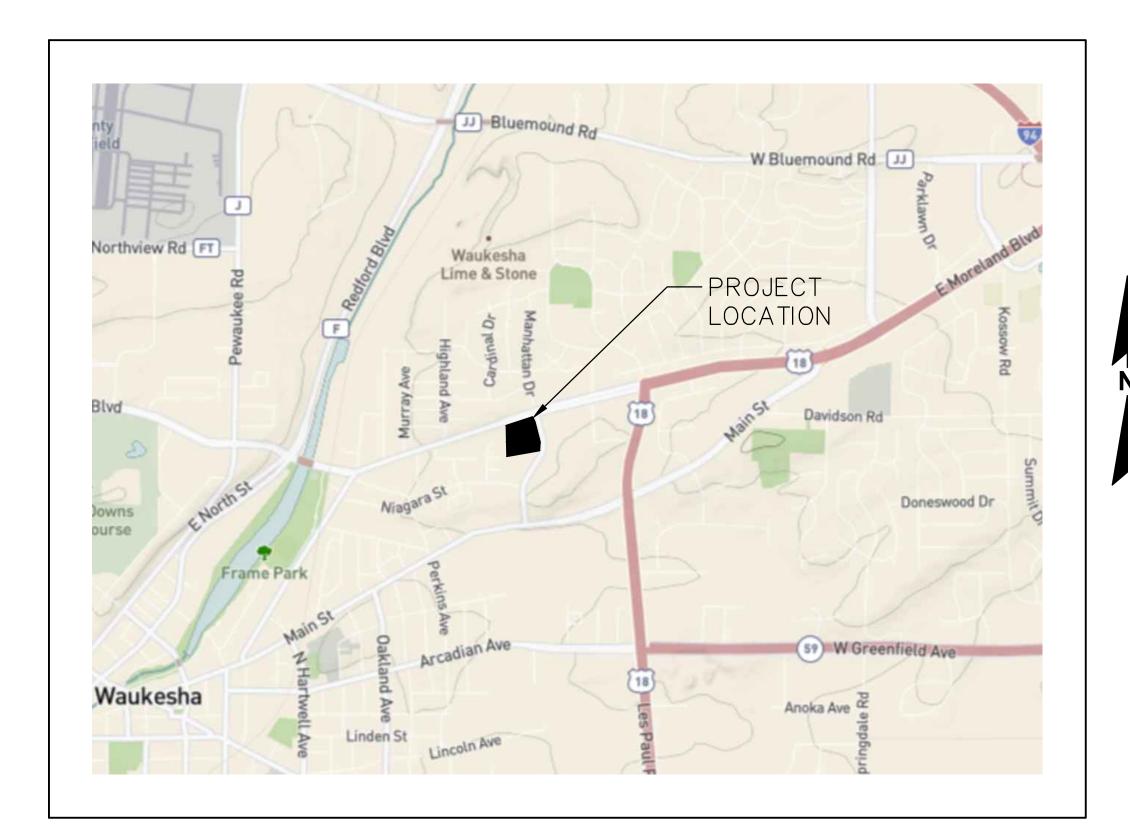
PROPOSED SANITARY MANHOLE

PROPOSED INLET/ CB

PROPOSED AREA DRAIN

FOR NISSAN WAUKESHA CITY OF WAUKESHA, WISCONSIN

VICINITY MAP



PLAN INDEX SHEET NO. **DESCRIPTION** COVER SHEET 1 OF PLAT OF SURVEY EXISTING CONDITIONS, DEMOLITION & EROSION CONTROL PLAN C200 OVERALL SITE PLAN C201 DETAILED SITE PLAN C202 FIRE TRUCK TEMPLATE PLAN **GRADING PLAN** C400 EROSION CONTROL DETAILS SITE DETAILS C502 UTILITY DETAILS C503 UNDERGROUND STORAGE DETAILS C504 UNDERGROUND STORAGE DETAILS **SPECIFICATIONS** L100 LANDSCAPE PLAN

ENGINEER AND LANDSCAPE ARCHITECT:



LEGEND

INDICATES RECORDED DIMENSION WHERE DIFFERENT FROM ACTUAL

OR SECTION OR 1/4 SECTION CORNER AS DESCRIBED

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)

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

(UNLESS OTHERWISE NOTED)

RAILROAD CROSSING SIGNAL

SPOT/YARD/PEDESTAL LIGHT

HANDICAPPED PARKING

ELECTRIC TRANSFORMER
TELEPHONE MANHOLE

TELEPHONE PEDESTA

GAS WARNING SIGN

SANITARY MANHOLE

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 TELEPHONE

-MARKED CABLE TV LINE

-MARKED FIBER OPTIC INDICATES EXISTING CONTOUR ELEVATION

INDICATES EXISTING SPOT ELEVATION

-EXISTING PROPERTY LINE

-EXISTING EASEMENT LINE

SANITARY INTERCEPTOR MANHOLE

ELECTRIC MANHOLE ELECTRIC PEDESTAL

ELECTRIC METER

SOIL BORING/MONITORING WELL

16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000

CREATIVITY BEYOND ENGINEERING rasmith.com

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:

CHISELED BOX ON LAMP POST
BASE. SE OF SITE
CONC CURB ON NORTH SIDE
ELEVATION = 103.24'
VERTICAL DATUM: CITY OF
WAUKESHA DATUM

CONC MON W/ BRASS CAP IN
CONC CURB ON NORTH SIDE
EAST BOUND LANE OF USH 18
NW CORNER SW \$\frac{1}{4}\$ OF SEC 36
ELEVATION = 876.98'
N: 378,689.51 USFT

BENCHMARK 2:

"X" NW FLANGE BOLT ON HYDRANT ON NORTHERNLY ROW OF E MORELAND BLVD ELEVATION = 100.53' VERTICAL DATUM: CITY OF WAUKESHA DATUM

ELEVATION = 841.03' N: 376,029.00 USFT E: 2,448,203.06 USFT

Know what's below.
Call before you do

SEWRPC BENCHMARK 1:

SEWRPC BENCHMARK 2:

CONC MON W/ BRASS CAP

SW CORNER SW 1 OF SEC 36

E: 2,448,163.35 USFT

Know what's below.
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ADDRESS:

L200

1451 E MORELAND BLVD WAUKESHA, WI 53186

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.

LANDSCAPE NOTES & DETAILS

PLAN DATE: 5/30/2023							
REVISIONS	ISSUE DATE	SHEET NO.'S	ISSUED FOR:				

16/45 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com



NISN

SHA

COVERSHEET

CITY OF WAUKES

JEREMY J.
JEFFERY
E-41449
BROOKFIELD
WI

5/30/2023

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R.A. Smith, Inc.

DATE: 5/30/2023

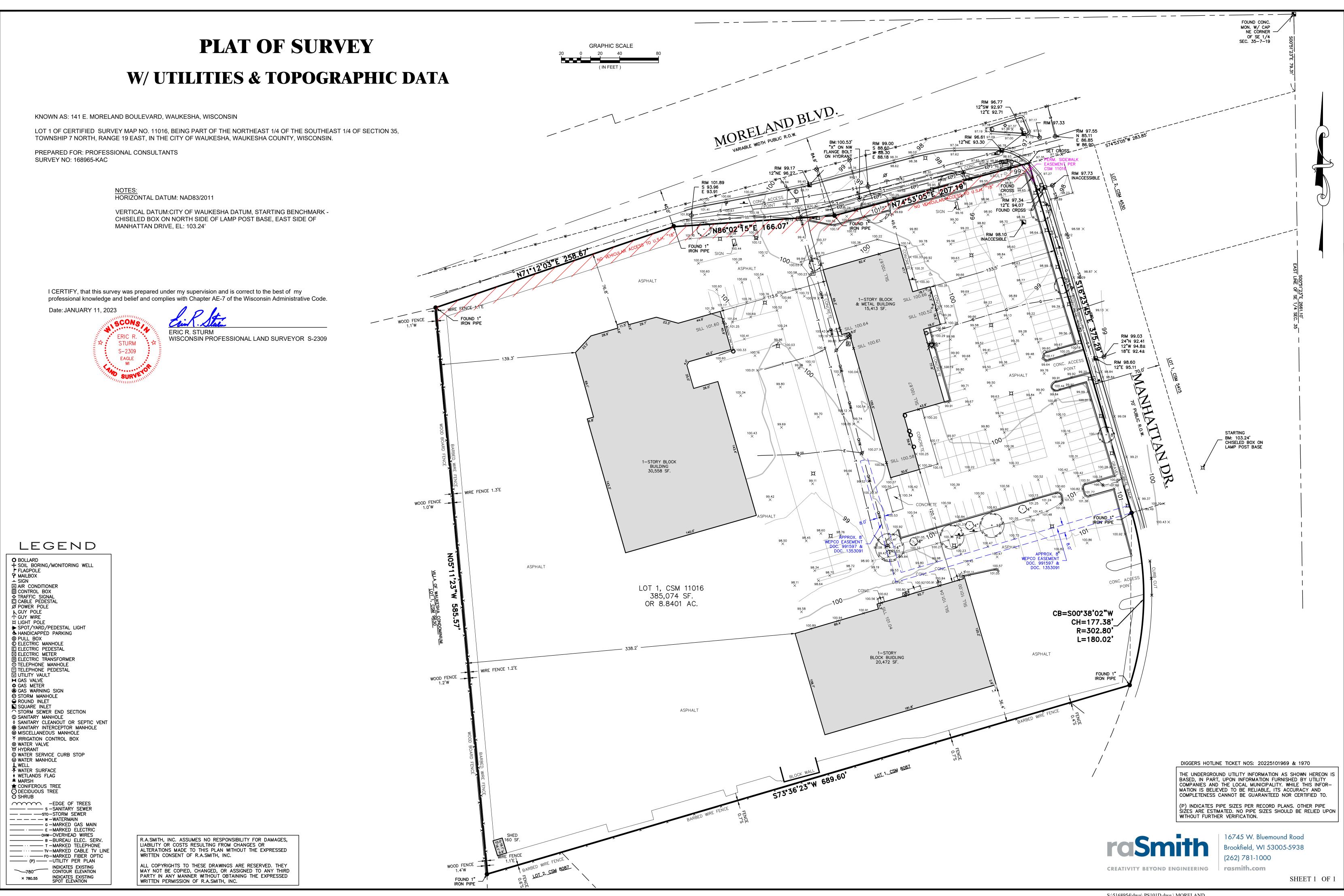
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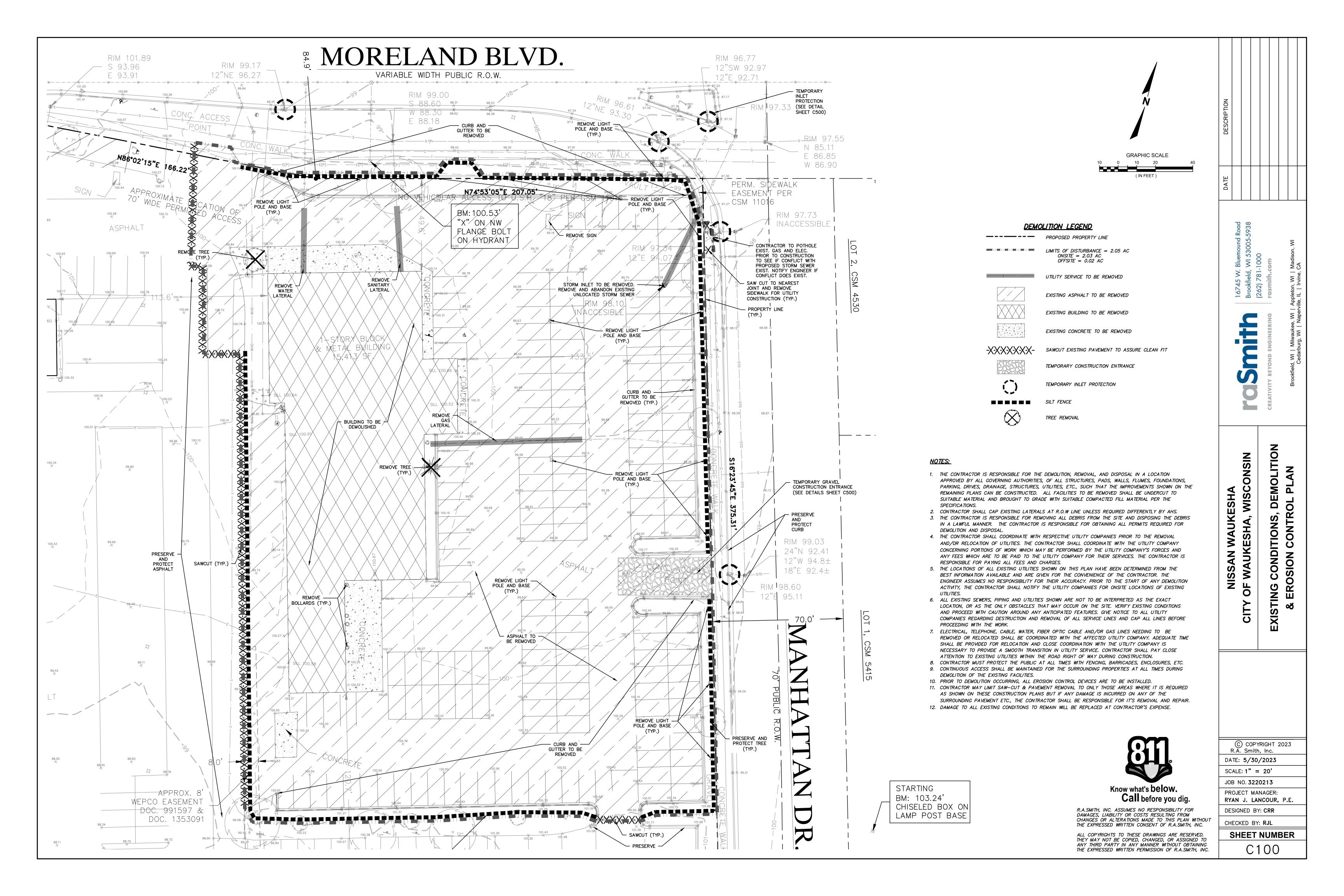
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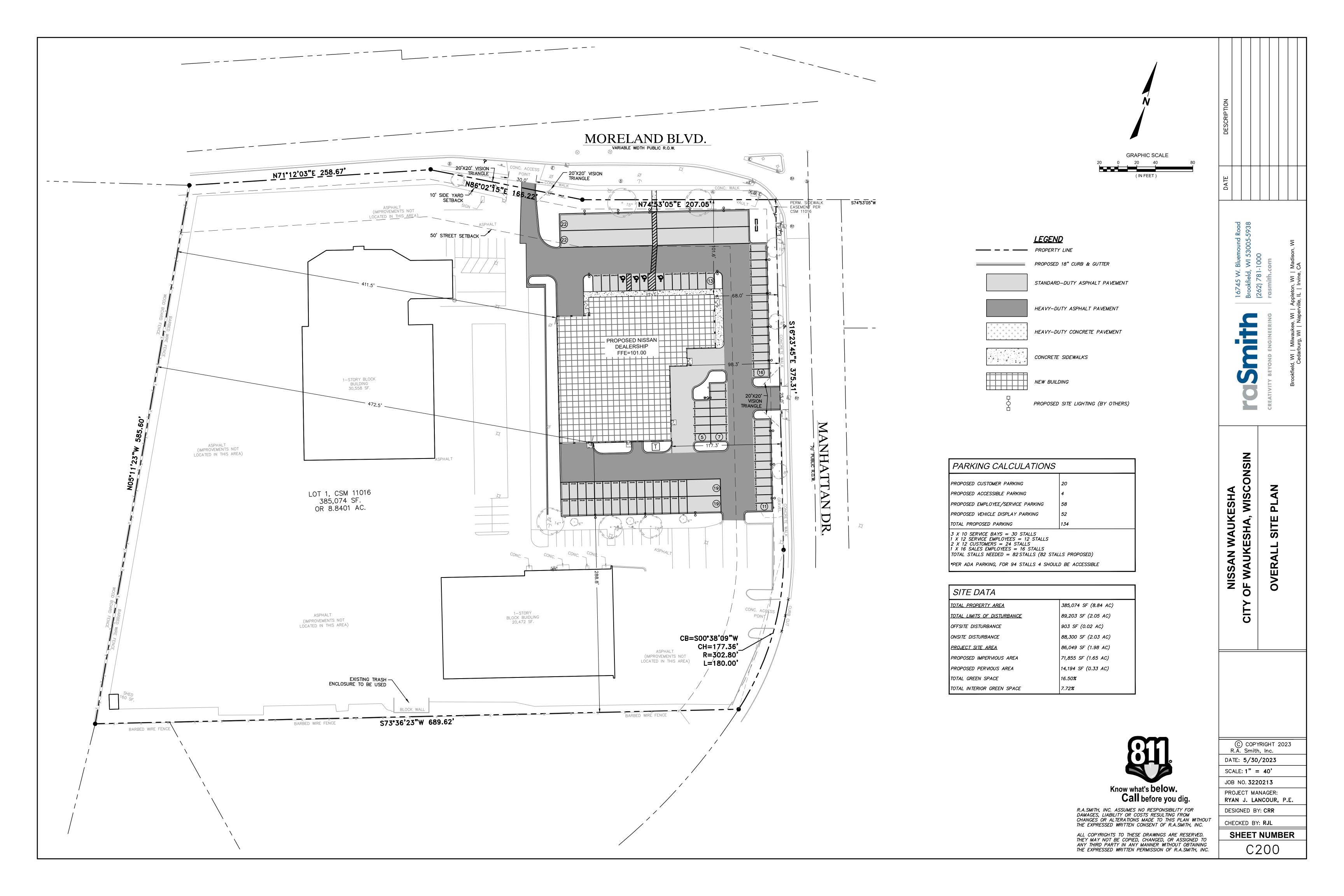
PROJECT MANAGER:
RYAN J. LANCOUR. P.E.

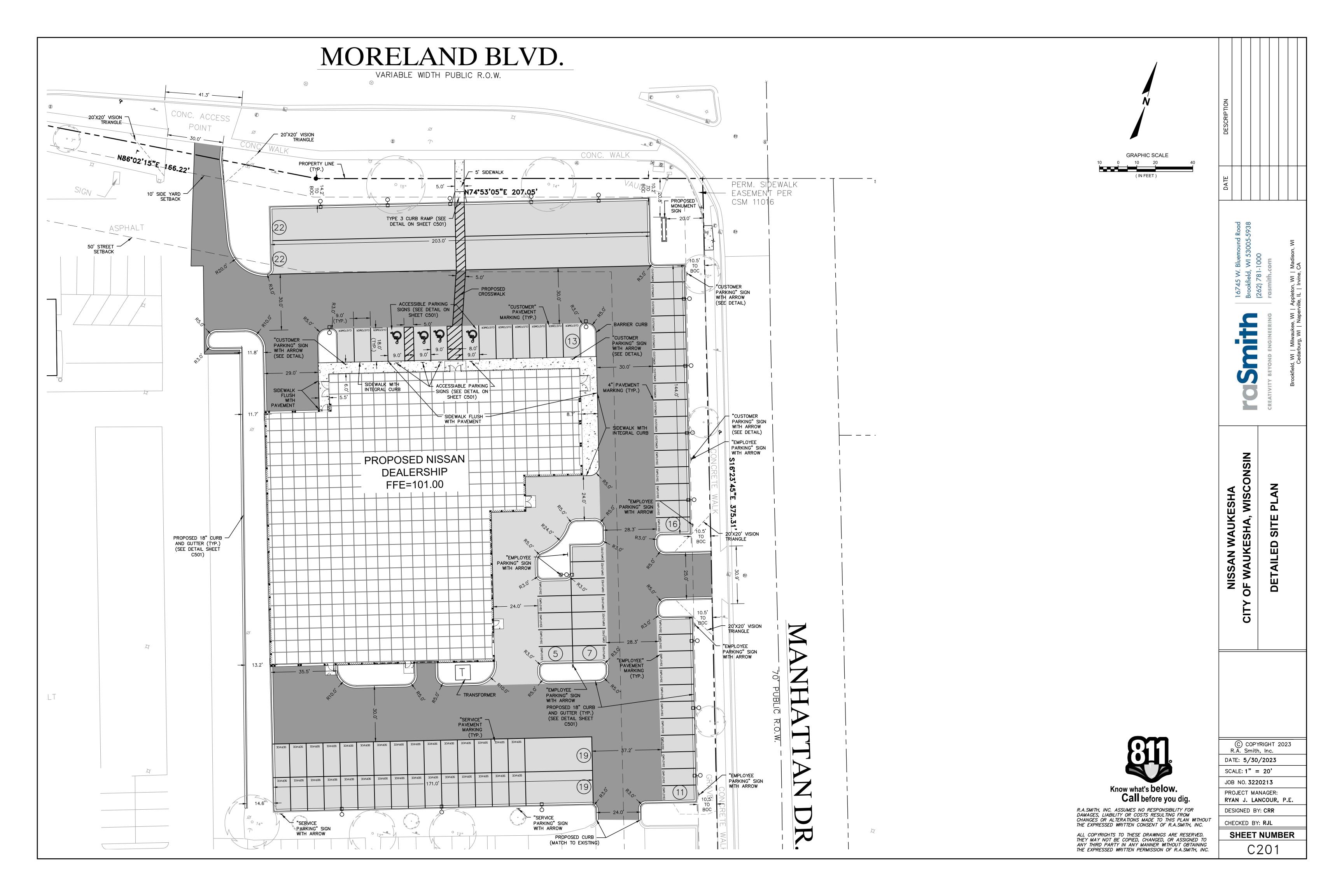
DESIGNED BY: CRR
CHECKED BY: RJL

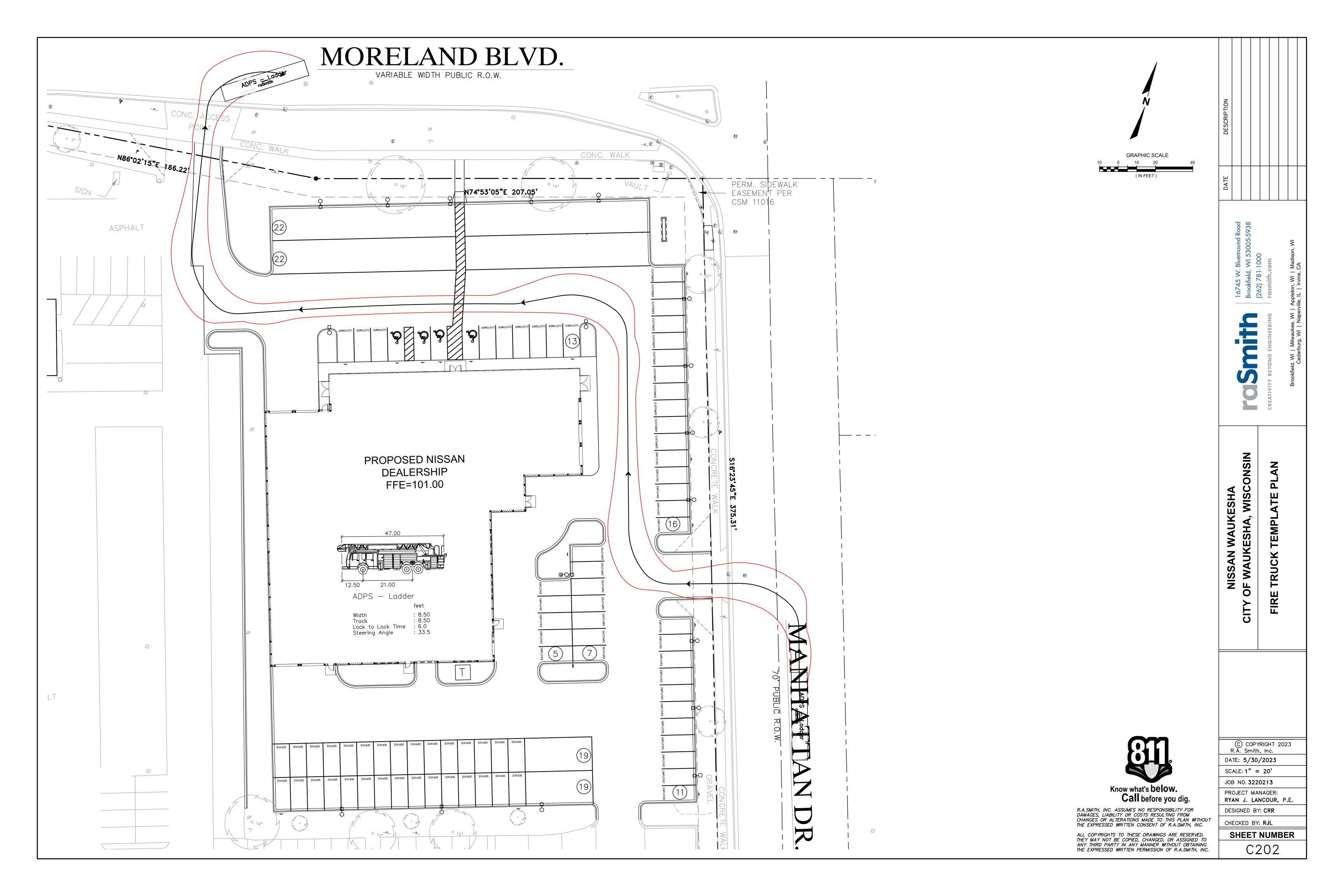
COOO

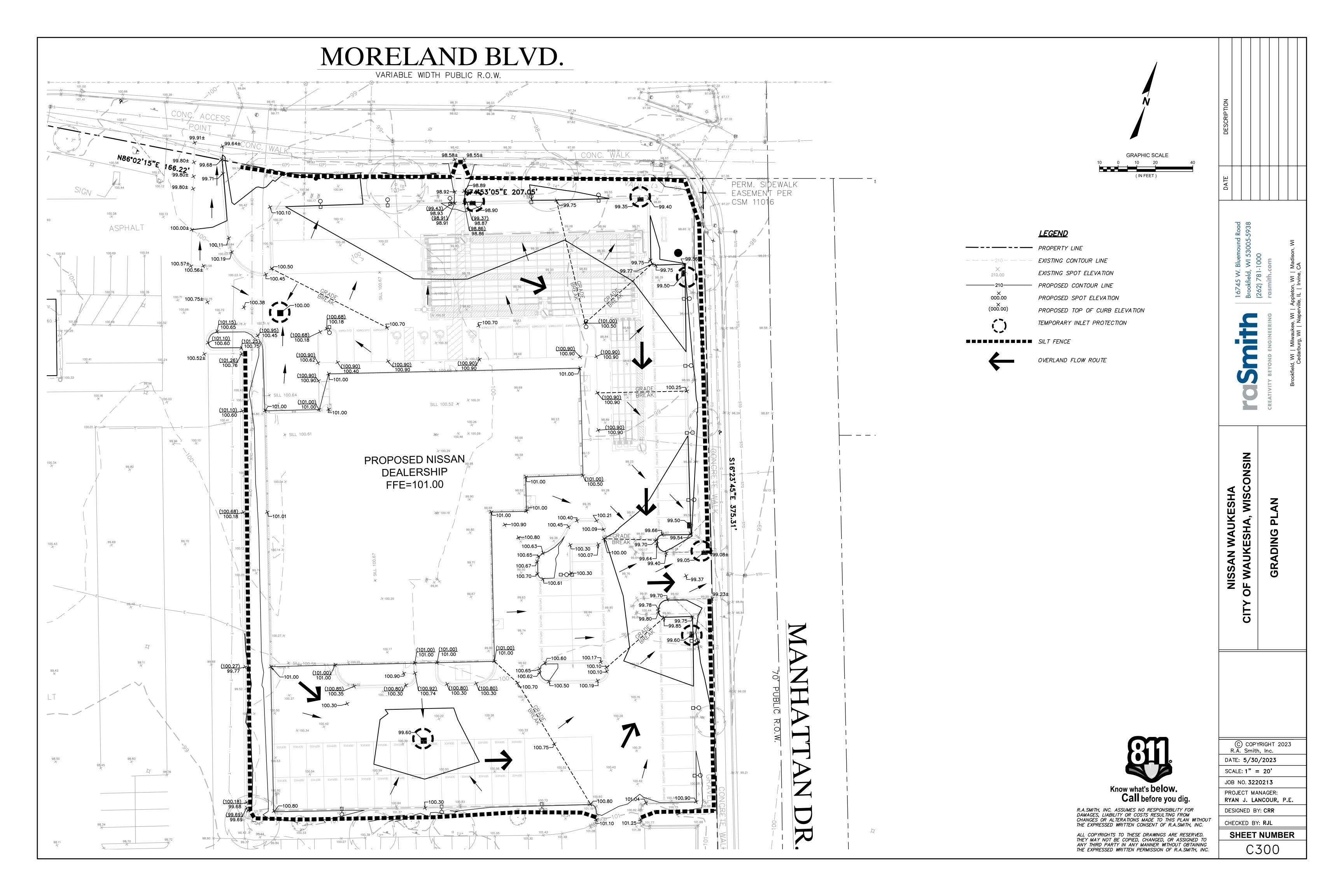


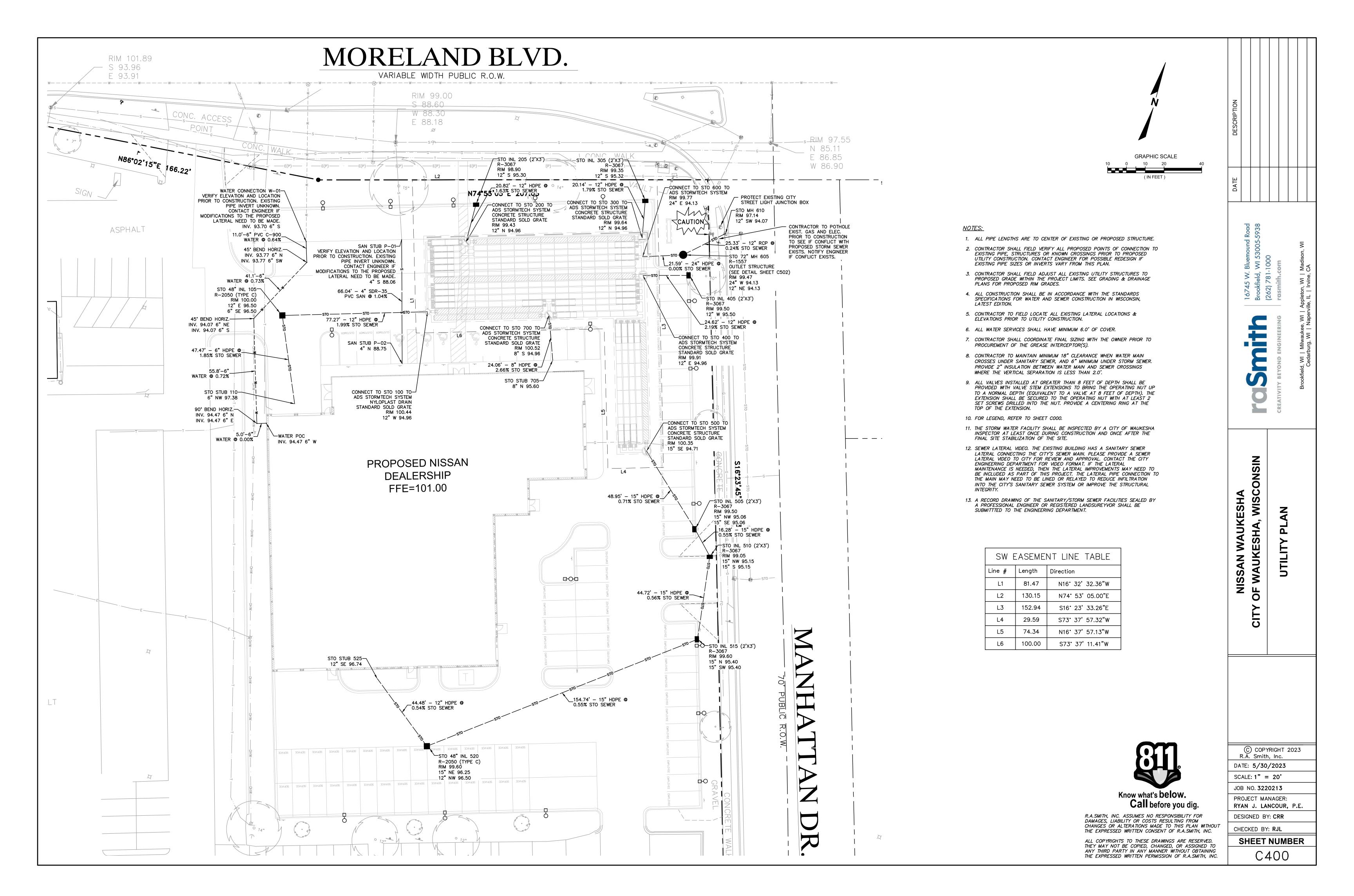












FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL. FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE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

GENERAL NOTES:

REQUIREMENTS IN THE TABLE BELOW:

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:

GEOTEXTILE

BACKFILL & COMPACT

TRENCH WITH

ATTACH THE FABRIC TO THE POSTS WITH WIRE STAPLES

OR WOODEN LATH AND NAILS

SILT FENCE DETAIL

(NOT TO SCALE)

EXCAVATED SOIL

FABRIC ONLY

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.

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

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.

— SILT FENCE SHALL BE SUPPORTED BY EITHER WOOD OR STEEL SUPPORTS AS SPECIFIED BELOW: A. WOOD - 1 1/8" X 1 1/8" AIR OR KILN DRIED OAK OR HICKORY; FABRIC SHALL BE STAPLED USING 1/2-INCH MINIMUM STAPLES TO THE UPSLOPE SIDE OF THE FENCE IN AT LEAST 3 PLACES; POSTS SHALL BE A MINIMUM OF 3 FEET LONG FOR 24-INCH FENCE AND 4 FEET LONG FOR 36-INCH B. STEEL - MINIMUM 5 FEET IN LENGTH WITH STRENGTH OF 1.33 LBS/FT AND HAVE PROJECTIONS FOR FASTENERS; FABRIC SHALL BE ATTACHED IN AT LEAST THREE PLACES ON THE UPSLOPE SIDE WITH 50LB. PLASTIC TIE STRAPS OR WIRE FASTENERS. TIEBACK BETWEEN FENCE POST AND **ANCHOR FENCE** ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS SUPPORT CORD FLOW DIRECTION -**WOOD POSTS** LENGTH 3'-4' GEOTEXTILE 20" DEPTH IN *FABRIC* GROUND **ANCHOR** FLOW DIRECTION -

* NOTE: 8'-0" POST SPACING

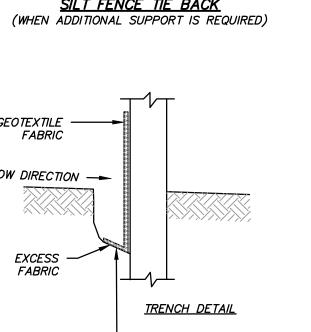
ALLOWED IF A WOVEN

GEOTEXTILE FABRIC IS

USED. 3'-0" MAX FOR

NON WOVEN FABRIC

STAKE MIN. 18" LONG SILT FENCE TIE BACK (WHEN ADDITIONAL SUPPORT IS REQUIRED) **GEOTEXTILE** *FABRIC* FLOW DIRECTION -



- GEOTEXTILE **GEOTEXTILE FABRIC WOOD POST** TWIST METHOD GEOTEXTILE WOOD POST **WOOD POST** 2'-0" MIN. HOOK METHOD

GEOTEXTILE

WOOD POST

JOINING TWO LENGTHS OF SILT FENCE

1. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

RIGHT-OF-WAY — TRACKING MAT - FILTER CLOTH STRIP TOPSOIL & SET TO PLAN SUBGRADE

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
- 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.

SAFETY HAZARD AS WELL AS A POLLUTION PROBLEM.

- 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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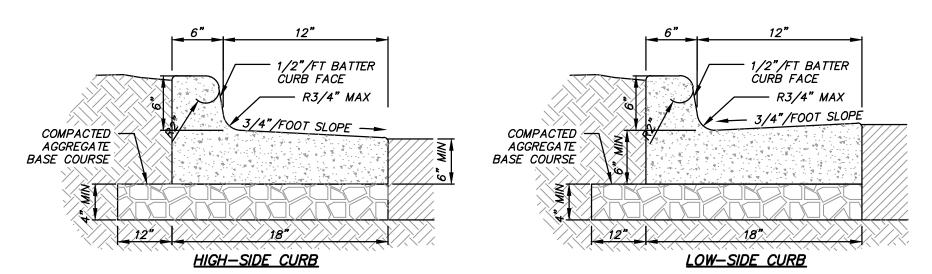
SCALE: N.T.S. JOB NO. **3220213**

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

DESIGNED BY: JJJ CHECKED BY: RJL

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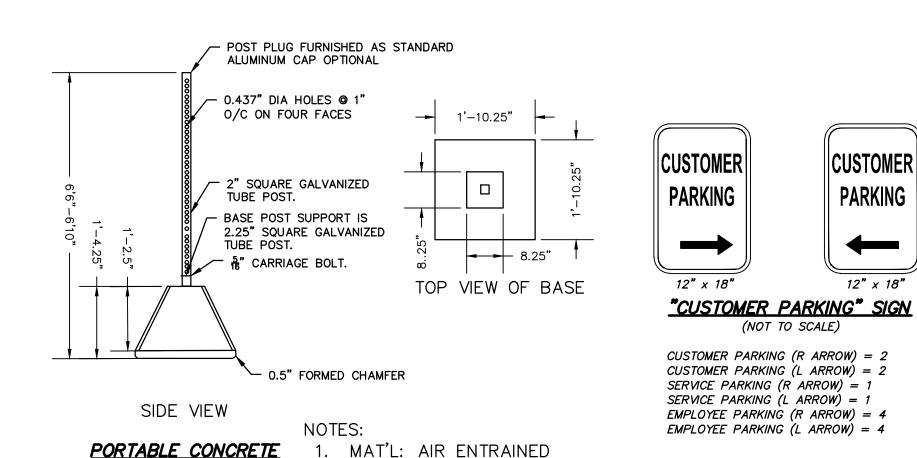
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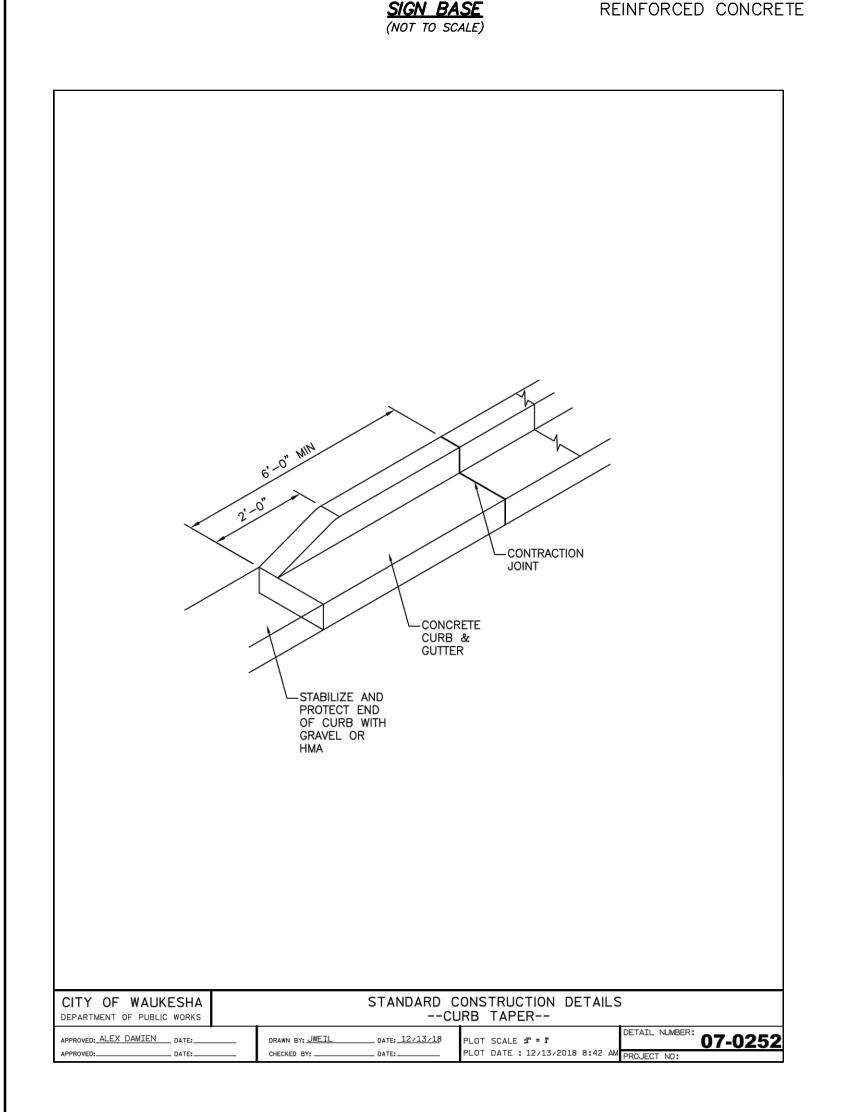


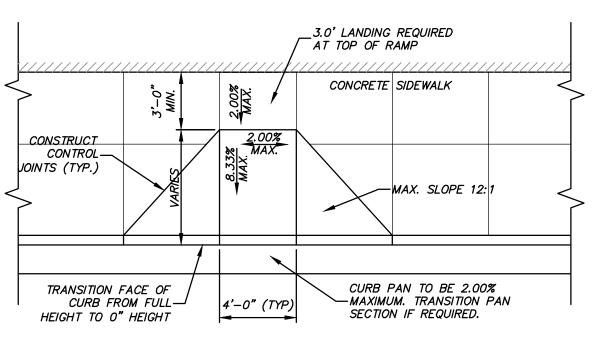
A) 3500 PSI CONCRETE SHALL BE USED IN CONSTRUCTION OF THE CURB & GUTTER.

- 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

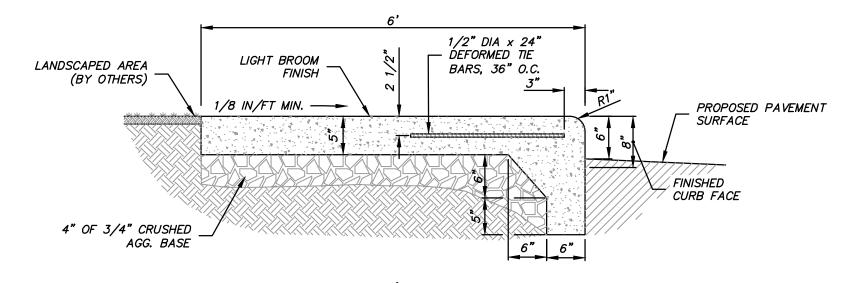
ON-SITE CONCRETE CURB & GUTTER DETAIL



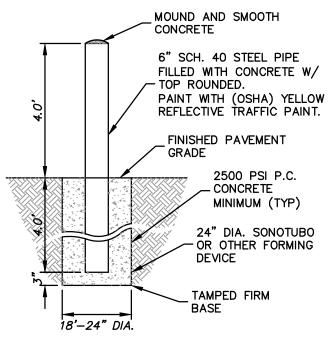


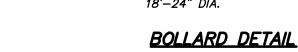


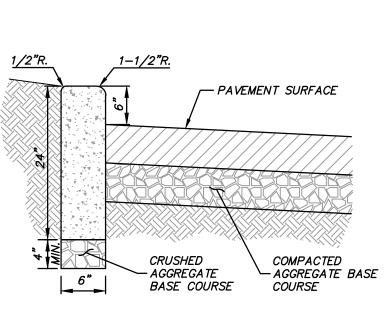
TYPE 3 CURB RAMP



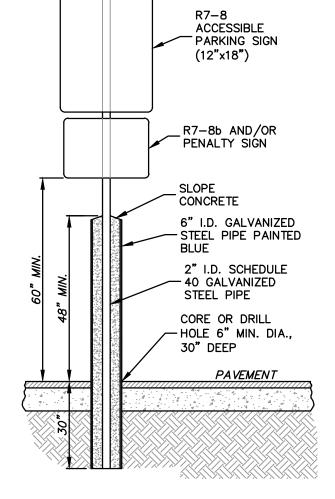
CONCRETE WALK W/ INTEGRAL CURB



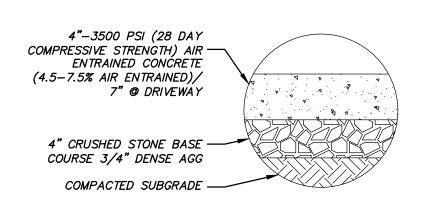




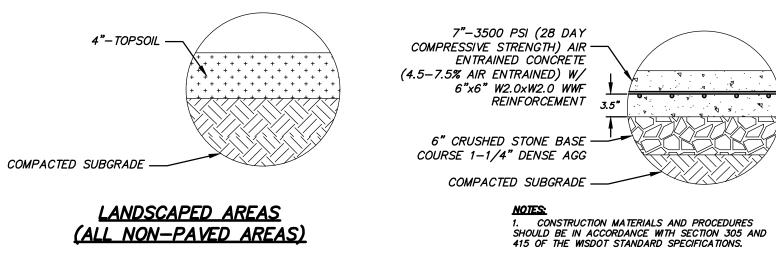
6" BARRIER CURB DETAIL (NOT TO SCALE)



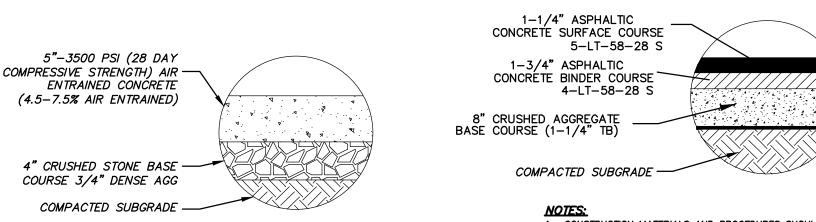
ACCESSIBLE PARKING SIGN AND POST INSTALLATION IN BOLLARD TYPE 2



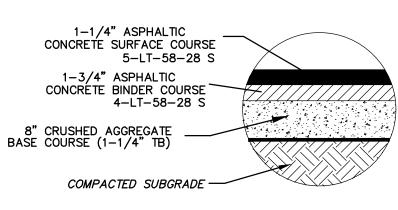
PUBLIC CONCRETE SIDEWALK SECTION



(ALL NON-PAVED AREAS)



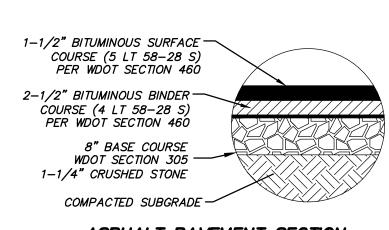
1. CONSTRUCTION MATERIALS AND PROCEDURES
SHOULD BE IN ACCORDANCE WITH SECTION 305 AND
415 OF THE WISDOT STANDARD SPECIFICATIONS. CONCRETE SIDEWALK PAVEMENT SECTION



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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DESCRIPTION							
DATE							
38 ad							

	Brookfield, WI 53005-59
	(262) 781-1000
BEYOND ENGINEERING	rasmith.com
okfield, WI Milwaukee, WI Appleton, WI Madison, WI	Appleton, WI Madison, WI
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O I WAUKESHA KESHA, WISCO WAUKESHA, DE NISSAN

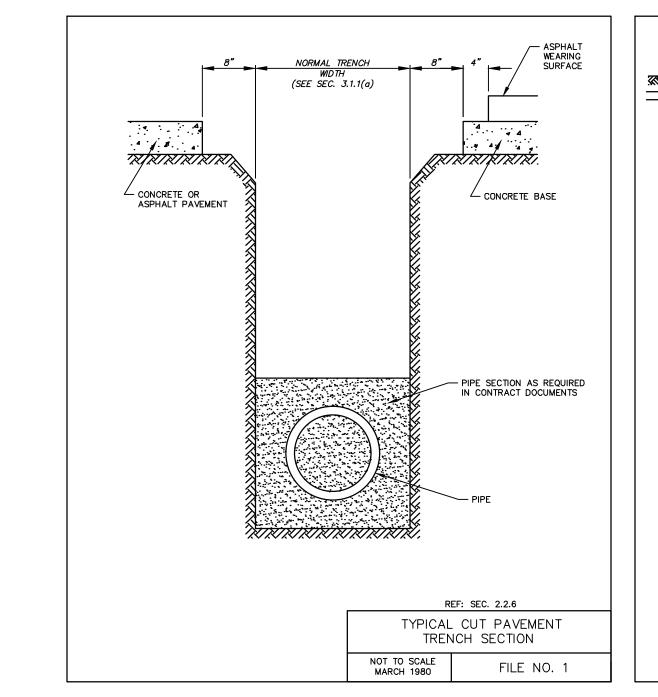
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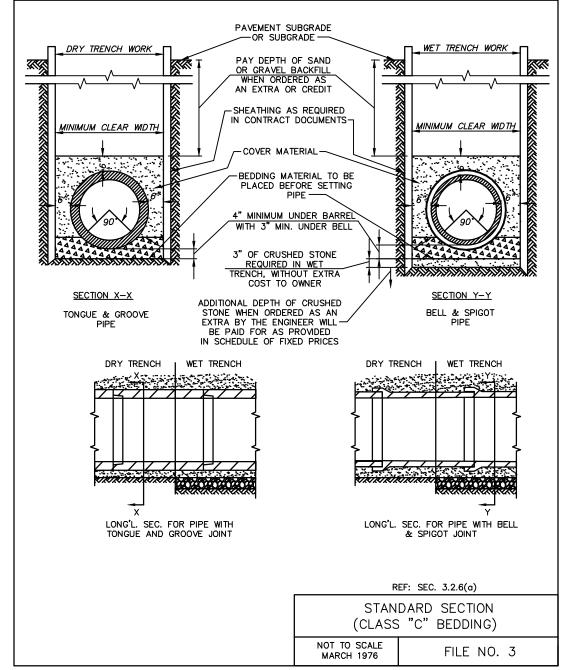
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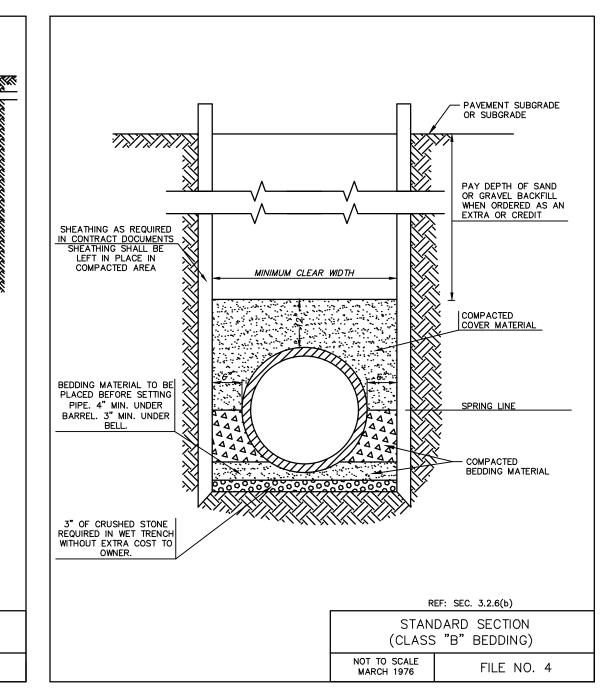
PROJECT MANAGER: RYAN J. LANCOUR, P.E.

DESIGNED BY: CRR CHECKED BY: RJL

SHEET NUMBER C501











Bluemouna WI 53005--1000

ONSIN I WAUKESHA KESHA, WISCO NISSAN

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SCALE: N.T.S.

JOB NO. **3220213**

PROJECT MANAGER:

Know what's below. Call before you dig.

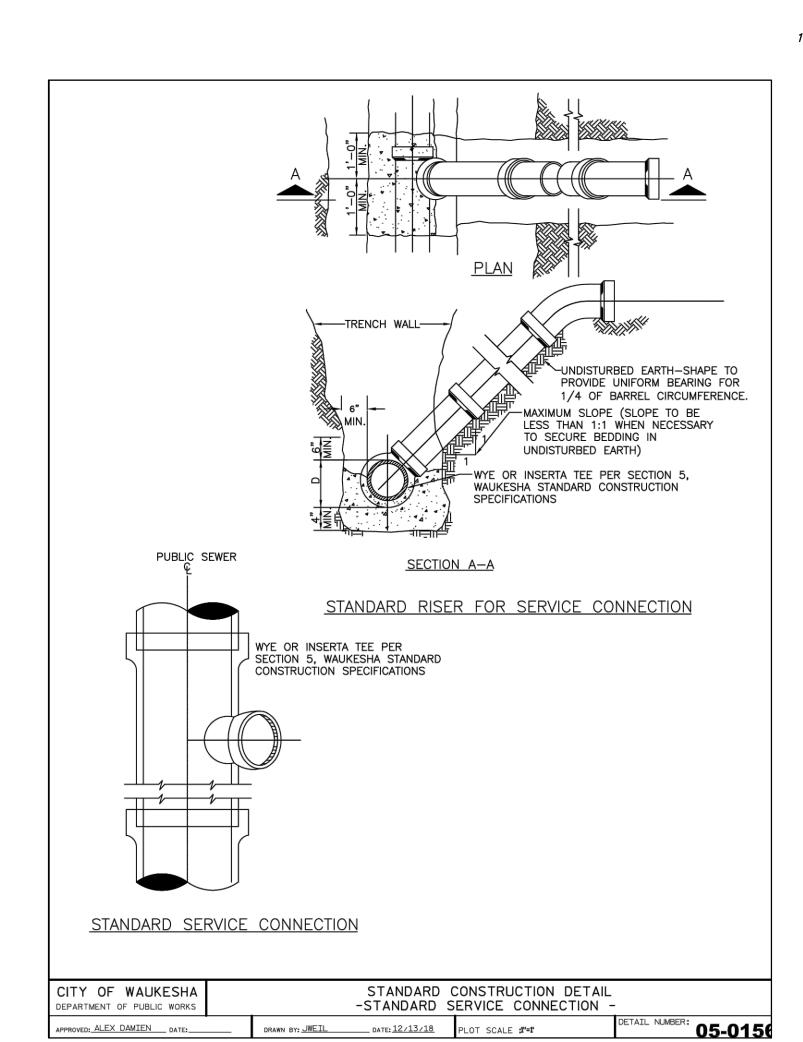
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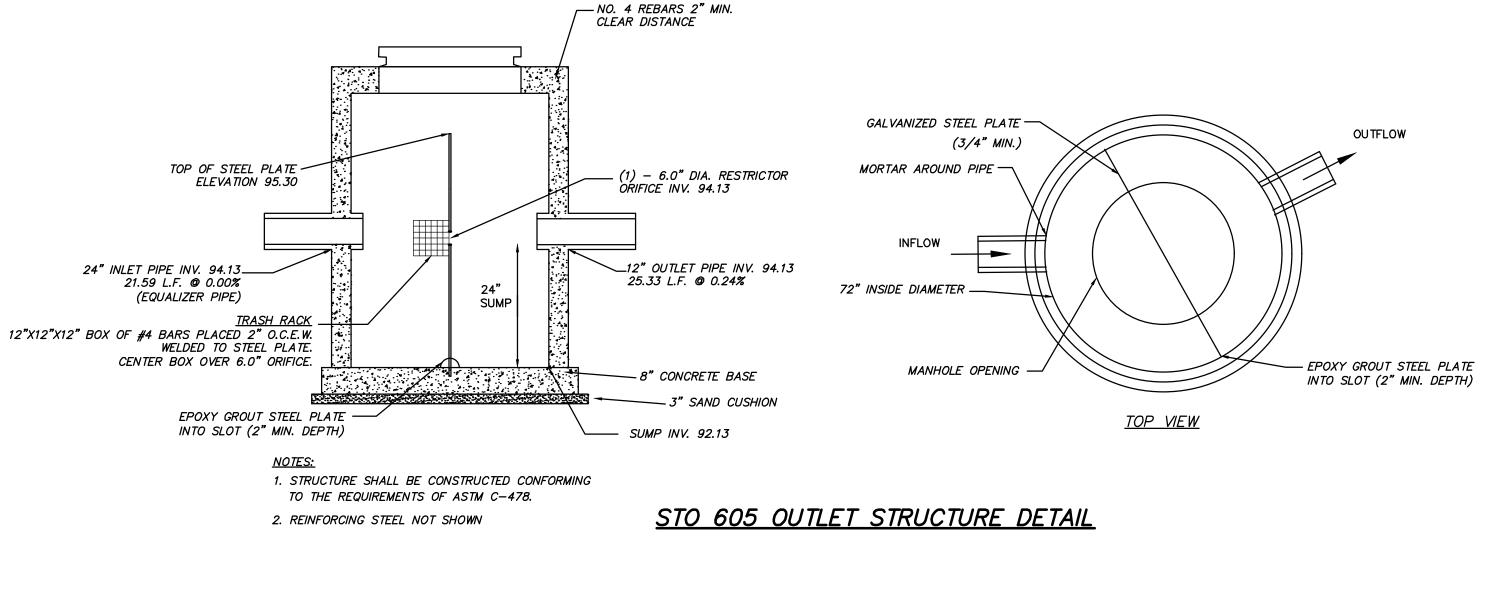
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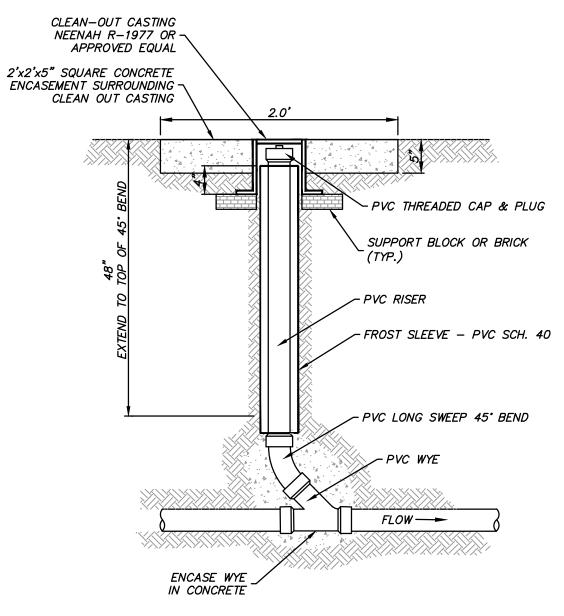
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SHEET NUMBER C502

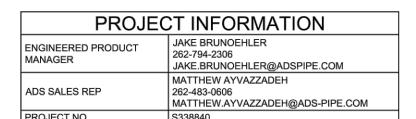
RYAN J. LANCOUR, P.E.







CLEAN-OUT STRUCTURE SECTION VIEW



CHAMBERS SHALL BE STORMTECH SC-310.





ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

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

4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

SUBGRADE SOILS -

DESCRIPTION

ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS.

CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.

GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR

MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS

CLEAN, CRUSHED, ANGULAR STONE

CLEAN, CRUSHED, ANGULAR STONE

STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.

END CAP

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALI

AROUND CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS -

PLACE POND LINER ON TOP OF SUBGRADE

PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".

TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.

PRIOR TO PLACING GEOTEXTILE FABRIC.

(SEE NOTE 6 BELOW)

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION

2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION

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

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

6. PLACE 40 MIL (HDPE) POND AND CANAL LINER OR EQUAL ON SUBGRADE EXTENDING THE ENTIRE EXCAVATED AREA AND UP EXCAVATED WALLS ONE FOOT PRIOR TO PLACING GEOSYNTHETIC FABRIC.

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 M43) STONE".

PROCESSED AGGREGATE.

WAUKESHA, WI, USA

SC-310 STORMTECH CHAMBER SPECIFICATIONS

2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR

SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"

FROM REFLECTIVE GOLD OR YELLOW COLORS.

MATERIAL LOCATION

FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C'

LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED

GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D'

INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE

EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE

EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE

FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO

PERIMETER STONE

EXCAVATION WALL

(CAN BE SLOPED OR VERTICAL)

CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.

5. REQUIREMENTS FOR HANDLING AND INSTALLATION:

(SEE NOTE 5)

12" (300 mm) MIN ----

FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.

THE FOOT (BOTTOM) OF THE CHAMBER.

COMPACTION REQUIREMENTS.

CHAMBERS"

CHAMBERS"

CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C'

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD
- 4. 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 ALLOWARI FLOAD 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.
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING
- 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

- 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 1.95 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
- LRED 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". 3. 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 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).
- 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".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED: NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.

AASHTO MATERIAL

CLASSIFICATIONS

AASHTO M1451

AASHTO M431

3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10

AASHTO M431

3, 357, 4, 467, 5, 56, 57

AASHTO M431

3, 357, 4, 467, 5, 56, 57

PAVEMENT LAYER (DESIGNED

BY SITE DESIGN ENGINEER)

12" (300 mm) TYP

A-1, A-2-4, A-3

- 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

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

COMPACTION / DENSITY REQUIREMENT

PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED

INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND

PREPARATION REQUIREMENTS.

BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER

THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN

6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR

WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR

PROCESSED AGGREGATE MATERIALS. ROLLER GROSS

FORCE NOT TO EXCEED 20,000 lbs (89 kN).

NO COMPACTION REQUIRED.

PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.2,3

(450 mm) MIN*

- IE CHAMBER = 0

DEPTH OF STONE TO BE DETERMINED

BY SITE DESIGN ENGINEER 6" (150 mm) MIN

STORM

SYSTEM

96.46

95.96

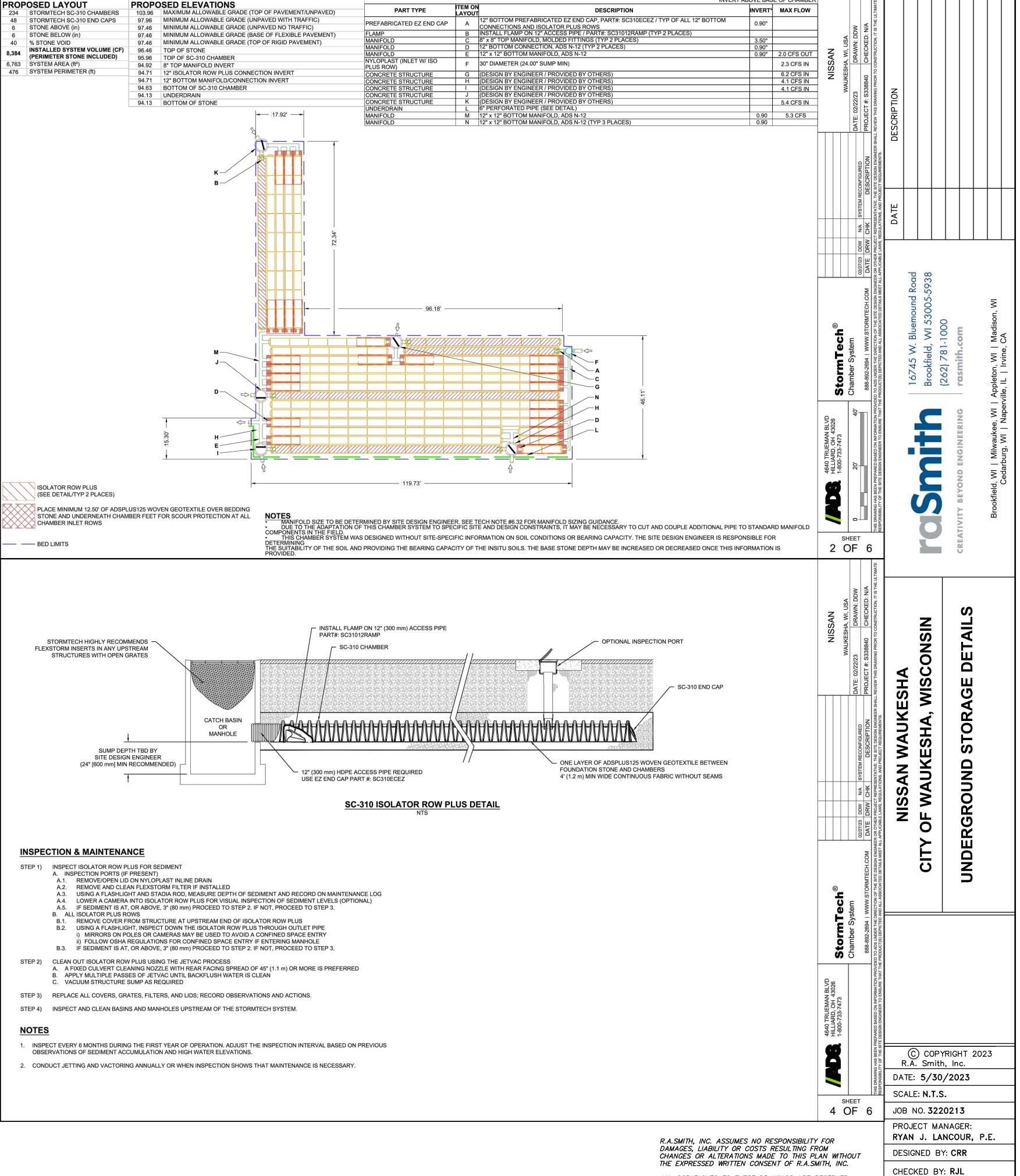
94.63

94.13

3 OF 6

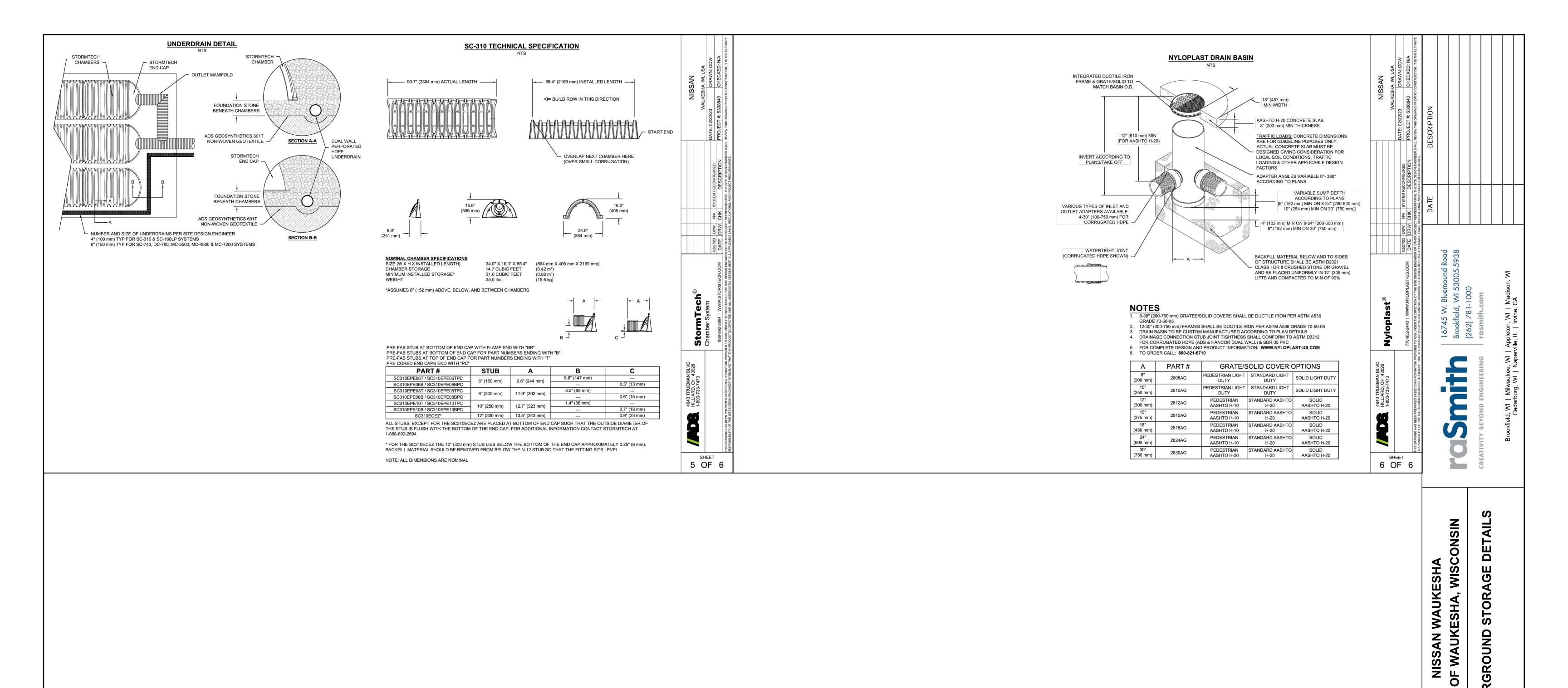
BOTTOM OF STONE & IE OF UNDERDRAIN = D

EHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC



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UNDERGROUND

JOB NO. **3220213** PROJECT MANAGER: RYAN J. LANCOUR, P.E.

DESIGNED BY: CRR CHECKED BY: RJL

SHEET NUMBER C504

<u>DIVISION 1 — GENERAL REQUIREMENTS</u>

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 REPRESENTATIVE MAY EXAMINE THEM.

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

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.
- G. 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

CONSTRUCT PROPOSED IMPROVEMENTS.

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
- 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.

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

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 FXCESSIVELY 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 SPECIFICATIONS. WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4.000 PSI 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 /
- 7. AIR—ENTRAINING SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM 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. 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 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.
- WITH A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS. 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

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 OVFR 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

WATER UTILITY OPERATOR. 33 30 00 - SANITARY SEWERAGE

UNLESS NOTED OTHERWISE.

- 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
- 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

CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.

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

- 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. 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,
- 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.
- 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

21. TRACER WIRE SHALL BE BROWN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.1 OF SSSWCW ON ALL BURIED

- 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.



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SCALE: N.T.S. JOB NO. **3220213**

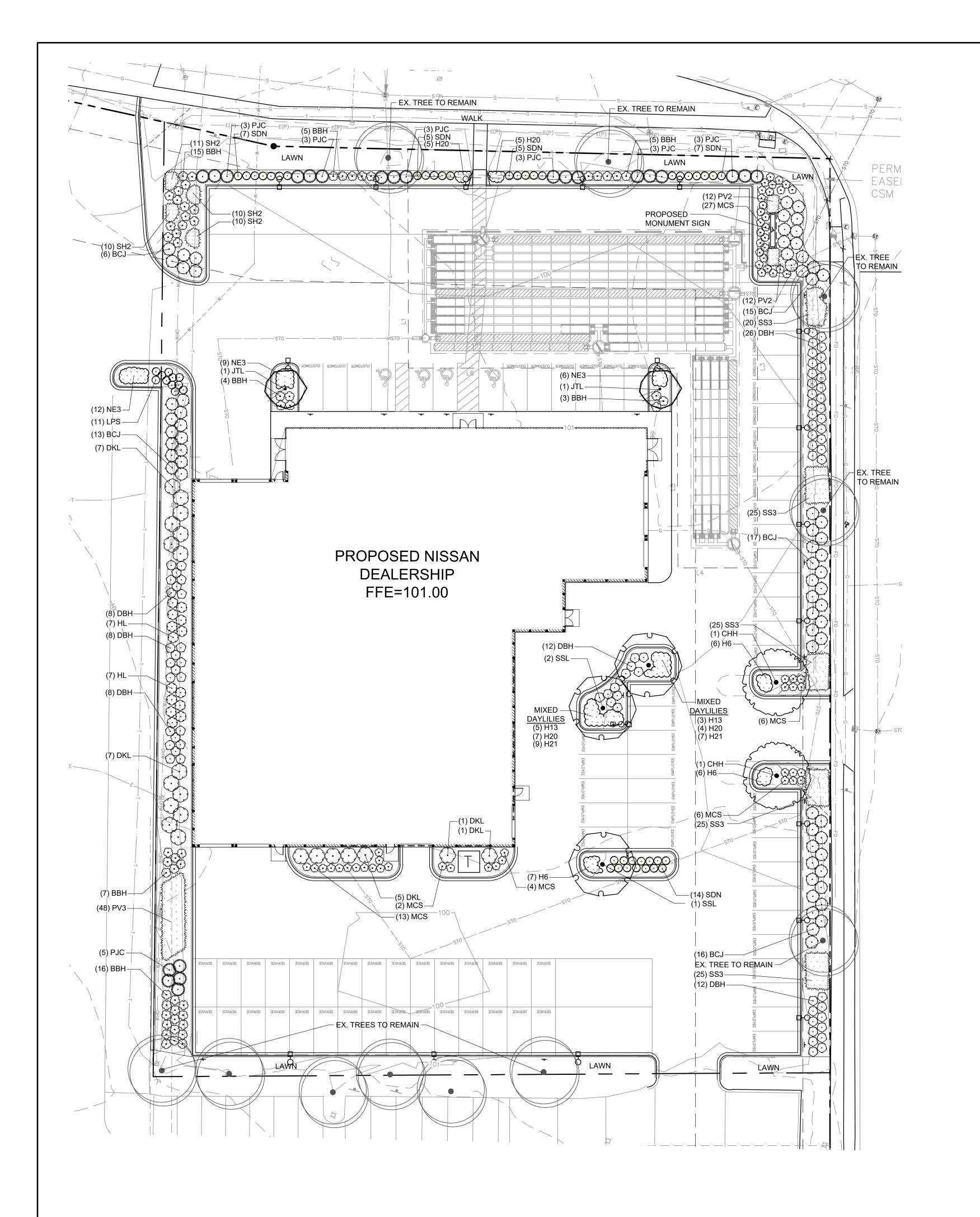
R.A. Smith, Inc.

DATE: **5/30/2023**

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

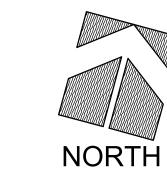
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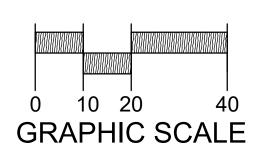
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DECIDUOUS TREES CHH SSL	QTY 2 3	COMMON NAME Chicagoland Hackberry Sweet Street Linden	BOTANICAL NAME Celtis occidentalis `Chicagoland` Tilia americana `Kromm`	<u>SIZE</u> 2" CAL 2" CAL	ROOT B&B B&B	REMARKS Full, matching heads Full, matching heads
ORNAMENTAL TREES JTL	QTY 2	COMMON NAME Ivory Silk Japanese Tree Lilac	BOTANICAL NAME Syringa reticulata `Ivory Silk`	SIZE 2" CAL	ROOT B&B	REMARKS Full, matching heads
DECIDUOUS SHRUBS SDN DBH BBH HL MCS LPS DKL	QTY 38 74 55 14 58 11 21	COMMON NAME Nikko Slender Deutzia Dwarf Bush Honeysuckle BoBo Hydrangea Little Quick Fire Hydrangea Magic Carpet Spirea Little Princess Spirea Dwarf Korean Lilac	BOTANICAL NAME Deutzia gracilis `Nikko` Diervilla lonicera Hydrangea paniculata `ILVOBO`` Hydrangea paniculata `Little Quick Fire` Spiraea japonica `Magic Carpet` Spiraea x japonica `Little Princess` Syringa meyeri `Palibin`	SIZE 15" HT 15" HT 24" HT 24" 15" HT 15" HT 24" HT	ROOT CONT. CONT. CONT. CONT. CONT. CONT. CONT.	<u>REMARKS</u>
EVERGREEN SHRUBS PJC BCJ	QTY 23 67	COMMON NAME Kallay Compact Pfitzer Juniper Blue Chip Juniper	BOTANICAL NAME Juniperus chinensis `Kallays Compact` Juniperus horizontalis `Blue Chip`	<u>SIZE</u> 18"SPD 18"SPD	ROOT CONT. CONT.	<u>REMARKS</u>
ORNAMENTAL GRASSES PV2 PV3 SS3 SH2	QTY 24 48 120 41	COMMON NAME Cheyenne Sky Switch Grass Heavy Metal Switch Grass Carousel Little Bluestem Grass Tara Prairie Dropseed	BOTANICAL NAME Panicum virgatum `Cheyenne Sky` Panicum virgatum `Heavy Metal` Schizachyrium scoparium `Carousel Sporobolus heterolepis `Tara`	SIZE 1 GAL 1 GAL 1 GAL 1 GAL	ROOT POT POT POT POT	REMARKS 18" Spacing 30" Spacing 24" Spacing 18" Spacing
PERENNIALS H6 H13 H20 H21 NE3	QTY 19 8 21 16 27	COMMON NAME Little Business Daylily Mini Pearl Daylily Rosy Returns Daylily Stella de Oro Daylily Walkers Low Catmint	BOTANICAL NAME Hemerocallis x `Little Business` Hemerocallis x `Mini Pearl` Hemerocallis x `Rosy Returns` Hemerocallis x `Stella de Oro` Nepeta x faassenii `Walkers Low`	SIZE 1 GAL 4 1/2" 1 GAL 4 1/2" 4 1/2"	ROOT POT POT POT POT POT	REMARKS 24" Spacing 18" Spacing 18" Spacing 18" Spacing 24" Spacing







Know what's below.

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NISSAN WAUKESHA	CITY OF WAUKESHA, WISCONSIN	I ANDSCAPE PI AN

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DATE: 5/30/2023

SCALE: 1" = 20'

JOB NO. **3220213**

PROJECT MANAGER:

DESIGNED BY: NJW

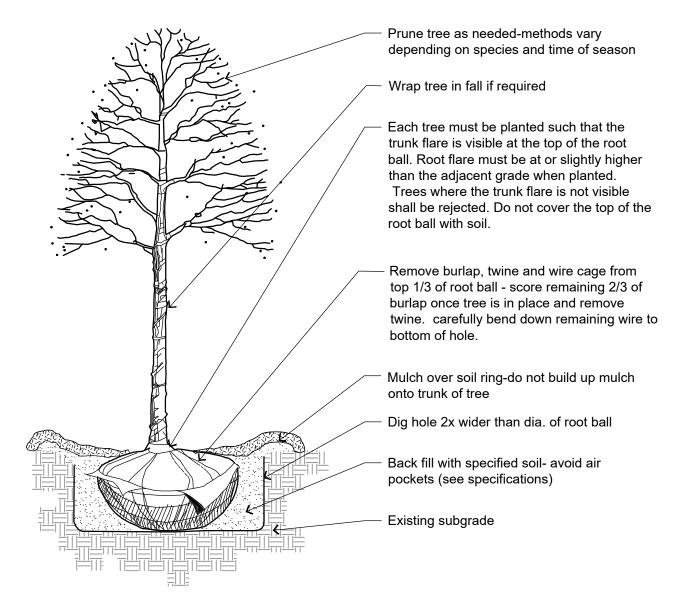
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RYAN J. LANCOUR, P.E.

SHEET NUMBER

L100

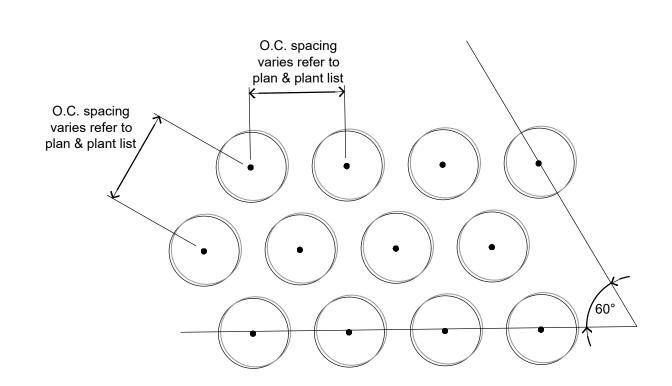
PLANTING DETAILS

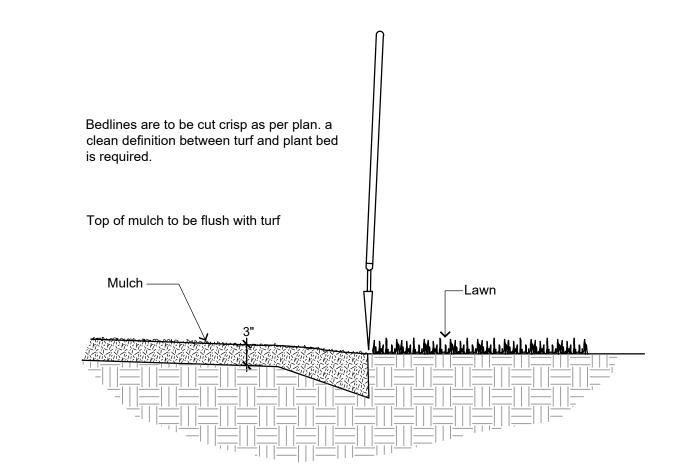


Prune cut dead and broken branches retain natural plant shape Plant at same depth as previous level — Do not bury any bottom branches brown branches Dig hole 2x wider than dia. of root ball —Finished grade-− mulch level -Planting mix— (see specifications) Balled & Burlapped Container grown Remove burlap 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 PLANTING DETAIL









SHOVEL CUT PLANT BED EDGING DETAIL

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DIVISION 1 - GENERAL REQUIREMENTS

01 5 00 Substitution Procedures

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

01 11 13 Work Covered by Contract Documents

1. Warranty and replacements: All plants (trees, evergreens, shrubs, perennials and ornamental grasses shall be warranted by the landscape contractor to be in healthy and flourishing condition for a period of one calendar year after the date of acceptance. This assumes the owner performs required maintenance (i.e. regular watering) after the landscape contractor's maintenance period has been completed. Landscape contractor shall inform owner when required maintenance has concluded. 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. The landscape contractor is responsible for the watering and maintenance of all landscape areas at time of planting, throughout construction and until the substantial completion of the installation and acceptance by the owner. This includes all trees, shrubs, evergreens, perennials, ornamental grasses and turf grass. Work also includes weeding, edging, mulching (only if required), fertilizing, trimming, mowing lawn areas, sweeping up grass clippings, pruning and deadheading.
- 3. 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 lawn 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 landscape architect and general contractor of date(s) when planting shall commence.

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.
- 3. Plant bed preparation: the soil in all perennial and ornamental grass areas shall be amended with compost prior to plant installation. Spread a 2" layer of compost (per note below) on top of clean topsoil and rototill to a depth of approximately 8".
- 4. Compost shall be stable, and weed-free organic matter. It shall be resistant to further decomposition and free of compounds, such as ammonia and organic acids, in concentrations toxic to plant growth. The compost shall contain no pathogens or other chemical contaminants and meet the requirements of WisDNR S100 Compost Specification.

32 91 13.16 Mulching

1. All tree and shrub planting beds to receive a 3" deep layer of high quality shredded hardwood bark mulch (not enviromulch or wood chips). Mulch shall be uniform in size, color, quality and overall appearance. Mulch shall be free of debris, large wood chunks, soil, rocks, weeds, invasive plant parts or seeds and any other material injurious to plant growth. All perennial and ornamental grass planting areas to receive a 2" layer of the same mulch. Do not allow mulch to contact plant stems and tree trunks.

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. Subgrade areas shall be graded to within 1", more or less, of proposed subgrade. Deviations shall not be consistent in one direction.
- 3. Topsoil shall be placed to meet proposed finished grade. Planting islands 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. All other landscaped areas to receive a minimum depth of 3" of clean topsoil (per note below).
- 4. Topsoil shall be: screened existing stockpiled topsoil, existing in-place soil, or screened soil from an off-site source that will support plant growth, and meets the following requirements. Clean topsoil 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. Topsoil shall contain 3 to 5 percent decomposed organic matter and a pH between 5.5 and 7.0.
- 5. 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 for 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, allowing for mulch depth. 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.
- 6. 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

32 92 00 - TURF AND GRASSES

32 92 19 Seeding

- 1. Seed for 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 installation.
- 2. Erosion control measures are to be used in swales and on steep grades, where applicable.
- 3. If straw mulch is used as a covering for seeding, a tackifier may be necessary to avoid wind damage.
- 4. 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
- 5. An acceptable quality seed installation is defined as having:
- a. No bare spots larger than 1/2 square foot
- b. No more than 5% of the total area with bare spots larger than 1/2 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.

32 93 33 Shrubs

- 1. Shrubs shall be planted per planting details.
- 2. All shrubs to be pocket planted with a mix of 75% existing soil removed from excavation and 25% compost, blended prior to backfilling holes.
- 3. When hole is two-thirds full, shrubs shall be watered thoroughly and water left to soak in before proceeding.

32 93 43 Trees

- 1. 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 75% existing soil removed from excavation and 25% compost 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. 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 per detail and remove at the end of the one year warranty period.

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.

DATE	DESCRIPTION				
	DATE				

Blue, WI 53(



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DATE: 5/30/2023

SCALE: NTS JOB NO. **3220213**

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

DESIGNED BY: NJW

CHECKED BY: RJL SHEET NUMBER

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