

EXISTING CONDITIONS



Northwest Corner



Southwest Corner



South Street



Northeast Corner

BUILDING 1

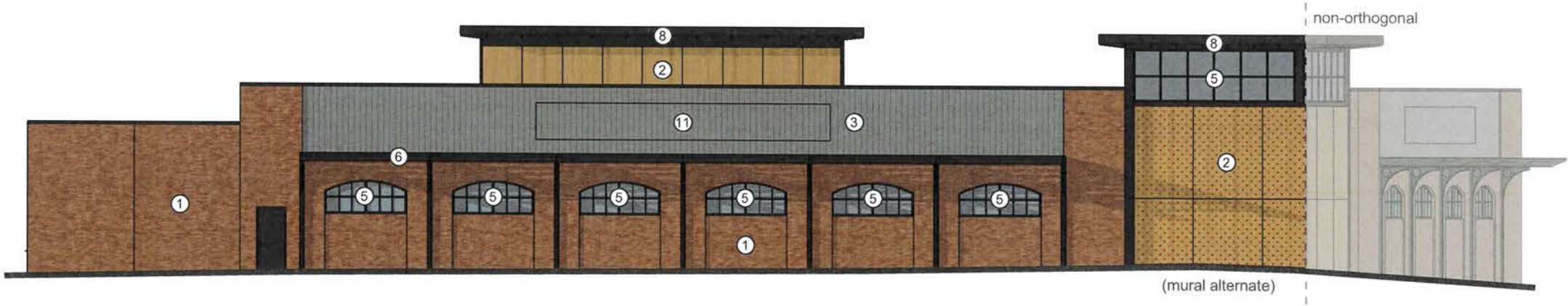
South
1/16" = 1'-0"



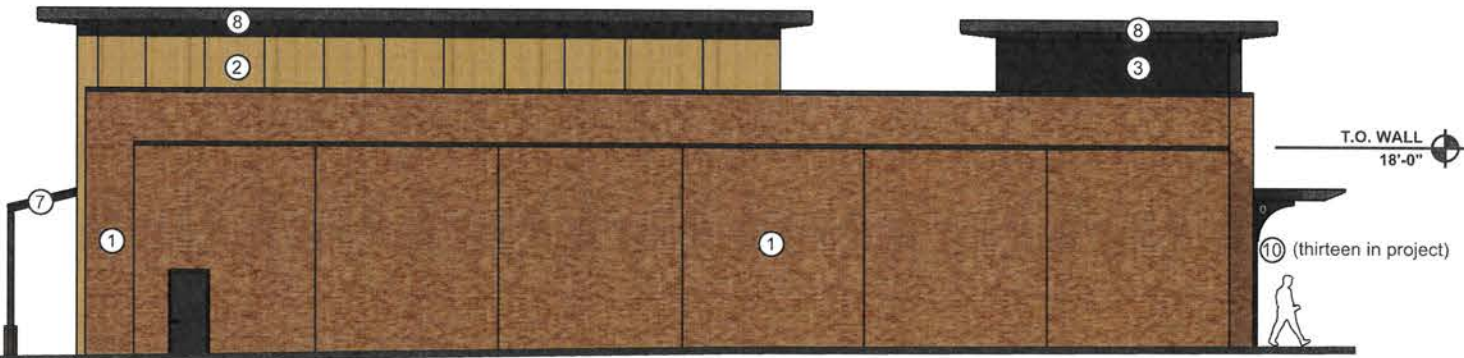
West
1/16" = 1'-0"



North
1/16" = 1'-0"



East
1/16" = 1'-0"



BUILDING 1 - ELEVATION NOTES

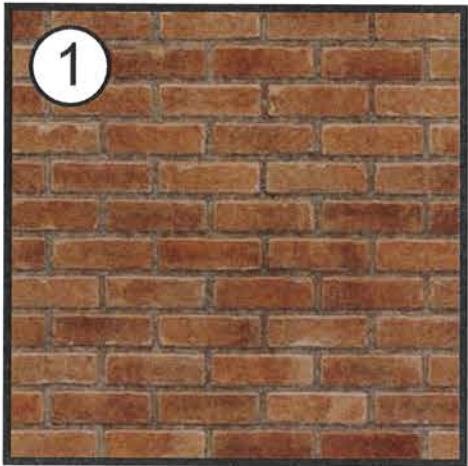
- 1 Brick: color red
- 2 Wood-look phenolic panel
- 3 Corrugated metal panel: color gray/dark gray
- 4 Aluminum storefront window system: color dark bronze
- 5 Spandrel glass in aluminum storefront: color dark bronze
- 6 C-channel metal accent painted: color gray
- 7 Standing seam metal roof: color gray, over exposed steel structure painted: color dark gray
- 8 Brake metal roof overhang w/ outriggers
- 9 Overhead garage door
- 10 Metal sunshade style overhang painted: color dark gray
- 11 Tenant signage for approximate location, final approval at later date

Notes do not align between buildings
Scale does not align between buildings

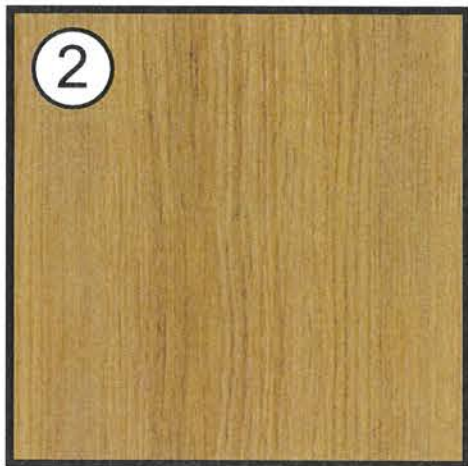
Artistic and/or computer renderings are not a contractual representation of the finished product and GROTH Design Group makes no warranties and representations that the depictions of such renderings will be replicated in the finished product. Client acknowledges and agrees that the terms of the contract, not the renderings shall control.

MATERIAL PALETTE

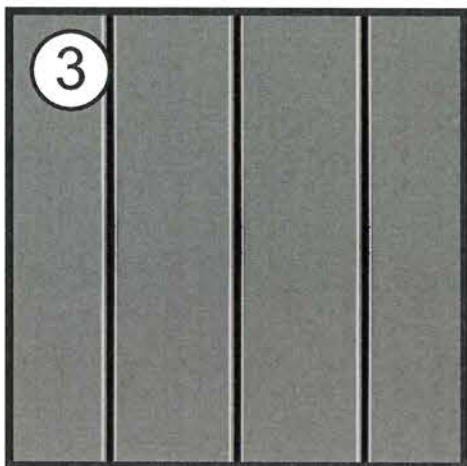
Building 1



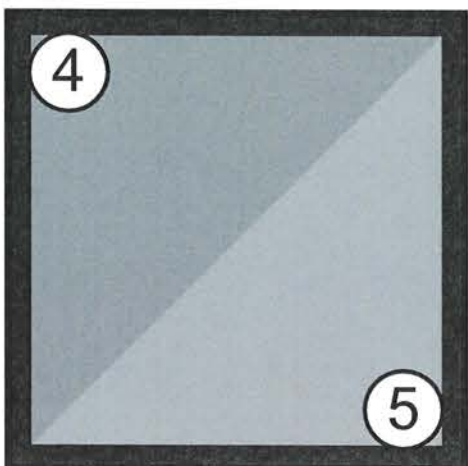
Brick: color red



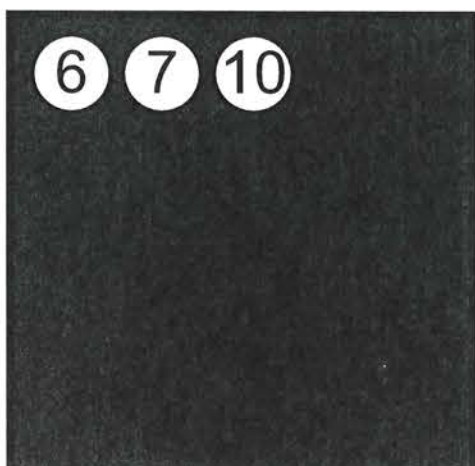
Wood-look phenolic panel



Corrugated metal panel:
color gray

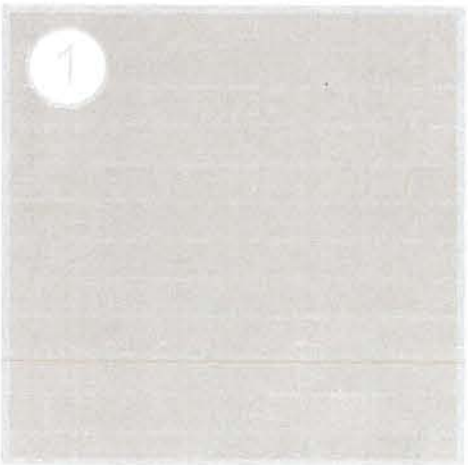


Clear/Spandrel glass in aluminum
storefront: color dark bronze

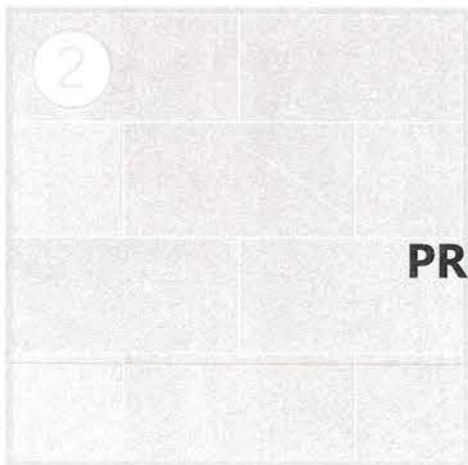


Painted metal: color dark gray

Building 2



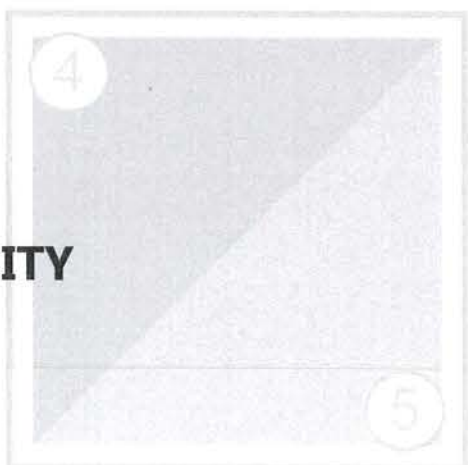
Brick, color red



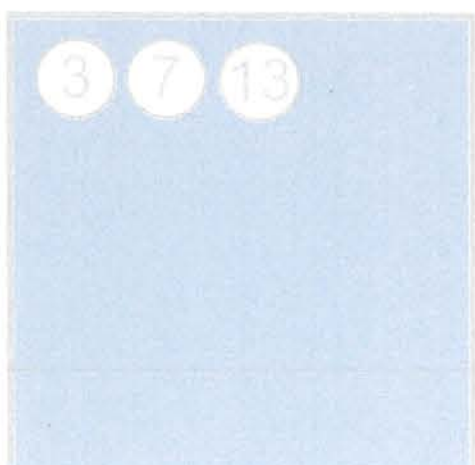
Wood-grain phenolic panel:
color cream



Corrugated metal panel:
color gray



Clear/Spandrel glass in aluminum
storefront: color clear with red seal



Painted metal: color blue

PREVIOUSLY APPROVED BY CITY

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Northwest Corner - Tower (Mural alternate)

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Northwest Corner - Tower



Southwest Corner

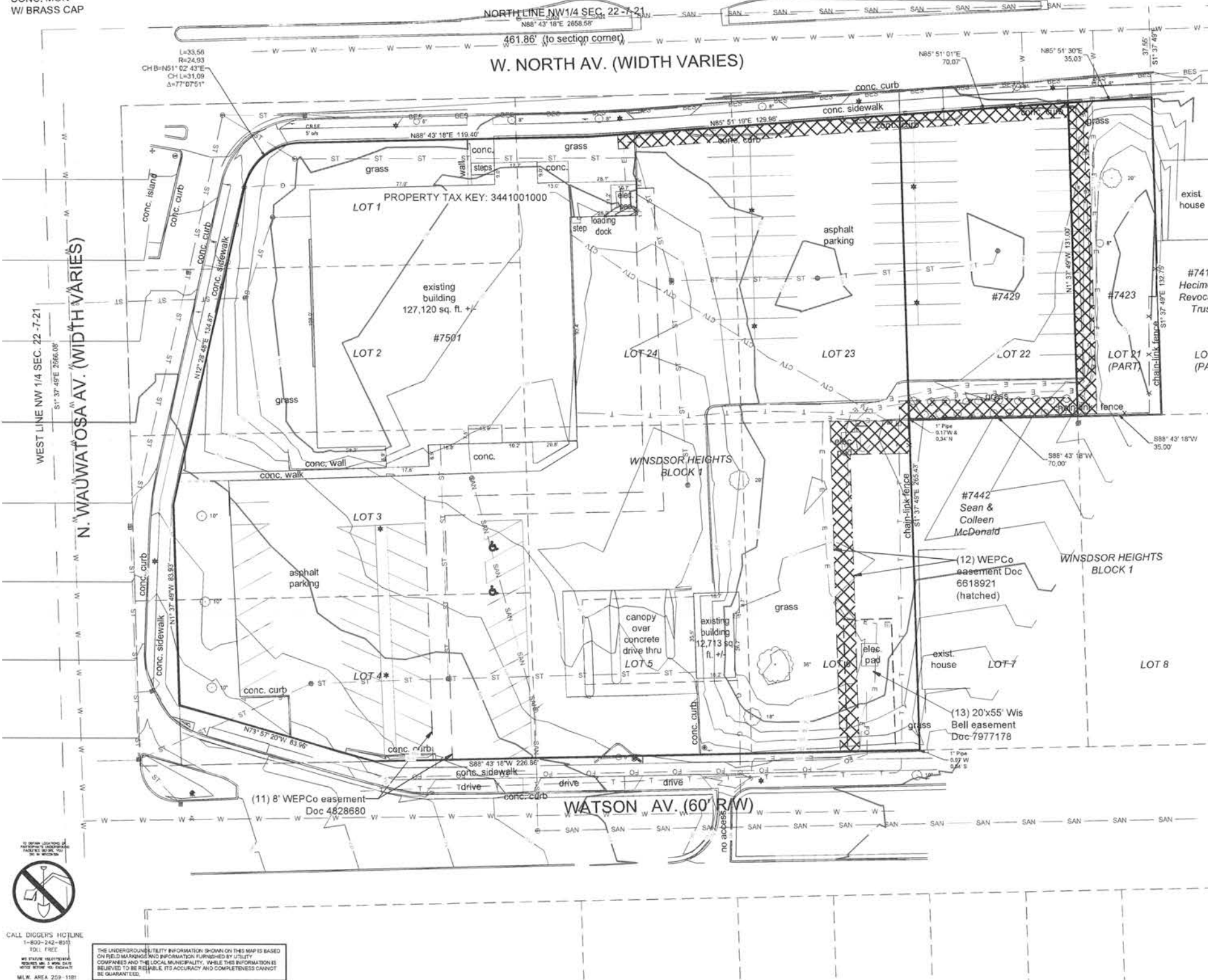


South Lot - Pedestrian Entry

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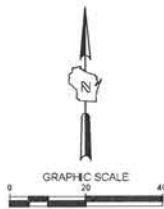
2026.07.08

NW Corner
SEC. 22 - 7-21
CONC. MON
W/ BRASS CAP



LEGEND:	
SECTION 1/4 SECTION LINE	
PROPERTY LINE	
EASEMENT	
CHAIN LINK FENCE	
GUARD RAIL	
METAL FENCE	
WOOD FENCE	
TREE LINE	
OVERHEAD UTILITY LINE	
ELECTRIC	
TELEPHONE	
FIBER OPTIC	
CABLE TV	
SANITARY SEWER	
FORCE MAIN	
STORM SEWER	
WATER MAIN	
GAS	
EXISTING CONTOUR	
WETLAND	
FLOODPLAIN	
UNKNOWN MANHOLE	IRON PIPE FOUND/SET
SANITARY MANHOLE	REBAR FOUND/SET
STORM MANHOLE	CHISELED CROSS FOUND/SET
ELECTRIC MANHOLE	PK NAIL FOUND/SET
MMSD MANHOLE	SPIKE NAIL
TELEPHONE MANHOLE	MONUMENT
CLEANOUT	BENCHMARK
CATCH BASIN	SIGN
CATCH BASIN (ROUND)	PARKING METER
ROOF DRAIN	FLAG POLE
CULVERT END	DECIDUOUS TREE
HYDRANT	CONIFEROUS TREE
WATER VALVE	BUSH
GAS VALVE	POST
GAS METER	SOIL BORING
ELECTRIC METER	TRAFFIC SIGNAL
UTILITY PEDESTAL	LIGHT POLE
HANDHOLE	UTILITY POLE
VENT	GUY WIRE
MONITORING WELL	GUY POLE

SIGMA GROUP
Single Source. Smart Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210



WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

SITE SURVEY

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2025
DRS SUBMITTAL	05/27/2025
DRS SUBMITTAL	07/09/2025

NO. REVISION	DATE
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- GENERAL NOTES
1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
 2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
 3. DRAWING IS BASED ON FIELD SURVEY COMPLETED BY THE SIGMA GROUP ON 05/25/2017.
 4. DATUM FOR THE PROJECT SURVEY IS NAD83 1923. BENCHMARK FOR THE PROJECT SURVEY IS THE TOP NUT ON THE HYDRANT SOUTHWEST OF THE SITE, ELEV=163.47.
 5. CONTRACTOR TO VERIFY EXISTING CONDITIONS. CONTACT ENGINEER WITH DISCREPANCIES.

PROJECT NO.	25057
DESIGN DATE	---
PLOT DATE	2026.07.08
DRAWN BY	JMJ
CHECKED BY	PJJ
APPROVED BY	---
SHEET NO.	C001

CALL DIGGERS HOTLINE:
1-800-242-8051
TOLL FREE
NO FEE FOR SERVICE
IF YOU ARE NOT SURE
OF THE LOCATION
OF THE UTILITY
CALL 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.



THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

- CONSTRUCTION SEQUENCE:**
1. EARTHWORK FOR NEW BANK - START 10/2026
 2. NEW BANK - START 11/2026
 3. NEW BANK - COMPLETE 07/2027
 4. DEMO OLD BANK - START 07/2027
 5. NEW GROCERY - START 08/2027
 6. NEW GROCERY COMPLETE 06/2028

- GENERAL NOTES:**
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 3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
 4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON-COM. GITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
 5. SEE SHEET C400 FOR A COMPLETE LIST OF EROSION CONTROL NOTES AND DETAILS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO START OF LAND DISTURBING ACTIVITIES.
 6. DO NOT BEGIN LAND DISTURBING ACTIVITIES UNTIL AN EROSION CONTROL PERMIT IS OBTAINED FROM LOCAL JURISDICTION.
 7. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY REQUIRES A STREET OCCUPANCY PERMIT FROM THE CITY.

SITE PREPARATION AND EROSION CONTROL PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2021
DRB SUBMITTAL	05/27/2021
DRB SUBMITTAL	07/09/2021

NO REVISION DATE

PROJECT NO:	25057
DESIGN DATE:	—
PLOT DATE:	2026.07.08
DRAWN BY:	JMJ
CHECKED BY:	PJL
APPROVED BY:	—
SHEET NO:	

C002



THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

LEGEND:

		8" THICK CONCRETE WALK
		CONCRETE PAVEMENT
		ASPHALT SURFACE
		HEAVY-DUTY ASPHALT SURFACE
		CURB & GUTTER (ACCEPT)



WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

SITE PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2021
DRB SUBMITTAL	05/27/2021
DRB SUBMITTAL	07/09/2021

NO REVISION DATE

PROJECT NO.	25057
DESIGN DATE	—
PLOT DATE	2026.07.08
DRAWN BY	JMJ
CHECKED BY	PJl
APPROVED BY	—
SHEET NO.	

C100

- GENERAL NOTES:**
1. THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE SHALL BE A DEDICATED UTILITY LOCATING UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
 2. VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
 3. WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
 4. ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. FOR ALL ELECTRICAL AND MECHANICAL WORK, REFER TO THE COLUMNS, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
 5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
 6. WORK WITHIN THE PUBLIC RIGHT OF WAY, INCLUDING BUT NOT LIMITED TO DRIVEWAY OPENINGS, SIDEWALK AND RAMP, PAVING, AND SIGN AND GUETER SHALL BE COMPLETED PER MUNICIPAL AND/OR COUNTY REQUIREMENTS AND STANDARDS.
 7. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY REQUIRES A STREET OCCUPANCY PERMIT FROM THE CITY.
 8. EARTHWORK SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

2026.07.08

JARGOS

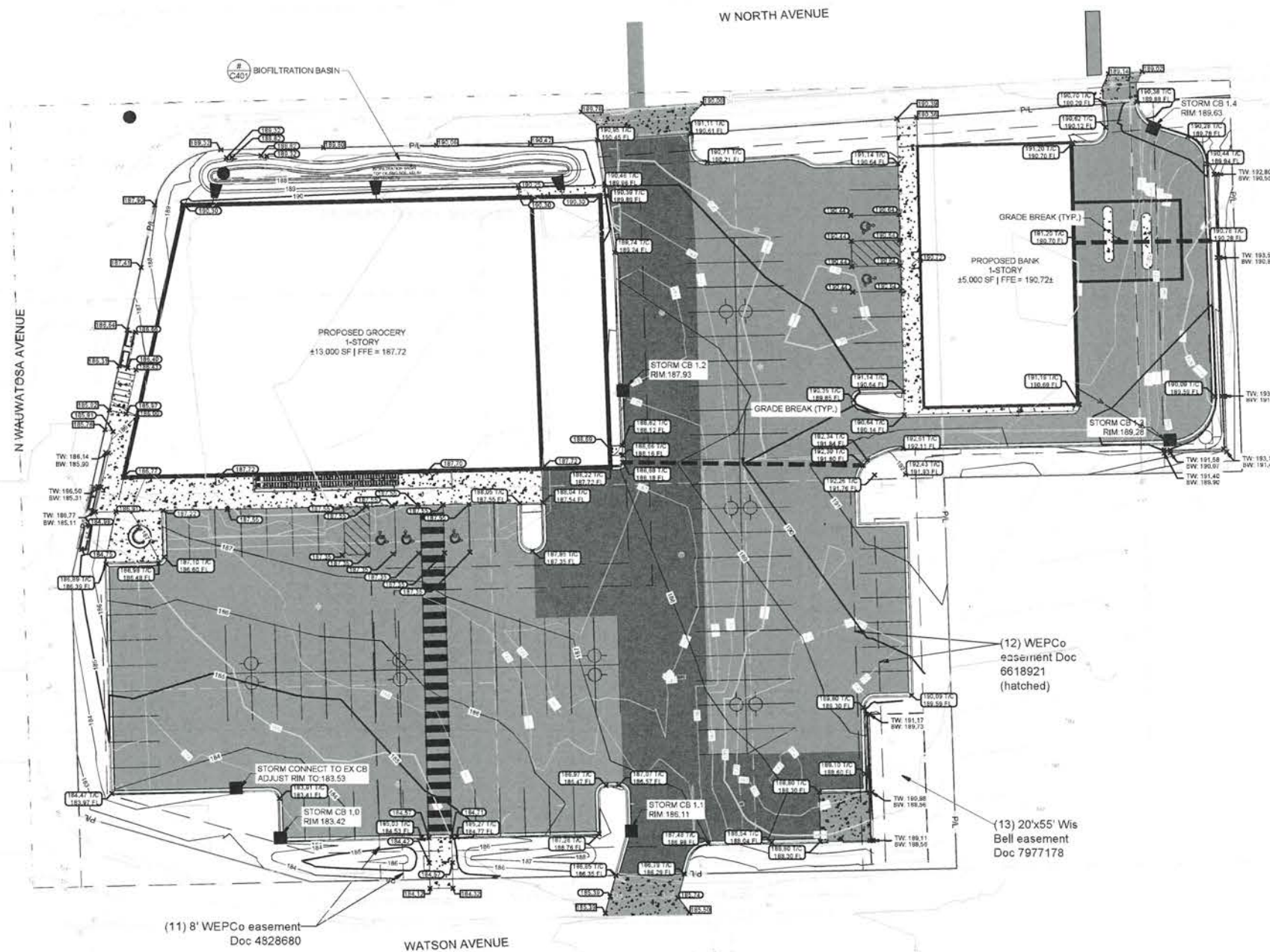
C200

25057



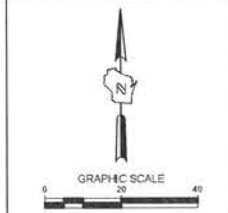
CALL DIGGERS HOTLINE:
1-800-242-8511
TOLL FREE
BY OTHER RESPONSIBILITY
NOTED ON 3/20/24
MILWAUKEE COUNTY
MILWAUKEE AREA 229-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.



- LEGEND:**
- 5" THICK CONCRETE WALK
 - CONCRETE PAVEMENT
 - ASPHALT SURFACE
 - HEAVY-DUTY ASPHALT SURFACE
 - CURB & GUTTER (ACCEPT)
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED CURB & GUTTER SPOT GRADE
 - T/C: TOP OF CURB GRADE
 - FL: FLOW LINE CURB GRADE
 - PROPOSED SURFACE SPOT GRADE
 - EXISTING SURFACE SPOT GRADE (MATCH)
 - GRADE BREAK LINE
 - PROPOSED TOP OF WALL AT FINISHED GRADE
 - PROPOSED BOTTOM OF WALL AT FINISHED GRADE

THE SIGMA GROUP
Single Source. Smart Solutions.
www.thesignagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210



WAWATOSA GROCERY
7501 W. NORTH AVENUE
WAWATOSA, WI

GRADING PLAN

**PRELIMINARY
NOT FOR
CONSTRUCTION**

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2026
DRB SUBMITTAL	05/27/2026
DRS SUBMITTAL	07/09/2026

NO. REVISION DATE

PROJECT NO.	25057
DESIGN DATE	---
PLOT DATE	2026.07.08
DRAWN BY	JMJ
CHECKED BY	PJL
APPROVED BY	---
SHEET NO.	---

C200

- GENERAL NOTES:**
- THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
 - VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
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 - DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
 - WORK WITHIN THE PUBLIC RIGHT OF WAY, INCLUDING BUT NOT LIMITED TO DRIVEWAY OPENINGS, SIDEWALK AND RAMPS, PAVING, AND CURB AND GUTTER SHALL BE COMPLETED PER MUNICIPAL AND/OR COUNTY REQUIREMENTS AND STANDARDS.
 - ALL WORK WITHIN THE PUBLIC RIGHT OF WAY REQUIRES A STREET OCCUPANCY PERMIT FROM THE CITY.
 - EARTHWORK SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

2026.07.08

JUNROS

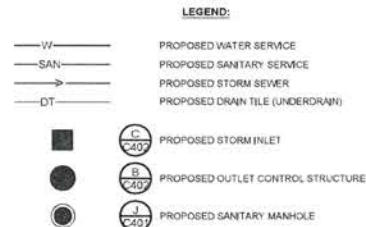
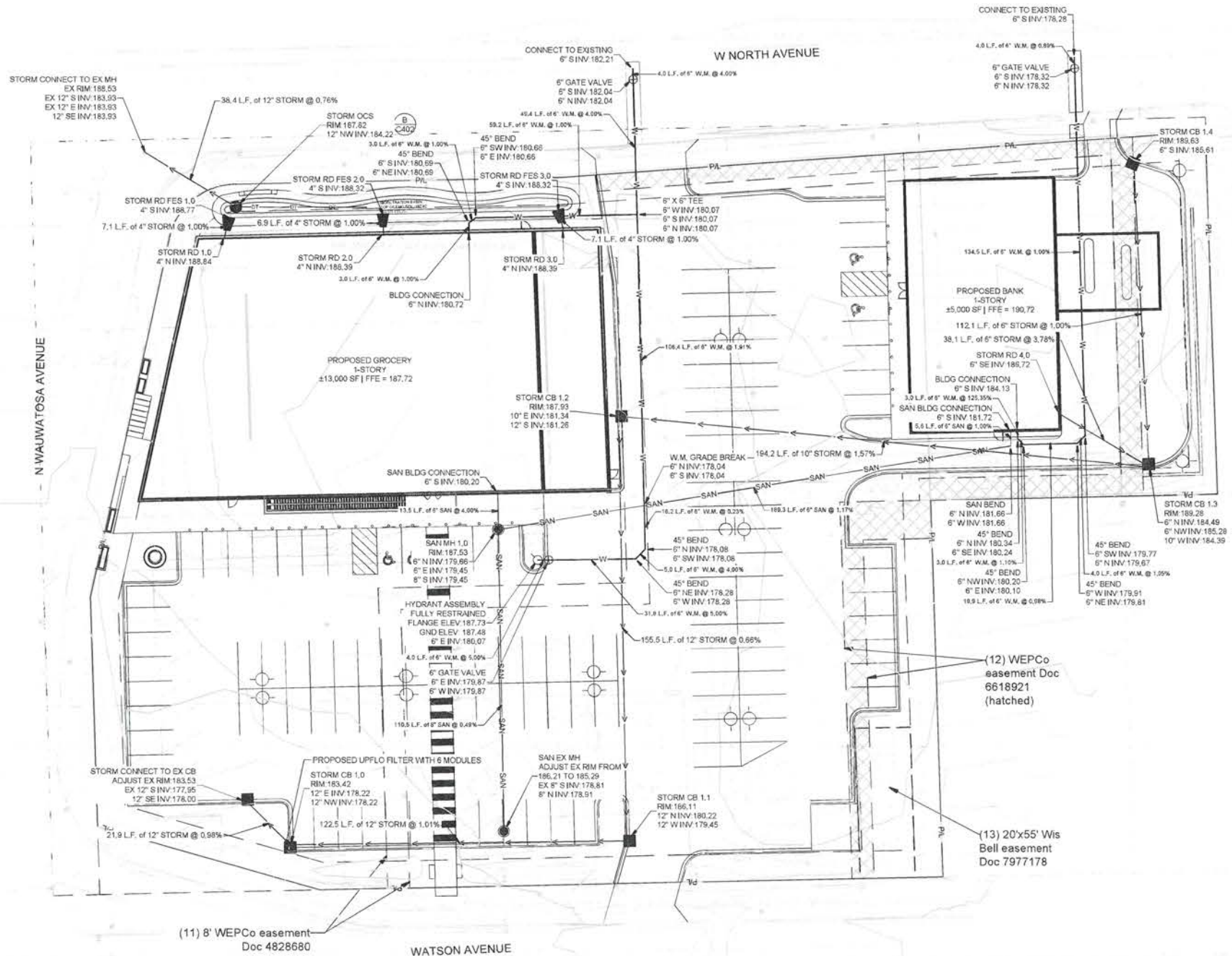
C300

25057



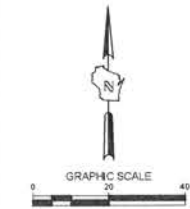
CALL DIGGERS' HOTLINE:
1-800-242-8511
TOLL FREE
IF ANY EXISTING UTILITIES
ARE NOT SHOWN ON THIS PLAN,
THEY SHALL BE LOCATED
BY THE CONTRACTOR
M.L.R. AREA 229-1181

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 - ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
 - PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUDS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
 - WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
 - ALL WORK WITHIN THE PUBLIC RIGHT OF WAY REQUIRES A STREET OCCUPANCY PERMIT FROM THE CITY.
 - PRIVATE STORM SEWER 12-INCH DIAMETER OR LARGER SHALL BE HDPE. BELOW 12-INCH DIAMETER SHALL BE PVC SDR-35 ASTM D3034. PRIVATE WATER MAIN SHALL BE CLASS 200 OR 15 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
 - COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES.
 - IF PROJECT IS DESIGN BUILD MEP, THE GENERAL CONTRACTOR IS REQUIRED TO PROVIDE FINAL SEWER AND WATER DESIGN SHOWING LOCATION, INVERTS, AND SIZES TO THE ENGINEER FOR FINAL REVIEW AND VERIFICATION PRIOR TO STARTING UNDERGROUND UTILITY CONSTRUCTION.
 - WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS SHALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGA-LUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKS AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS.
 - INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGA-LUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER FILE NO. S-44-46-46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS.

SIGMA GROUP
Single Source. Smart Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210



WAWATOSA GROCERY
7501 W. NORTH AVENUE
WAWATOSA, WI

UTILITY PLAN

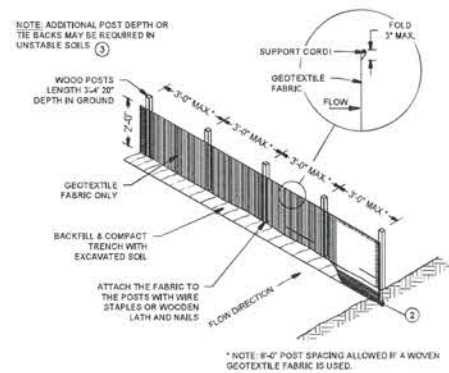
PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2026
DRS SUBMITTAL	05/27/2026
DRS SUBMITTAL	07/26/2026

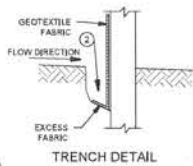
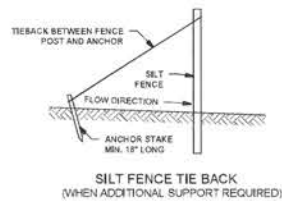
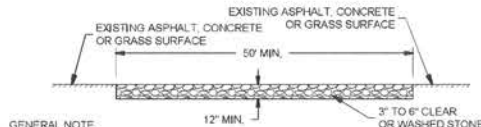
NO.	REVISION	DATE
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PROJECT NO.	25057
DESIGN DATE	—
PLOT DATE	2026.07.08
DRAWN BY	JMJ
CHECKED BY	PJL
APPROVED BY	—
SHEET NO.	—

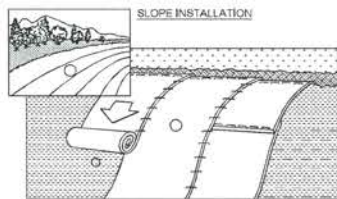
C300



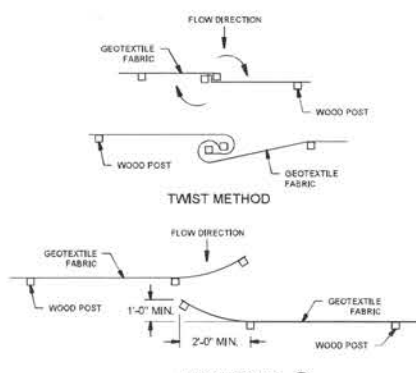
SILT FENCE

**A** SILT FENCE - WDNR TS-1056
SCALE: NTS**C** CONSTRUCTION ENTRANCE - WDNR TS-1057
SCALE: NTS

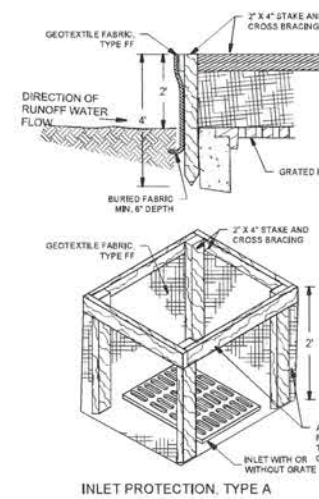
- GENERAL NOTE:
1. STONE TRACKING PAD SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1057.
 2. AN APPROVED MANUFACTURED TRACKOUT CONTROL DEVICE SYSTEM CONFORMING TO WDNR TECHNICAL STANDARD #1057 MAY BE USED AS AN ALTERNATIVE TO A STONE TRACKING PAD.

**D** EROSION MATTING - WDNR TS-1052
SCALE: NTS

- NOTES:
1. ECRMs (EROSION CONTROL REVEGATIVE MATS) SHALL BE INSTALLED AFTER ALL TOPSOILING, FERTILIZING, LIMING, AND SEEDING IS COMPLETE.
 2. THE MAT SHALL BE IN FIRM AND INTIMATE CONTACT WITH THE SOIL. IT SHALL BE INSTALLED AND ANCHORED PER THE MANUFACTURER'S RECOMMENDATION.
 3. TRMs (TURF-REINFORCEMENT MAT) SHALL BE INSTALLED IN CONJUNCTION WITH THE TOPSOILING OPERATION AND SHALL BE FOLLOWED BY ECRM INSTALLATION.
 4. AT TIME OF INSTALLATION, DOCUMENT THE MANUFACTURER AND MAT TYPE BY RETENTION OF MATERIAL LABELS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. RETAIN THIS DOCUMENTATION UNTIL THE SITE HAS BEEN STABILIZED.
 5. EROSION MATTING SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1052.
 6. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 7. TRM MAT INSTALLED LOCATION SHALL BE ASBUILT PRIOR TO TOPSOIL AND ECRM MAT PLACEMENT.

JOINING TWO LENGTHS OF SILT FENCE
HOOK METHOD

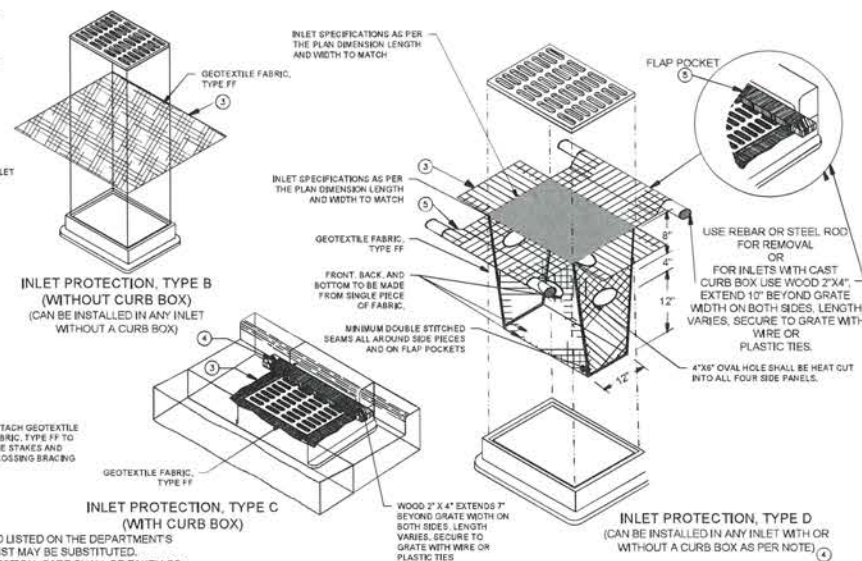
- GENERAL NOTES:
1. HORIZONTAL BRACE REQUIRED WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
 2. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 8" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH & BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
 3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1-1/2" X 1-1/2" OF OAK OR HICKORY.
 4. WHERE SILT FENCE CROSSES A CULVERT, EITHER GAP SILT FENCE OR ROUTE SILT FENCE OVER TOP OF CULVERT TO AVOID RESTRICTING FLOW OF WATER.
 5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ON THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TRIM OR ROTATE, AT LEAST 150 DEGREES. B) HOOK THE END OF EACH SILT FENCE LENGTHS.
 6. SILT FENCE SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1056.
 7. THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 10-2.



INLET PROTECTION, TYPE A

B INLET PROTECTION - WDNR TS-1060
SCALE: NTS

- GENERAL NOTES:
1. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENTS EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
 2. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
 3. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
 4. 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.
 5. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.
 6. INLET PROTECTION SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1060.
 7. THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 10-2.



INLET PROTECTION, TYPE B (WITHOUT CURB BOX) (CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)

INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

- TYPE B & C:
- 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 ENTERING THE INLET.
- TYPE D:
- 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. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" 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 PINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

EROSION CONTROL NOTES

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WAUWATOSA AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.
2. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE INTENDED PURPOSE IS ACCOMPLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY. DOCUMENT AND MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH WDNR NR216 REQUIREMENTS.
4. SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
5. FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
6. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.
7. PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN ADJACENT STREETS FREE OF DUST AND DIRT.
8. SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ANY TOPSOIL AND FILL STOCKPILES.
9. SITE DEWATERING: WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE MEASURES SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
10. WASTE AND MATERIAL DISPOSAL: ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
11. TRACKING: EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING. TO THE SATISFACTION OF THE CITY OF WAUWATOSA, BEFORE THE END OF EACH WORKDAY, FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR PRACTICE SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. NOTIFY MUNICIPALITY OF ANY CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.
12. SEDIMENT CLEANUP: ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORKDAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORKDAY.
13. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY SEEDING, MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT PRACTICE FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.
14. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILES. IF REMAINING FOR MORE THAN THIRTY DAYS, PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS OR OTHER MEANS.
15. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY PRACTICES, SUCH AS FILTER FABRIC FENCES, STRAW BALES, SEDIMENT AND SEDIMENT TRAPS, FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS SHALL BE REMOVED.
16. NOTIFY THE CITY OF WAUWATOSA HAVING JURISDICTION WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.
17. OBTAIN PERMISSION FROM THE LOCAL MUNICIPALITY HAVING JURISDICTION PRIOR TO MODIFYING THE EROSION CONTROL PLAN.
18. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
19. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.
20. CONTRACTOR SHALL TO THE EXTENT POSSIBLE, MINIMIZE DISTURBANCE OF EXISTING VEGETATION DURING CONSTRUCTION.
21. CONTRACTOR SHALL TO THE EXTENT POSSIBLE, MINIMIZE COMPACTION OF TOPSOIL AND PRESERVE TOPSOIL IN GREENSPACE AREAS.
22. WASH WATER FROM VEHICLES AND WHEEL WASHING SHALL BE CONTAINED AND TREATED PRIOR TO DISCHARGE.
23. CONTRACTOR SHALL MAINTAIN SPRINKLERS ON-SITE.
24. PERMANENT TURF SEEDING OF DISTURBED AREA MUST OCCUR PRIOR TO SEPTEMBER 15TH. IF ADEQUATE TIME IS NOT AVAILABLE TO APPLY PERMANENT SEEDING PRIOR TO SEPTEMBER 15TH, THEN DISTURBED AREAS SHALL BE TEMPORARILY SEEDDED WITH AN ANNUAL RYE GRASS PER WDNR TECHNICAL STANDARD 1059. WHERE THE TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED TO DISTURBED AREA PER WDNR TECHNICAL STANDARD 1059. INSPECT ANONIMOUS PAM APPLICATION AT A MINIMUM FREQUENCY OF EVERY TWO MONTHS AND REAPPLY AS NECESSARY.

WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

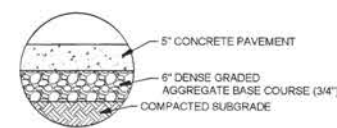
EROSION CONTROL DETAILS

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CONSTRUCTION**

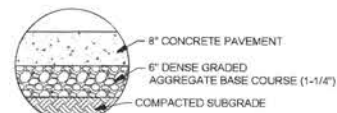
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CONDITIONAL USE SUBMITTAL	05/20/2026
DRB SUBMITTAL	05/27/2026
DRB SUBMITTAL	07/09/2026

NO. REVISION	DATE
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PROJECT NO.	25057
DESIGN DATE	---
PLOT DATE	2026.07.08
DRAWN BY	JMJ
CHECKED BY	PJH
APPROVED BY	---
SHEET NO.	C400



A CONCRETE SIDEWALK SECTION
SCALE: NTS

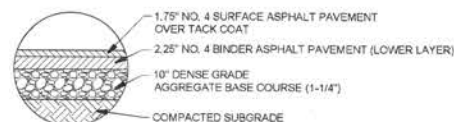


*CONTRACTOR SHALL PREPARE AND SUBMIT A CONCRETE POUR PLAN SHOWING ALL PLANNED CONTRACTION AND CONSTRUCTION JOINTS. LENGTH OF PANELS SHOULD NOT BE MORE THAN 25% GREATER THAN ITS WIDTH. JOINT SPACING (IN FEET) SHOULD NOT EXCEED 2.5 TIMES THE THICKNESS (IN INCHES) OF PAVEMENT. TIE BARS OR DOWEL BARS SHALL BE PLACED AT CONSTRUCTION JOINTS AS APPROPRIATE.

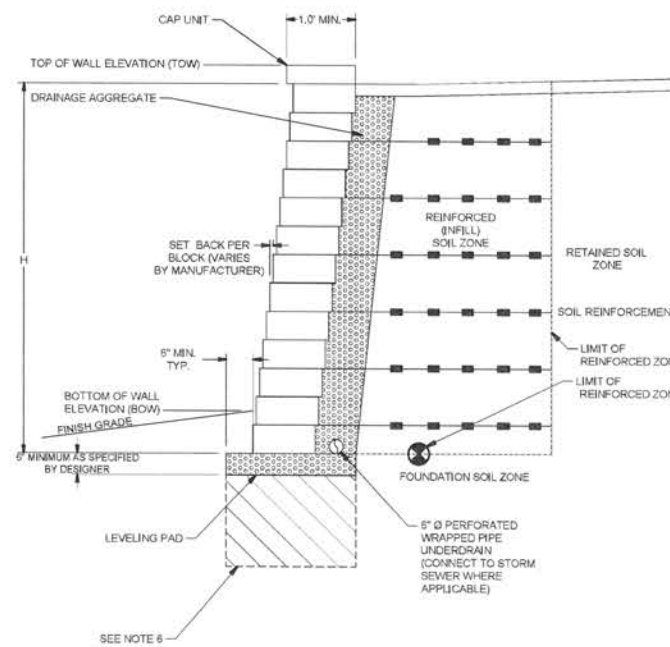
B CONCRETE PAVEMENT SECTION
SCALE: NTS



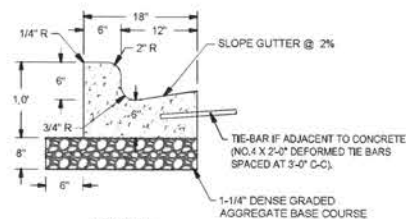
C ASPHALT PAVEMENT SECTION
SCALE: NTS



D ASPHALT PAVEMENT SECTION - HEAVY DUTY
SCALE: NTS

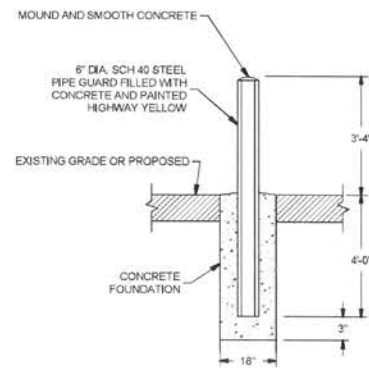


I MODULAR BLOCK MSE WALL
SCALE: NTS



NOTES:
1. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE. AGGREGATE PROVIDED A 6\"/>

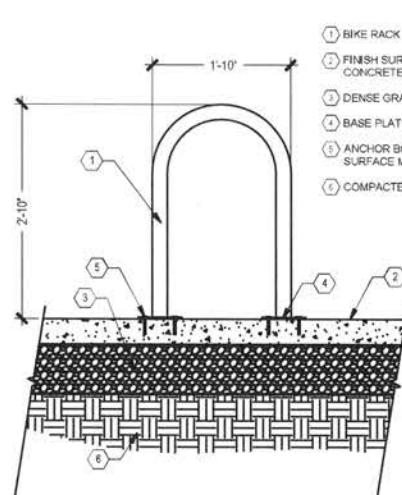
E 18 INCH CONCRETE CURB AND GUTTER
SCALE: NTS



H BOLLARD
SCALE: NTS

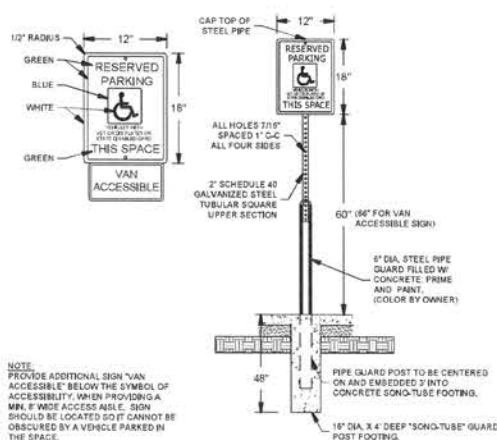
NOTES:

1. RETAINING WALL SYSTEM SHALL BE KEYSTONE, ROCKWOOD, OR APPROVED EQUAL.
2. TYPICAL SECTION IS FOR CONCEPTUAL DESIGN ONLY. THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND STAMPED AND SEALED SHOP DRAWINGS AND STABILITY CALCULATIONS FOR THE RETAINING WALLS TO THE ENGINEER. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF THESE ITEMS SHALL BE INCLUDED.
3. STAMPED AND SEALED RETAINING WALL DESIGN, PLANS, DETAILS AND CALCULATIONS SHALL BE PROVIDED TO THE CITY.
4. GEOTEXTILE REINFORCEMENT SPACING AND LENGTH PER MANUFACTURER'S ENGINEER RECOMMENDATIONS.
5. GEOTECHNICAL ENGINEER MAY REQUIRE THAT ADDITIONAL DRAIN PIPING IS NEEDED DEPENDENT UPON SOILS ENCOUNTERED DURING WALL CONSTRUCTION.
6. WALL LEVELING BASE TO BE VERIFIED WITH GEOTECHNICAL ENGINEER.
7. ANY SPECIAL TREATMENT SOILS BELOW LEVELING PAD WHICH ARE SUBJECT TO FROST HEAVE SHALL BE DESIGNED BY WALL ENGINEER OF RECORD.
8. PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.
9. THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET AND GRADING PLAN SHEETS.
10. STYLE AND COLOR OF THE MODULAR BLOCK SHALL BE SELECTED BY THE OWNER AND ARCHITECT.



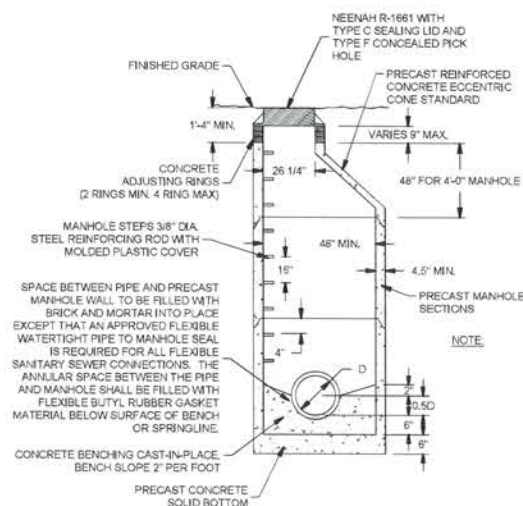
SECTION VIEW - SURFACE MOUNT

F BIKE RACK
SCALE: NTS



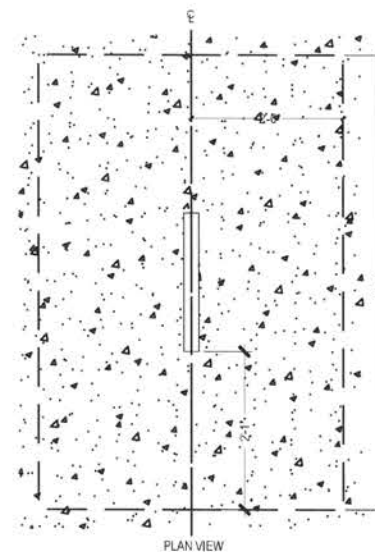
NOTE:
PROVIDE ADDITIONAL SIGN 'VAN ACCESSIBLE' BELOW THE SYMBOL OF ACCESSIBILITY WHEN PROVIDING A MIN. 8\"/>

G ADA SIGN AND BOLLARD POST
SCALE: NTS



J PRECAST SANITARY MANHOLE
SCALE: NTS

- NOTE:
1. BASIS OF DESIGN: 1 LOOP WAVE STYLE BIKE RACK AS MANUFACTURED BY ULINE
2. COLOR AND FINISH: GALVANIZED BLACK POWDER COAT
3. MOUNTING: SURFACE MOUNT
4. INSTALL PRE MANUFACTURER'S RECOMMENDATION
5. BIKE STALLS SHALL BE A MINIMUM OF 2' BY 6'. PLACEMENT SHALL NOT RESULT IN A BICYCLE OBSTRUCTING A WALKWAY.
6. RACKS SHALL BE SPACED MIN. 3'-0\"/>



PLAN VIEW

NOTES:

1. CONSTRUCT MANHOLE IN ACCORDANCE WITH FILE NO. 12 OF THE STATE STANDARD SPECIFICATIONS FOR SEWER AND WATER.
2. CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY RINGS SHALL BE GROOVED TO RECEIVE STEP.
3. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
4. JOINTS BETWEEN RINGS AND STRUCTURE SECTIONS SHALL BE WATERTIGHT AND SHALL BE MADE USING FLEXIBLE RUBBER TYPE GASKETS OR MORTAR.
5. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT MIN.
6. 3\"/>
7. ALL SANITARY MANHOLES SHALL BE PROVIDED WITH EXTERNAL CHIMNEY SEALS AND SELF-SEALING LIDS WITH CONCEALED PICK HOLES.
8. UNLESS NOTED ON THE PLANS, THE CONTRACTOR IS RESPONSIBLE FOR ALL MANHOLE SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.
9. MASTIC SEALS BETWEEN BARREL AND CONE SECTIONS

THE SIGMA GROUP
Single Source. Smart Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

DETAILS

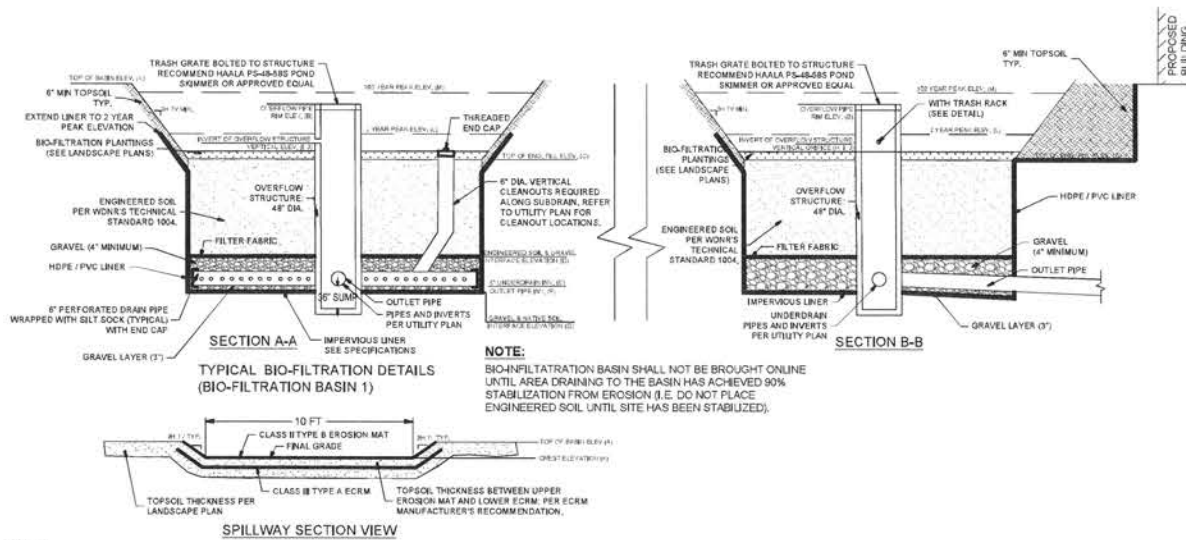
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CHECKED BY	PJI
APPROVED BY	---
SHEET NO.	---

C401

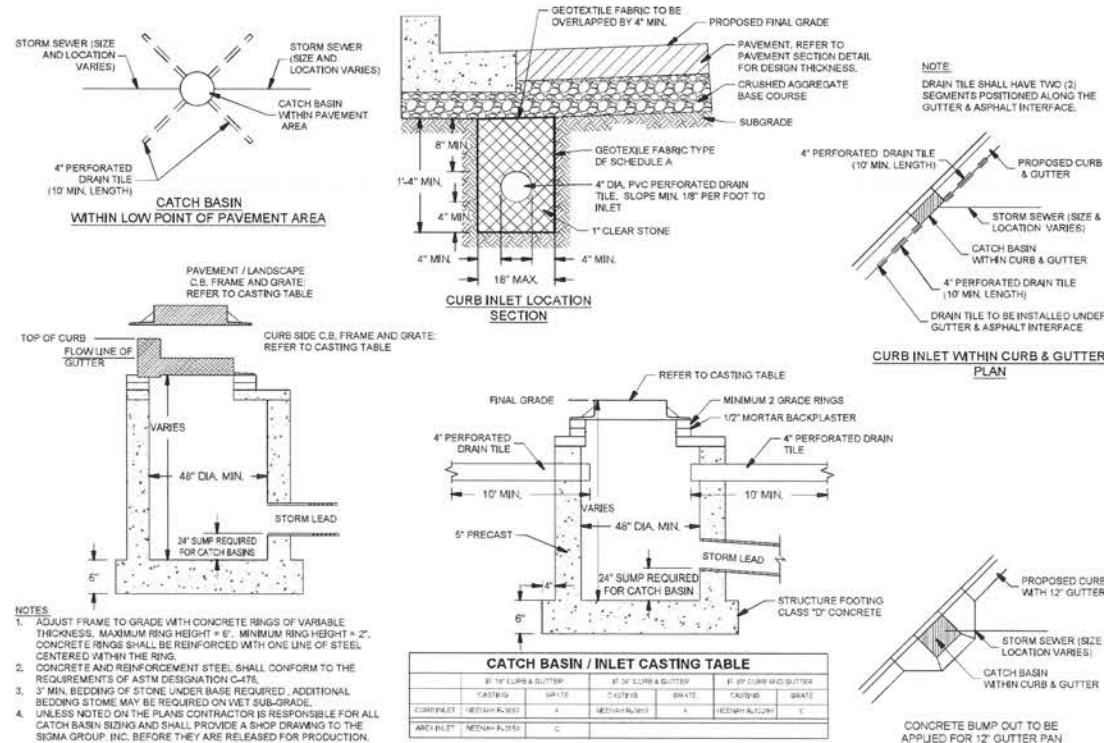


NOTE:

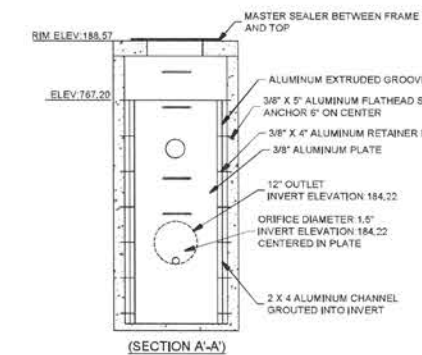
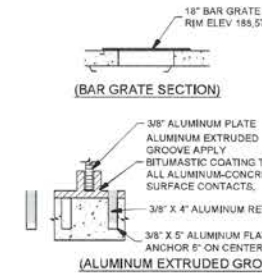
- BIO-FILTRATION BASINS THAT HAVE MULTIPLE VERTICAL ORIFICES SHALL BE INSTALLED AT THE SAME ELEVATION AS IDENTIFIED IN THE TABLE.
- MULTIPLE VERTICAL ORIFICES SHALL HAVE A MINIMUM OF 12 INCHES HORIZONTAL SEPARATION.

BIO-FILTRATION SUMMARY TABLE												
BIO-FILTRATION AREA	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	TOP OF POND CURB FLOW LINE	18" OVERFLOW RIM ELEVATION	TOP OF ENGINEERED FILL ELEVATION	ENGINEERED SOIL AND GRAVEL INTERFACE ELEVATION	6" DIAMETER UNDERDRAIN ELEVATION	OUTLET PIPE SIZE	OUTLET PIPE ELEVATION	GRAVEL AND NATIVE SOIL INTERFACE ELEVATION	1.5" VERTICAL ORIFICE ELEVATION WITH WEIR	6" VERTICAL ORIFICE ELEVATION WITH WEIR	# OF VERTICAL ORIFICES	SPILLWAY CREST ELEVATION
BIO 1	186.32	186.57	187.82	186.02	184.22	12"	184.22	184.22	184.22	185.72	1	186.82
												2 YR WATER ELEVATION
												100 YR WATER ELEVATION
												186.78
												186.75

BIOFILTRATION BASIN SCALE:NTS



INLET AND CATCH BASIN SCALE:NTS



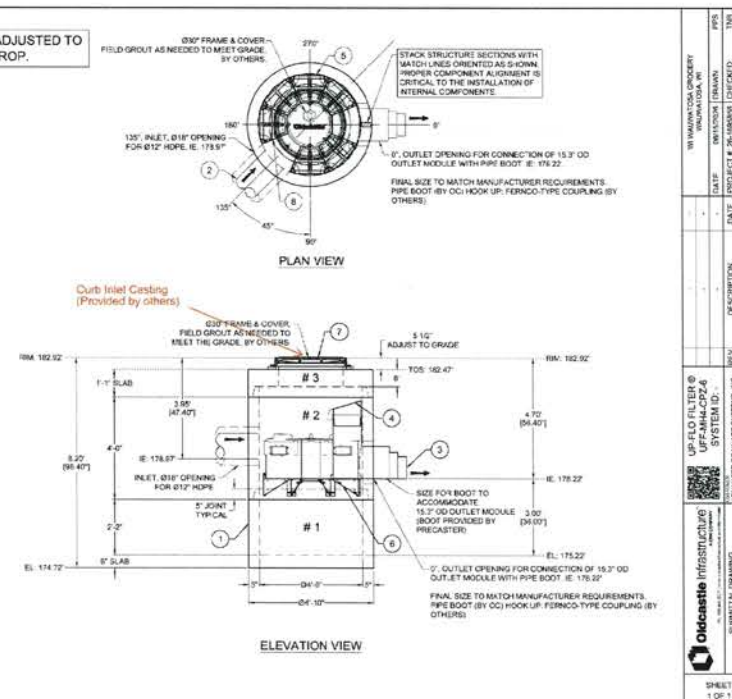
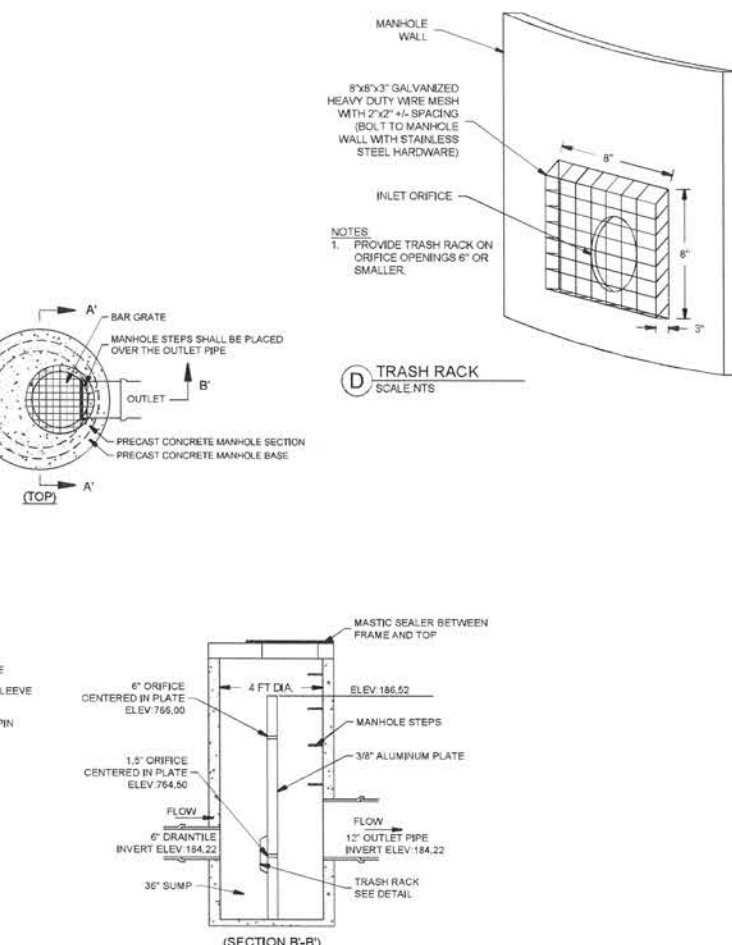
OUTLET CONTROL STRUCTURE - ALUMINUM PLATE SCALE:NTS

STRUCTURE ID	UNIT AREA/FOOT
MODEL SIZE	1.0
TREATMENT FLOW RATE (GPM)	1.0
PEAK FLOW RATE (GPM)	1.0
SEGMENT STORAGE (IN. H ₂ O)	1.0
MODEL QUANTITY	1.0

- NOTES:**
1. LIFT LOADING CRITERIA:
 - A. ASHED HISS-44 (WITH IMPACT)
 - B. LATERAL LIVE LOAD SURCHARGE: 80 PSF (7.0 KPa) DEPTH
 - C. NO LATERAL SURCHARGE FROM ANY ADJACENT BUILDINGS, WALLS, FOUNDATIONS, GRASS, ADDITIONAL SITE ELEMENTS
 2. SOIL LOADING CRITERIA:
 - A. SOIL COVER DEPTH: 3.0 FT (0.91 M) - 5.0 FT (1.52 M)
 - B. SOIL UNIT WEIGHT: 120 PCF
 - C. ASSUMED WATER TABLE ELEVATION: BELOW BOTTOM OF PRECAST
 - D. REQUIRED ALLOWABLE BEARING PRESSURE: 2,500 PSF
 - E. EQUIVALENT LATERAL EARTH PRESSURE: 45 PCF (ACTIVE)
 - F. DESIGN LATERAL EARTH PRESSURES: NOT APPLICABLE
 3. CONCRETE (NORMAL WEIGHT):
 - A. MIN. 28-DAY COMPRESSIVE STRENGTH: 6,000 PSI
 - B. CONCRETE ASTM C150
 4. STEEL REINFORCEMENT: ASTM A618 / A706 (GRADE 60)
 5. REFERENCE STANDARDS: ASTM C941, C143, C143.14
 6. THE STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. ENGINEER OF RECORD SHALL VERIFY THAT NO TO EXISTING PARAMETERS MEET OR EXCEED PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/ARCHITECT SHALL NOTIFY CULCASTLE INFRASTRUCTURE UPON REVIEW OF THIS SUBMITTAL.
 7. OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE. IF AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3,000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS. PIPES ARE TO BE FLUSH WITH THE INSIDE SURFACE OF THE CONCRETE STRUCTURE.
 8. CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS, AND ELEVATIONS OF OPENINGS.
 9. CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED AND LEVEL PER PROJECT SPECIFICATIONS).
 10. SECTION HEIGHTS, SLAB WALL THICKNESSES, AND KEYWAYS ARE SUBJECT TO CHANGE AS REQUIRED FOR SITE REQUIREMENTS AND/OR DUE TO PRODUCT AVAILABILITY AND PRODUCTION FACILITY CONSTRAINTS.
 11. MAXIMUM PIPE WEIGHTS BASED ON 1.000 LB.
 12. MINIMUM PERFORMANCE: 80% REMOVAL, NUDEP - NUDEP BLIND; NUDEP SL-60-SL 106 (50 - 22 MICRONS) AT THE PEAK TREATMENT FLOW.
 13. NORMAL OPERATING W.L.E. IS 2.49' ABOVE THE OUTLET INVERT AT THE PEAK TREATMENT FLOW OF 126 GPM (0.51 GPM PER MODULE). FOR GIVEN FLOW THE HEAD REQUIREMENT CAN BE REDUCED BY ADDING ADDITIONAL T-PIES.
 14. OUTLET PIPE SIZE INFORMATION:
 - A. 15.75" DIAMETER: 15.75" OR 15.75" OR 15.75"
 - B. CONCRETE PENETRATION: PIPE BOOT BY GC
 - C. HOOK-UP: FERNCO-TYPE COUPLING BY GC
 - D. CONTRACTOR TO TRIM OUTLET MODULE TO FIT CONNECTION TYPE

ITEM	DESCRIPTION	BY	DATE	UNIT	SIZE & TYPE
1	1.0 FT PRECAST MANHOLE	GC	01	1	1A
2	INLET PIPE	GC	01	1	1A
3	OUTLET MODULE	GC	01	1	1A
4	WIPER HOOD	GC	01	1	1A
5	MODULE BODY AND LID	GC	01	1	1A
6	SUPPORT FRAME	GC	01	1	1A
7	FRAME & COVER	GC	01	1	1A
8	END PLATE	GC	01	1	1A

UPFLO FILTER MANHOLE - 6 MODULES SCALE:NTS



WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

DETAILS

**PRELIMINARY
NOT FOR
CONSTRUCTION**

ISSUANCE DATE
CONDITIONAL USE SUBMITTAL 05/20/2026
DRB SUBMITTAL 05/27/2026
DRB SUBMITTAL 07/05/2026

NO. REVISION DATE

PROJECT NO: 25057
DESIGN DATE: —
PLOT DATE: 2026.07.08
DRAWN BY: JMJ
CHECKED BY: PJJ
APPROVED BY: —
SHEET NO: —

C402

2026.07.08

AC508FE

C500

25057

GENERAL:

- EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, AND NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR ENGINEER FOR THEIR ACCURACY OR COMPLETENESS.
- CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERE TO. CONTRACTOR SHALL HAVE SITE MARKED BY DIGGER'S HOTLINE AND SHALL HAVE PRIVATE UTILITIES MARKED BY A PRIVATE UTILITY LOCATOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS, AND SIZES OF EXISTING UTILITIES AND SHALL CHECK ALL UTILITY CROSSINGS AND PROPOSED CONNECTIONS FOR CONFLICTS/DISCREPANCIES PRIOR TO INITIATING CONSTRUCTION. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE ENGINEER SO REDESIGN MAY OCCUR IF NEEDED.
- LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLANS. LENGTHS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

SITE CLEARING:

- EXCEPT FOR STRIPPED TOPSOIL OR OTHER MATERIALS INDICATED TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
- MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.
- SALVAGE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNER'S PREMISES WHERE INDICATED.
- UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
- DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
- PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
- LOCATE AND CLEARLY FLAG TREES AND VEGETATION TO REMAIN OR TO BE RELOCATED.
- PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION. RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES INDICATED TO BE REMOVED. ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
- EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY THE OWNER AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES.
- FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL, UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.
- REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
- STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
- STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMINGLING WITH SUBSOIL, GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER, COVER TO PREVENT WINDBLOWN DUST.
- REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
- SAWCUT ALL PAVEMENTS FULL DEPTH PRIOR TO REMOVAL. SAWCUTS SHALL BE IN STRAIGHT LINES PERPENDICULAR AND/OR PARALLEL TO EXISTING PAVEMENT JOINTS AND PAVEMENT EDGES.
- REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
- SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NONRECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMINGLING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

SITE WATER SERVICE:

- COMPLY WITH STANDARDS OF STATE PLUMBING CODE (SPS CH. 382, 384), LOCAL WATER UTILITY REQUIREMENTS AND STANDARDS OF AUTHORITIES HAVING JURISDICTION FOR FIRE-SUPPRESSION AND WATER SERVICE PIPING INCLUDING MATERIALS, FITTINGS, APPURTENANCES, INSTALLATION, TESTING, SERVICE TAPS, ETC. IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND STATE PLUMBING CODE OR LOCAL JURISDICTIONAL AUTHORITY, STATE PLUMBING CODE AND LOCAL JURISDICTIONAL AUTHORITY REQUIREMENTS GOVERN.
- DO NOT INTERRUPT SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY OWNERS OF SUCH FACILITIES AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY WATER-DISTRIBUTION SERVICE.
- WATER SERVICE PIPING MAY BE EITHER DUCTILE-IRON WATER PIPE OR PVC WATER PIPE AS ALLOWED BY THE LOCAL WATER UTILITY.
- DUCTILE IRON WATER PIPE CONFORMING TO THE REQUIREMENTS OF THE AMERICAN NATIONAL STANDARD FOR DUCTILE IRON PIPE, CENTRIFUGALLY CAST, AWWA C151/A21.51 - LATEST REVISION AND REQUIREMENTS OF CHAPTER 8.16.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
 - CLASS 52
 - CEMENT MORTAR LINING AND INTERNAL AND EXTERNAL BITUMINOUS COATS IN ACCORDANCE WITH SECTION 51.8 OF AWWA C151.
 - PUSH-ON GASKET PIPE
 - PLAIN RUBBER GASKETS
 - BONDING STRAPS TO PROVIDE ELECTRICAL CONDUCTIVITY WITHOUT FIELD TESTING
- JOINTS FOR DUCTILE IRON PIPE: JOINTS SHALL BE RUBBER GASKET JOINTS, CONFORM TO THE REQUIREMENTS OF AMERICAN NATIONAL STANDARD FOR RUBBER GASKET JOINTS FOR DUCTILE IRON PRESSURE PIPE AND FITTINGS (ANSI/AWWA C111/A21.11, LATEST EDITION).
- FITTINGS FOR DUCTILE IRON PIPE: CONFORM TO THE REQUIREMENTS OF AMERICAN NATIONAL STANDARD FOR DUCTILE IRON AND GRAY IRON FITTINGS, 3" THROUGH 48" FOR WATER (ANSI/AWWA C119/A21.10, LATEST EDITION), CLASS 250 MECHANICAL JOINT PIPE FITTINGS, CEMENT LINED, ALL BELLS, ENTIRE FITTING TARRED, CONDUCTIVE MECHANICAL JOINT (NO LEAD) RUBBER GASKETS, FLANGES, AND BOLTS.
- PVC AWWA PIPE: AWWA C900, CLASS 235 WITH BELL END WITH GASKET AND WITH SPIGOT END AND MEETING REQUIREMENTS OF CHAPTER 8.20.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. FITTINGS SHALL BE IN ACCORDANCE WITH CHAPTER 8.22.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. MECHANICAL JOINT, DUCTILE IRON FITTINGS: AWWA C153, DUCTILE-IRON COMPACT PATTERN, GLANDS, GASKETS AND BOLTS: AWWA C111, DUCTILE IRON GLANDS, RUBBER GASKETS AND STEEL BOLTS.
- GATE VALVES: CONFORM TO AWWA C-500 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN SUITABLE FOR DIRECT BURY.
- VALVE BOXES: CAST IRON CONFORMING TO ASTM DESIGNATION A-48, CLASS 20 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- FIRE HYDRANTS: TO MEET LOCAL STANDARDS.
- WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS SHALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGALUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKING AND MEGALUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS.
- GENERAL WATER PIPE INSTALLATION: IN ACCORDANCE WITH CHAPTER 4.3.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- INSTALL DUCTILE-IRON WATER-SERVICE PIPING ACCORDING TO AWWA C600 AND CHAPTER 4.4.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C106, LATEST EDITION AND IN ACCORDANCE WITH CHAPTER 4.4.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. ALL JOINTS AND FITTINGS SHALL HAVE POLYETHYLENE ENCASEMENT INSTALLED PER MANUFACTURER'S REQUIREMENTS AND PROCEDURES.
- INSTALL PVC AWWA PIPE ACCORDING TO ASTM F645 AND AWWA M23 AND CHAPTER 4.6.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGALUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER FILE NO'S 44.45.46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL WATER SERVICE PIPING SUCH THAT THERE IS A MINIMUM OF 6" OF COVER OVER THE TOP OF THE WATER SERVICE PIPING.

SITE WATER SERVICE CONT.:

- BEDDING AND COVER FOR WATER SERVICE PIPING SHALL BE IN ACCORDANCE WITH SECTION 4.3.3 AND FILE NO. 36 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. TRENCH BACKFILL SHALL BE GRANULAR B BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION ON-SITE.
- INSTALL TRACER WIRE FOR NONMETALLIC WATER SERVICES IN ACCORDANCE WITH SPS SECTION 382.40(8)(K). TRACER WIRE INSULATION COLOR SHALL BE BLUE FOR POTABLE WATER SERVICE PIPING.
- DUCTILE-IRON PIPING, RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 4.4.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- PVC PIPING GASKETED JOINTS: USING JOINING MATERIALS ACCORDING TO AWWA C900, CONSTRUCT JOINTS WITH ELASTOMERIC SEALS AND LUBRICANTS ACCORDING TO ASTM D2774 OR ASTM D3139 AND PIPE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- CONDUCT HYDROSTATIC TESTS IN ACCORDANCE WITH CHAPTER 4.15.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
- CLEAN AND DISINFECT WATER SERVICE PIPING IN ACCORDANCE WITH SPS CHAPTER 82.40(8)(J) AND AWWA C651.

SANITARY SEWERAGE:

- ALL PRIVATE SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
- ALL PUBLIC SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION (STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS.
- PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
- MANHOLE: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.38.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS, DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
- MANHOLES DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
- SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORDANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
- PIPE JOINT CONSTRUCTION: FOLLOW PIPING MANUFACTURER'S RECOMMENDATIONS. JOIN PVC SEWER PIPE ACCORDING TO ASTM D3321 AND ASTM D 3212 FOR ELASTOMERIC GASKET JOINTS. JOIN DISSIMILAR PIPE MATERIALS WITH NON-PRESSURE-TYPE, FLEXIBLE COUPLINGS.
- PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FORM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE LIGHT DUTY, TOP LOADING CLASSIFICATION CLEANOUTS IN EARTH OR UNPAVED FOOT TRAFFIC AREAS. USE MEDIUM DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN PAVED FOOT TRAFFIC AREAS. USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN VEHICULAR TRAFFIC AREAS. SET CLEANOUT FRAMES AND COVERS IN PAVEMENT AREAS FLUSH WITH PAVEMENT SURFACE.
- CLASS B COMPACTED TRENCH SECTION (FILE NO. NO. 4 OF STANDARD SPECIFICATIONS) SHALL BE UTILIZED. BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF THE STANDARD SPECIFICATIONS.
- TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS, COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
- MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
- AFTER INSTALLATION OF SEWER PIPE CLEAN ALL DEBRIS FROM SEWER AND INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. CONDUCT DEFLECTION TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SECTION 3.2.60(A) OF THE STANDARD SPECIFICATIONS. REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS. TEST NEW BUILDING SEWER IN ACCORDANCE WITH SECTION 5.4.0 OF THE STANDARD SPECIFICATIONS. REPLACE LEAKING PIPE USING NEW PIPE MATERIALS AND REPEAT TESTING UNTIL LEAKAGE IS WITHIN ALLOWANCES SPECIFIED.

STORM DRAINAGE:

- ALL PRIVATE STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
- ALL PUBLIC STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION (STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS.
- PVC SEWER PIPE AND FITTINGS: ASTM D 3034, SDR 35, WITH BELL-AND-SPIGOT ENDS WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH CHAPTER 8.10.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. JOINTS SHALL CONFORM TO ASTM D-3212.
- REINFORCED CONCRETE PIPE: ASTM C78 WITH BELL AND SPIGOT ENDS AND GASKETED JOINTS WITH ASTM C443 RUBBER GASKETS IN ACCORDANCE WITH CHAPTER 8.6.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- HOPE PIPE: ADS N12 PIPE AS APPROVED ON THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCT REGISTER.
- CATCH BASINS: STANDARD PRECAST CONCRETE CATCH BASINS CONFORMING TO CHAPTER 3.6.0 OF THE STANDARD SPECIFICATIONS AND IN GENERAL CONFORMANCE WITH FILE NO. 26 OF THE STANDARD SPECIFICATIONS. DEPTH AND DIAMETER AS INDICATED ON PLANS. CATCH BASIN SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
- FRAMES AND GRATES: AS INDICATED ON PLANS, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SPECIFIED FRAME/GRATE IS COMPATIBLE WITH STRUCTURE. IF NOT, NOTIFY ENGINEER.
- MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.38.0 OF THE STANDARD SPECIFICATIONS AND CONFORMING TO FILE NOS. 12, 13 AND 15 OF THE STANDARD SPECIFICATIONS, DIAMETER AND DEPTH AS INDICATED ON PLANS. MANHOLE SIZES TO BE VERIFIED BY CONTRACTOR AND SHOP DRAWINGS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING STRUCTURES.
- MANHOLES AND CATCH BASINS DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
- SEWERS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 3.2.0 OF THE STANDARD SPECIFICATIONS. INSTALL PROPER SIZE INCREASERS, REDUCERS AND COUPLINGS WHERE DIFFERENT SIZES OR MATERIALS OF PIPES AND FITTINGS ARE CONNECTED. INSTALL TRACER PIPE OVER NON-METALLIC PIPING IN ACCORDANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
- PROVIDE AND INSTALL CLEANOUTS IN ACCORDANCE WITH SPS CHAPTER 382.35. INSTALL CLEANOUTS AND RISER EXTENSIONS FORM SEWER PIPES TO PROPOSED GRADE. INSTALL PIPING SO CLEANOUTS OPEN IN DIRECTION OF FLOW IN SEWER PIPE. USE LIGHT DUTY, TOP LOADING CLASSIFICATION CLEANOUTS IN EARTH OR UNPAVED FOOT TRAFFIC AREAS. USE MEDIUM DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN PAVED FOOT TRAFFIC AREAS. USE HEAVY DUTY, TOP-LOADING CLASSIFICATION CLEANOUTS IN VEHICULAR TRAFFIC AREAS. SET CLEANOUT FRAMES AND COVERS IN PAVEMENT AREAS FLUSH WITH PAVEMENT SURFACE.
- CLASS B COMPACTED TRENCH SECTION (FILE NO. NO. 4 OF STANDARD SPECIFICATIONS) SHALL BE UTILIZED. BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.43.0 OF THE STANDARD SPECIFICATIONS.
- TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS, COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
- MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
- CATCH BASIN INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.6 OF THE STANDARD SPECIFICATIONS. CATCH BASIN EXCAVATION AND PREPARATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.4(A) AND (B) OF THE STANDARD SPECIFICATIONS. FRAMES AND GRATES SHALL BE SET TO THE ELEVATIONS SHOWN ON THE PLANS.
- AFTER INSTALLATION OF SEWER PIPE CLEAN ALL DEBRIS FROM SEWER AND INSPECT INTERIOR OF PIPING TO DETERMINE WHETHER LINE DISPLACEMENT OR OTHER DAMAGE HAS OCCURRED. CONDUCT DEFLECTION TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SECTION 3.2.60(A) OF THE STANDARD SPECIFICATIONS. REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS.

EARTH MOVING:

- ALL EARTH WORK SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER PRESENTED IN THE SITE GEOTECHNICAL REPORT. GEOTECHNICAL ENGINEER RECOMMENDATIONS MADE IN THE FIELD AND THESE SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER SHALL GOVERN.
- CONTRACTOR SHALL PROVIDE MATERIAL TEST REPORTS FROM A QUALIFIED TESTING AGENCY INDICATING TEST RESULTS FOR CLASSIFICATION ACCORDING TO ASTM D1557 AND LABORATORY COMPACTION CURVES ACCORDING TO ASTM D 1557 FOR EACH ON-SITE AND OFF-SITE SOIL MATERIAL, PROPOSED FOR FILL AND BACKFILL.
- CONTRACTOR SHALL PROVIDE PREEXCAVATION PHOTOS OR VIDEOS SHOWING EXISTING CONDITIONS OF ADJOINING STRUCTURES AND SITE IMPROVEMENTS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY EARTHWORK OPERATIONS.
- OLD BUILDING FOUNDATIONS, BUILDING REMNANTS OR UNSUITABLE BACKFILL MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND THE NEW BUILDING PAD AREAS. THE RESULTING EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL.
- FOUNDATIONS, FOUNDATION WALLS OR CONCRETE FLOOR SLABS SHALL BE REMOVED TO A MINIMUM OF TWO FEET BELOW PROPOSED SUBGRADE WITHIN PROPOSED PARKING AND GREENSPACE AREAS. BASEMENT SLABS LOCATED BELOW 2 FEET FROM PLANNED SUBGRADE ELEVATION MAY BE LEFT IN PLACE BUT SHALL BE BROKEN INTO MAXIMUM 6 INCH PIECES TO FACILITATE DRAINAGE.
- SATISFACTORY SOILS FOR FILL: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM, OR A COMBINATION OF THESE GROUPS, FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER OR ANY SOIL GROUP OR COMBINATION OF GROUPS APPROVED OF BY THE PROJECT GEOTECHNICAL ENGINEER.
- UNSATISFACTORY SOILS FOR FILL: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487 OR A COMBINATION OF THESE GROUPS UNLESS DEEMED SATISFACTORY BY THE PROJECT GEOTECHNICAL ENGINEER. UNSATISFACTORY SOILS ALSO INCLUDE SOILS NOT MAINTAINED WITHIN 3 PERCENT OF OPTIMUM SOIL MOISTURE CONTENT AT THE TIME OF COMPACTION.
- AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION.
- ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND, ASTM D 2487, WITH AT LEAST 90 PERCENT PASSING A 1-1/2-INCH (37.5-MM) SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 SIEVE OR ANY SOIL DEEMED ACCEPTABLE FOR ENGINEERED FILL BY THE PROJECT GEOTECHNICAL ENGINEER. ENGINEERED FILL SHALL BE FREE OF ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIAL AND HAVE A MAXIMUM PARTICLE SIZE LESS THAN 3 INCHES. CLAY FILLS SHALL HAVE A LIQUID LIMIT OF LESS THAN 49 AND PLASTICITY INDEX BETWEEN 11 AND 25.
- BEDDING COURSE FOR SEWERS AND WATER SERVICE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND CONFORMING TO THE REQUIREMENTS OF SECTION 8.43.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- DRAINAGE COURSE BENEATH BUILDING SLABS: NARROWLY GRADED MIXTURE OF WASHED, CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL, ASTM D 448, COARSE-AGGREGATE GRADING SIZE 57, WITH 100 PERCENT PASSING A 1-1/2-INCH (37.5-MM) SIEVE AND 0 TO 5 PERCENT PASSING A NO. 8 SIEVE.
- TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS, COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
- PIPE COVER MATERIAL: CONFORM TO SECTION 8.43.3 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREAS.
- SHORING, SHEETING AND BRACING: SHORE, BRACE OR SLOPE BANKS OF EXCAVATION TO PROTECT WORKMEN, BANKS, ADJACENT PAVING, STRUCTURES, AND UTILITIES TO MEET OSHA REQUIREMENTS. DESIGN OF TEMPORARY SUPPORT OF EXCAVATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- EXCAVATE TO SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. UNCLASSIFIED EXCAVATED MATERIALS MAY INCLUDE ROCK, SOIL MATERIALS, AND OBSTRUCTIONS. NO CHANGES IN THE CONTRACT SUM OR THE CONTRACT TIME WILL BE AUTHORIZED FOR ROCK EXCAVATION OR REMOVAL OF OBSTRUCTIONS.
- PROOF-ROLL SUBGRADE BELOW THE BUILDING SLABS AND PAVEMENTS WITH FULLY LOADED TANDEM AXLE DUMP TRUCK OR RUBBER Tired VEHICLE OF SIMILAR SIZE AND WEIGHT, TYPICALLY 9 TONS/AXLE, WHERE COHESIVE SOILS ARE ENCOUNTERED OR WITH A SMOOTH DRUMMED VIBRATORY ROLLER WHERE GRANULAR SOILS ARE PRESENT. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES AND PROOFROLL IN DRY WEATHER. PROOF ROLL IN PRESENCE OF PROJECT GEOTECHNICAL ENGINEER OR TECHNICIAN. SOILS THAT ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD (TYPICALLY >1") SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED ENGINEERED FILL. IN PAVEMENT AREAS WHERE UNDERCUTS ARE PERFORMED, THE EDGES OF THE OVEREXCAVATIONS SHALL BE FEATHERED INTO THE SURROUNDING SUITABLE SOIL SO THAT EDGE FAILURE OF THE OVEREXCAVATED AREA DOES NOT OCCUR.
- DUE TO CLAYEY SOILS, IF UNDERCUTS OCCUR WITHIN PAVEMENT AREAS AND THEY ARE BACKFILLED WITH GRANULAR SOILS, THE BOTTOM OF THE OVEREXCAVATION SHALL BE SLOPED TO A DRAIN TILE THAT IS IN KIND SLOPED TOWARD THE NEAREST STORM SEWER. MINIMUM SLOPES OF SUCH DRAIN TILES SHALL BE 0.5%.
- CONVENTIONAL DISKING AND AERATION TECHNIQUES SHALL BE USED TO DRY SOILS BEFORE PROOF ROLLING. ALLOT FOR PROPER DRYING TIME IN PROJECT SCHEDULE.
- ENGINEERED FILL SHALL BE PLACED IN MAXIMUM LIFTS OF EIGHT INCHES OF LOOSE MATERIAL AND COMPACTED WITHIN 3% OF OPTIMUM SOIL MOISTURE CONTENT VALUE AND A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D1557. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- EXISTING OLD FILL MATERIAL SHALL BE REMOVED BELOW FOOTINGS OR FOUNDATION SUPPORTING FILL. ENGINEERED FILL BELOW FOOTINGS SHOULD HAVE AN IN-PLACE DENSITY OF 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. ENGINEERED FILL BELOW FOOTINGS SHALL BE EVALUATED BY IN-FIELD DENSITY TESTS DURING CONSTRUCTION.
- WHERE UNSUITABLE BEARING SOILS ARE ENCOUNTERED IN A FOOTING EXCAVATION, THE EXCAVATION SHALL BE DEEPENED TO COMPETENT BEARING SOIL AND THE FOOTING LOWERED OR AN OVEREXCAVATION AND BACKFILL PROCEDURE PERFORMED. OVEREXCAVATION AND BACKFILL TREATMENT REQUIRES WIDENING THE DEEPENED EXCAVATION IN ALL DIRECTIONS AT LEAST 6 INCHES BEYOND THE EDGE OF THE FOOTING FOR EACH 12 INCHES OF OVEREXCAVATION DEPTH. THE OVEREXCAVATION SHALL BE BACKFILLED UP TO FOOTING BASE ELEVATION IN MAXIMUM 6 INCH LOOSE LIFTS WITH SUITABLE GRANULAR FILL MATERIAL AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. SOILS AT FOUNDATION BEARING ELEVATION IN THE FOOTING EXCAVATIONS SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- A MINIMUM OF FOUR INCHES OF DRAINAGE COURSE MAT SHALL BE PLACED BELOW BUILDING FLOOR SLABS. DRAINAGE COURSE SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557).
- UTILITY TRENCHES FOR SEWER AND WATER SHALL CONFORM TO CLASS B COMPACTED TRENCH SECTION IN ACCORDANCE WITH FILE NO. 4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- BACKFILL UTILITY TRENCHES IN 4 TO 6 INCH LOOSE LIFTS COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE MOISTURE CONDITIONED TO BE WITH 3% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.
- UTILITY BEDDING PLACEMENT: CONFORM TO SECTION 3.2.5 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. BEDDING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557).
- COMPACTION TESTING OF UTILITY TRENCHES SHALL BE PERFORMED ONE FOR EVERY 200 CUBIC YARDS OF BACKFILL PLACED OR ONE FOR TEST PER 200 LINEAR FEET OF TRENCH FOR EACH LIFT, WHICHEVER IS LESS.
- AGGREGATE BASE COURSE BENEATH PAVEMENTS SHALL BE PLACED AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. AGGREGATE BASE SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- GRADING GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED. SLOPE GRADES TO DRAIN WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
- TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY-CONTROL TESTING.
- FOOTING SUBGRADE TESTING: EACH ISOLATED FOOTING SHALL INCLUDE AT LEAST ONE TEST PROBE. TEST PROBES SHALL BE PERFORMED EVERY 20 LINEAR FEET IN CONTINUOUS FOOTINGS.
- BUILDING SLAB AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EVERY 2500 SQ. FT. OR LESS OF BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
- PAVEMENT AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY LIFT FOR EVERY 2,500 SQUARE FEET OF PAVEMENT AREA, BUT IN NO CASES FEWER THAN 3 TESTS.
- FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EACH 50 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
- WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL, TO DEPTH REQUIRED, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
- DISPOSAL: REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNER'S PROPERTY.

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SPECIFICATIONS

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/22/2025
DRS SUBMITTAL	05/27/2025
DRS SUBMITTAL	07/09/2025

NO. REVISION	DATE
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PROJECT NO:	25057
DESIGN DATE	---
PLOT DATE:	2026.07.08
DRAWN BY:	JMJ
CHECKED BY:	PJJ
APPROVED BY:	---
SHEET NO:	

C500

2026.07.08

AKUSKE

C501

25057

CONCRETE PAVING:

1. THE COMPOSITION, PLACING AND CONSTRUCTION OF CONCRETE PAVEMENTS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTIONS 415, 416, 501, 601, AND 602 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REQUIREMENTS AND SPECIFICATIONS.
2. CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES, JOB-MIX DESIGNS, CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS, AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
3. MANUFACTURER QUALIFICATIONS: MANUFACTURER OF READY-MIXED CONCRETE PRODUCTS WHO COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT AND APPROVED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
4. CONCRETE GRADE: GRADE A, CONFORMING TO SECTION 501.3.2.2.1 OF THE WISDOT STANDARD SPECIFICATIONS
5. AGGREGATES: CONFORM TO SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS, PROVIDE AGGREGATES FROM A SINGLE SOURCE.
6. WATER: ASTM C 94/C 94M AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
7. AIR-ENTRAINING ADMIXTURE: ASTM C 260 AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
8. CHEMICAL ADMIXTURES: PER SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
9. CURING MATERIALS IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
10. EXPANSION JOINT MATERIAL: CONFORM TO SECTION 415.2.3 OF THE WISDOT STANDARD SPECIFICATIONS.
11. MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE IN ACCORDANCE WITH SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
12. GENERAL EXECUTION: CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS.
13. PROOFROLL, SUBGRADE AND AGGREGATE BASE AS OUTLINED IN EARTH MOVING SPECIFICATION PRIOR TO PLACEMENT OF PAVEMENTS.
14. SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
15. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.
16. JOINTS GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE INDICATED. CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS
17. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS.
18. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PRE-FORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED.
19. CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS TO MATCH JOINTING OF EXISTING ADJACENT CONCRETE PAVEMENT.
20. EDGING: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.
21. CURBING: COMPLY WITH SECTION 601 OF THE WISDOT STANDARD SPECIFICATIONS.
22. SIDEWALKS: COMPLY WITH SECTION 602 OF THE WISDOT STANDARD SPECIFICATIONS.
23. MOISTEN AGGREGATE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED.
24. FINISH CURBING IN ACCORDANCE WITH SECTION 601.3.5 OF THE WISDOT STANDARD SPECIFICATIONS.
25. FINISH SIDEWALK AND PATIO IN ACCORDANCE WITH SECTION 602.3.2.3 OF THE WISDOT STANDARD SPECIFICATIONS (LIGHT BROOM FINISH).
26. FINISH CONCRETE VEHICULAR PAVEMENTS AND PADS IN ACCORDANCE WITH SECTION 415.3.8 OF THE WISDOT STANDARD SPECIFICATIONS (ARTIFICIAL TURF DRAG FINISH).
27. PROTECT AND CURE SIDEWALK IN ACCORDANCE WITH SECTION 602.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
28. PROTECT AND CURE CURBING IN ACCORDANCE WITH SECTION 601.3.7 OF THE WISDOT STANDARD SPECIFICATIONS.
29. PROTECT AND CURE VEHICULAR CONCRETE PAVING IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
30. REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION.
31. PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 7 DAYS AFTER PLACEMENT.
32. MAINTAIN CONCRETE PAVEMENT FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE PAVEMENT NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

ASPHALTIC PAVING:

1. THE COMPOSITION, PLACING AND CONSTRUCTION OF ASPHALTIC PAVEMENTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460, 465, AND 475 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS).
2. CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES, JOB-MIX DESIGNS, CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS, AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
3. MANUFACTURER QUALIFICATIONS: MANUFACTURER SHALL BE REGISTERED WITH AND APPROVED BY THE DOT OF THE STATE IN WHICH PROJECT IS LOCATED.
4. ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF BASE COURSE IS WET OR EXCESSIVELY DAMP OR IF THE FOLLOWING CONDITIONS ARE NOT MET: APPLY TACK COAT WHEN AMBIENT TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES FAHRENHEIT FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. PLACE ASPHALTIC CONCRETE SURFACE COURSE WHEN TEMPERATURE IS ABOVE 40 DEGREES FAHRENHEIT. BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30 DEGREES FAHRENHEIT AND RISING, PROCEED WITH PAVEMENT MARKING ONLY ON CLEAN, DRY SURFACES. DO NOT APPLY BELOW THE MINIMUM PAVEMENT TEMPERATURE AS RECOMMENDED BY THE MANUFACTURER.
5. AGGREGATES SHALL BE IN ACCORDANCE WITH SECTION 460.2.2 OF THE WISDOT STANDARD SPECIFICATIONS.
6. ASPHALT MATERIALS SHALL BE IN ACCORDANCE WITH CHAPTER 455 OF THE WISDOT STANDARD SPECIFICATIONS.
7. PAVEMENT MARKING PAINT: PROVIDE PAINT FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCTS LIST. COLOR SHALL BE WHITE UNLESS OTHERWISE NOTED ON PLANS.
8. HOT-MIX ASPHALT: ASPHALTIC BINDER COURSE AND SURFACE COURSE SHALL BE MIXTURE LT FOR REGULAR DUTY PAVEMENT AND LT FOR HEAVY DUTY PAVEMENT COMPLYING WITH THE WISDOT STANDARD SPECIFICATIONS. ASPHALTIC BINDER SHALL BE 58-28 S UNLESS NOTED.
9. AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE WISDOT STANDARD SPECIFICATIONS.
10. PAVEMENT PLACEMENT GENERAL: ASPHALT CONCRETE PAVING EQUIPMENT, WEATHER LIMITATIONS, JOB-MIX FORMULA, MIXING, CONSTRUCTION METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTIONS OF THE WISDOT STANDARD SPECIFICATIONS.
11. PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS.
12. SWEEP LOOSE GRANULAR PARTICLES FROM SURFACE OF AGGREGATE BASE COURSE PRIOR TO PAVEMENT PLACEMENT. DO NOT DISLODGE OR DISTURB AGGREGATE EMBEDDED IN COMPACTED SURFACE OF BASE COURSE.
13. SPREAD AND FINISH ASPHALTIC MIXTURE IN ACCORDANCE WITH SECTION 450.3.2.5 OF THE WISDOT STANDARD SPECIFICATIONS. PAVEMENT THICKNESSES SHALL BE AS INDICATED ON THE PLANS.
14. PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAYER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX. USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.
15. COMPACT ASPHALTIC PAVEMENT IN ACCORDANCE WITH SECTION 450.3.2.8 OF THE WISDOT STANDARD SPECIFICATIONS.
16. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.
17. THICKNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS 1/4 INCH FOR BINDER COURSE AND PLUS 1/4 INCH FOR SURFACE COURSE, NO MINUS.
18. SURFACE SMOOTHNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS. BINDER COURSE: 1/4 INCH. SURFACE COURSE: 1/8 INCH. REMOVE AND REPLACE ALL HUMPS OR DEPRESSIONS EXCEEDING THE SPECIFIED TOLERANCES.
19. DO NOT APPLY PAVEMENT-MARKING PAINT UNTIL LAYOUT. COLORS AND PLACEMENT HAVE BEEN VERIFIED WITH ENGINEER.
20. APPLY MARKINGS TO A DRY SURFACE FREE FROM FROST, REMOVE DUST, DIRT, OIL, GREASE, GRAVEL, DEBRIS OR OTHER MATERIAL THAT MAY PREVENT BONDING TO THE PAVEMENT.
21. APPLY PAINT AS THE MANUFACTURER SPECIFIES WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES AT A MINIMUM RATE OF 17.6 GALLONS/MILE FOR A CONTINUOUS 4" LINE.
22. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS AND TO PREPARE TEST REPORTS.

SEGMENTAL RETAINING WALL:

1. WORK SHALL CONSIST OF FURNISHING DETAILED DESIGN, MATERIALS, LABOR, EQUIPMENT AND SUPERVISION TO INSTALL A SEGMENTAL RETAINING WALL SYSTEM IN ACCORDANCE WITH PLANS AND SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON PLANS.
 2. MATERIALS SUBMITTALS: THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S CERTIFICATIONS TWO WEEKS PRIOR TO START OF WORK STATING THAT THE SRW UNITS AND GEOSYNTHETIC REINFORCEMENT MEET THE REQUIREMENTS OF THE DESIGN.
 3. DESIGN SUBMITTAL: THE CONTRACTOR SHALL SUBMIT TWO SETS OF DETAILED DESIGN CALCULATIONS AND FINAL RETAINING WALL PLANS FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO THE BEGINNING OF WALL CONSTRUCTION. ALL CALCULATIONS AND DRAWINGS SHALL BE PREPARED AND SEALED BY A PROFESSIONAL CIVIL ENGINEER (P.E.) - (WALL DESIGN ENGINEER) EXPERIENCED IN SRW DESIGN AND LICENSED IN THE STATE WHERE THE WALL IS TO BE BUILT.
 4. SEGMENTAL RETAINING WALL (SRW) UNITS SHALL BE MACHINE FORMED, PORTLAND CEMENT CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS. SRW UNITS SHALL BE VERSA-LOK STANDARD RETAINING WALL UNITS, KEYSTONE RETAINING WALL UNITS, ROCKWOOD RETAINING WALL UNITS OR APPROVED EQUAL.
 5. COLOR AND STYLE OF SRW UNITS SHALL BE AS SELECTED BY ARCHITECT AND OWNER FROM MANUFACTURER'S FULL RANGE.
 6. SRW UNITS SHALL BE CAPABLE OF BEING ERECTED WITH THE HORIZONTAL GAP BETWEEN ADJACENT UNITS NOT EXCEEDING 1/8 INCH.
 7. SRW UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERMANENCE OF THE STRUCTURE. ANY CRACKS OR CHIPS OBSERVED DURING CONSTRUCTION SHALL FALL WITHIN THE GUIDELINES OUTLINED IN ASTM C 1372.
 8. CONCRETE SRW UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM 1372 AND HAVE A MINIMUM NET AVERAGE 28 DAYS COMPRESSIVE STRENGTH OF 3000 PSI. COMPRESSIVE STRENGTH TEST SPECIMENS SHALL CONFORM TO THE SAWCUT COUPON PROVISIONS OF ASTM C140.
 9. SRW UNITS' MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN + 1/8 INCH FROM THAT SPECIFIED AS MEASURED IN ACCORDANCE WITH ASTM C 140. THIS TOLERANCE DOES NOT APPLY TO ARCHITECTURAL SURFACES, SUCH AS SPLIT FINES.
 10. SRW UNITS SHALL BE INTERLOCKED WITH CONNECTION PINS. THE PINS SHALL CONSIST OF GLASS-REINFORCED NYLON MADE FOR THE EXPRESSED USE WITH THE SRW UNITS SUPPLIED.
 11. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF HIGH-TENACITY PET GEOGRIDS, HDPE GEOGRIDS, OR GEOTEXTILES MANUFACTURED FOR SOIL REINFORCEMENT APPLICATIONS, THE TYPE, STRENGTH AND PLACEMENT OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE DETERMINED BY PROCEDURES OUTLINED IN THIS SPECIFICATION AND THE NCM DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS (3RD EDITION 2009) AND MATERIALS SHALL BE SPECIFIED BY WALL DESIGN ENGINEER IN THEIR FINAL WALL PLANS AND SPECIFICATIONS. THE MANUFACTURER(S)/SUPPLIER(S) OF THE GEOSYNTHETIC REINFORCEMENT SHALL HAVE DEMONSTRATED CONSTRUCTION OF SIMILAR SIZE AND TYPES OF SEGMENTAL RETAINING WALLS ON PREVIOUS PROJECTS.
 12. THE TYPE, STRENGTH AND PLACEMENT OF THE REINFORCING GEOSYNTHETIC SHALL BE AS DETERMINED BY THE WALL DESIGN ENGINEER, AS SHOWN ON THE FINAL, P.E.-STAMPED RETAINING WALL PLANS.
 13. MATERIAL FOR LEVELING PAD SHALL CONSIST OF COMPACTED SAND, GRAVEL, OR COMBINATION THEREOF (USCS SOIL TYPES GP, GW, SP, & SW) AND SHALL BE A MINIMUM OF 6 INCHES IN DEPTH. LEAN CONCRETE WITH A STRENGTH OF 200-300 PSI AND 3 INCHES THICK MAXIMUM MAY ALSO BE USED AS A LEVELING PAD MATERIAL. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
 14. DRAINAGE AGGREGATE SHALL BE ANGULAR, CLEAN STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D422:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
3/4 INCH	75-100
NO. 4	0-60
NO. 40	0-50
NO. 200	0-5
- | SIEVE SIZE | PERCENT PASSING |
|------------|-----------------|
| 1 INCH | 100 |
| NO. 4 | 20-100 |
| NO. 40 | 0-60 |
| NO. 200 | 0-35 |
15. THE DRAINAGE COLLECTION PIPE SHALL BE A PERFORATED OR SLOTTED PVC, OR CORRUGATED HDPE PIPE. THE DRAINAGE PIPE MAY BE WRAPPED WITH A GEOTEXTILE TO FUNCTION AS A FILTER. DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR ASTM F 758.
 16. THE REINFORCED SOIL MATERIAL SHALL BE FREE OF DEBRIS, UNLESS OTHERWISE NOTED ON THE FINAL, P.E.-SEALED, RETAINING WALL PLANS PREPARED BY THE WALL DESIGN ENGINEER. THE REINFORCED MATERIAL SHALL CONSIST OF THE INORGANIC USCS SOIL TYPES GP, GW, SW, SP, SM, MEETING THE FOLLOWING GRADATION, AS DETERMINED IN ACCORDANCE WITH ASTM D422:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
NO. 4	20-100
NO. 40	0-60
NO. 200	0-35

17. THE MAXIMUM PARTICLE SIZE OF POORLY-GRADED GRAVELS (GP) (NO FINES) SHOULD NOT EXCEED 3/4 INCH UNLESS EXPRESSLY APPROVED BY THE WALL DESIGN ENGINEER AND THE LONG-TERM DESIGN STRENGTH (LTS) OF THE GEOSYNTHETIC IS REDUCED TO ACCOUNT FOR ADDITIONAL INSTALLATION DAMAGE FROM PARTICLES LARGER THAN THIS MAXIMUM.
18. THE PLASTICITY OF THE FINE FRACTION SHALL BE LESS THAN 20.
19. THE PH OF THE BACKFILL MATERIAL SHALL BE BETWEEN 3 AND 9 WHEN TESTED IN ACCORDANCE WITH ASTM G 51.
20. DRAINAGE GEOTEXTILE SHALL CONSIST OF GEOSYNTHETIC SPECIFICALLY MANUFACTURED FOR USE AS A PERMEABLE SOIL FILTER THAT RETAINS SOIL WHILE STILL ALLOWING WATER TO PASS THROUGHOUT THE LIFE OF THE STRUCTURE. THE TYPE AND PLACEMENT OF THE GEOTEXTILE FILTER MATERIAL SHALL BE AS REQUIRED BY THE WALL DESIGN ENGINEER IN THEIR FINAL WALL PLANS AND SPECIFICATIONS.
21. THE DESIGN ANALYSIS FOR THE FINAL, P.E.-STAMPED RETAINING WALL PLANS PREPARED BY THE WALL DESIGN ENGINEER SHALL INCLUDE THE EXTERNAL STABILITY, INTERNAL STABILITY AND FACIAL STABILITY ANALYSIS. THE REINFORCED SOIL MASS, AND SHALL BE IN ACCORDANCE WITH ACCEPTABLE ENGINEERING PRACTICE AND THESE SPECIFICATIONS. THE INTERNAL AND EXTERNAL STABILITY ANALYSIS SHALL BE PERFORMED IN ACCORDANCE WITH THE NCM DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3RD EDITION, USING THE RECOMMENDED MINIMUM FACTORS OF SAFETY IN THIS MANUAL.
22. EXTERNAL STABILITY ANALYSIS FOR BEARING CAPACITY, GLOBAL STABILITY, AND TOTAL AND DIFFERENTIAL SETTLEMENT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE OWNER'S GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PERFORM BEARING CAPACITY, SETTLEMENT ESTIMATES, AND GLOBAL STABILITY ANALYSIS BASED ON THE FINAL WALL DESIGN PROVIDED BY THE WALL DESIGN ENGINEER AND COORDINATE ANY REQUIRED CHANGES WITH THE WALL DESIGN ENGINEER.
23. THE GEOSYNTHETIC PLACEMENT IN THE WALL DESIGN SHALL HAVE 100% CONTINUOUS COVERAGE PARALLEL TO THE WALL FACE, GAPPING BETWEEN HORIZONTALLY ADJACENT LAYERS OF GEOSYNTHETIC (PARTIAL COVERAGE) WILL NOT BE ALLOWED.
24. CONTRACTOR'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.
25. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION. OVER-EXCAVATION SHALL BE FILLED WITH COMPACTED INFILL MATERIAL, OR AS DIRECTED BY THE WALL DESIGN ENGINEER, AT THE CONTRACTOR'S EXPENSE.
26. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR.
27. FOLLOWING THE EXCAVATION, THE FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S ENGINEER TO ASSURE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH. SOILS NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH INFILL SOILS, AS DIRECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.
28. FOUNDATION SOIL SHALL BE PROOF-ROLLED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY AND INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF LEVELING PAD MATERIALS.
29. LEVELING PAD SHALL BE PLACED AS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLANS WITH A MINIMUM THICKNESS OF 6 INCHES. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
30. GRANULAR LEVELING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A FIRM, LEVEL BEARING SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. WELL-GRADED SANDS CAN BE USED TO SMOOTH THE TOP 1/4 INCH TO 1/2 INCH OF THE LEVELING PAD. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO ACHIEVE 96% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D 958).
31. ALL SRW UNITS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE FINAL, P.E.-SEALED WALL PLANS AND DETAILS OR AS DIRECTED BY THE WALL DESIGN ENGINEER. THE SRW UNITS SHALL BE INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SPECIFICATIONS AND DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE TWO REQUIREMENTS.
32. FIRST COURSE OF SRW UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE LEVELED SIDE-TO-SIDE, FRONT-TO-REAR AND WITH ADJACENT UNITS, AND ALLOWED TO ENSURE INTIMATE CONTACT WITH THE LEVELING PAD. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS. NO GAPS SHALL BE LEFT BETWEEN THE FRONT OF ADJACENT UNITS. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO THE BACK OF THE UNITS.
33. ALL EXCESS DEBRIS SHALL BE CLEANED FROM TOP OF UNITS AND THE NEXT COURSE OF UNITS INSTALLED ON TOP OF THE UNITS BELOW.

SEGMENTAL RETAINING WALL CONT.:

34. CONNECTION PINS SHALL BE INSERTED THROUGH THE PIN HOLES OF EACH UPPER-COURSE UNIT INTO RECEIVING SLOTS IN LOWER-COURSE UNITS. PINS SHALL BE FULLY SEATED IN THE PIN SLOT BELOW. UNITS SHALL BE PUSHED FORWARD TO REMOVE ANY LOOSENESS IN THE UNIT-TO-UNIT CONNECTION.
35. PRIOR TO PLACEMENT OF NEXT COURSE, THE LEVEL AND ALIGNMENT OF THE UNITS SHALL BE CHECKED AND CORRECTED WHERE NEEDED.
36. LAYOUT OF CURVES AND CORNERS SHALL BE INSTALLED IN ACCORDANCE WITH THE WALL PLAN DETAILS OR IN GENERAL ACCORDANCE WITH SRW MANUFACTURER'S INSTALLATION GUIDELINES. WALLS MEETING AT CORNERS SHALL BE INTERLOCKED BY OVERLAPPING SUCCESSIVE COURSES.
37. PROCEDURES ABOVE SHALL BE REPEATED UNTIL REACHING TOP OF WALL UNITS, JUST BELOW THE HEIGHT OF THE CAP UNITS. GEOSYNTHETIC REINFORCEMENT, DRAINAGE MATERIALS, AND REINFORCED BACKFILL SHALL BE PLACED IN SEQUENCE WITH UNIT INSTALLATION.
38. ALL GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLAN PROFILES AND DETAILS, OR AS DIRECTED BY THE WALL DESIGN ENGINEER.
39. AT THE ELEVATIONS SHOWN ON THE FINAL PLANS, (AFTER THE UNITS' DRAINAGE MATERIAL AND BACKFILL HAVE BEEN PLACED TO THIS ELEVATION) THE GEOSYNTHETIC REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED INFILL AND ON TOP OF THE CONCRETE SRW UNITS, TO WITHIN 1 INCH OF THE FRONT FACE OF THE UNIT BELOW. EMBEDMENT OF THE GEOSYNTHETIC IN THE SRW UNITS SHALL BE CONSISTENT WITH SRW MANUFACTURER'S RECOMMENDATIONS. CORRECT ORIENTATION OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE VERIFIED BY THE CONTRACTOR TO BE IN ACCORDANCE WITH THE GEOSYNTHETIC MANUFACTURER'S RECOMMENDATIONS. THE HIGHEST-STRENGTH DIRECTION OF THE GEOSYNTHETIC MUST BE PERPENDICULAR TO THE WALL FACE.
40. GEOSYNTHETIC REINFORCEMENT LAYERS SHALL BE ONE CONTINUOUS PIECE FOR THEIR ENTIRE EMBEDMENT LENGTH. SPLICING OF THE GEOSYNTHETIC IN THE DESIGN-STRENGTH DIRECTION (PERPENDICULAR TO THE WALL FACE) SHALL NOT BE PERMITTED. ALONG THE LENGTH OF THE WALL, HORIZONTALLY ADJACENT SECTIONS OF GEOSYNTHETIC REINFORCEMENT SHALL BE BUTTED IN A MANNER TO ASSURE 100% COVERAGE PARALLEL TO THE WALL FACE.
41. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM OF 6 INCHES OF BACKFILL IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC. TURNING SHOULD BE KEPT TO A MINIMUM. RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SLOW SPEEDS (LESS THAN 5 MPH).
42. THE GEOSYNTHETIC REINFORCEMENT SHALL BE FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL. THE NOMINAL TENSION SHALL BE APPLIED TO THE REINFORCEMENT AND SECURED IN PLACE WITH STAPLES, STAKES OR BY HAND TENSIONING UNTIL REINFORCEMENT IS COVERED BY 6 INCHES OF FILL.
43. DRAINAGE AGGREGATE SHALL BE INSTALLED TO THE LINE, GRADES AND SECTIONS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLANS. DRAINAGE AGGREGATE SHALL BE PLACED TO THE MINIMUM THICKNESS SHOWN ON THE CONSTRUCTION PLANS BETWEEN AND BEHIND UNITS (A MINIMUM OF 1 CUBIC FOOT FOR EACH EXPOSED SQUARE FOOT OF WALL FACE UNLESS OTHERWISE NOTED ON THE FINAL WALL PLANS).
44. DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE THE REINFORCED-SOIL ZONE. THE DRAINAGE COLLECTION PIPE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE FINAL CONSTRUCTION DRAWINGS. THE DRAINAGE COLLECTION PIPE SHALL DAYLIGHT INTO A STORM SEWER OR ALONG A SLOPE, AT AN ELEVATION BELOW THE LOWEST POINT OF THE PIPE WITHIN THE AGGREGATE DRAIN. DRAINAGE LATERALS SHALL BE SPACED AT A MAXIMUM 50-FOOT SPACING ALONG THE WALL FACE.
45. THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN THE FINAL WALL PLANS IN THE MAXIMUM COMPACTED LIFT THICKNESS OF 6 INCHES AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D 958) AT A MOISTURE CONTENT WITHIN -1% POINT TO +3% POINTS OF OPTIMUM. THE BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SRW UNITS.
46. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE BACK OF THE WALL UNITS. COMPACTION WITHIN THE 3 FEET BEHIND THE WALL UNITS SHALL BE ACHIEVED BY AT LEAST THREE PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, PLATE, OR ROLLER.
47. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING AND REINFORCED BACKFILL TO DIRECT WATER RUNOFF AWAY FROM THE WALL FACE.
48. AT COMPLETION OF WALL CONSTRUCTION, BACKFILL SHALL BE PLACED LEVEL WITH FINAL TOP OF WALL ELEVATION IF FINAL GRADING, PAVING, LANDSCAPING AND/OR STORM DRAINAGE INSTALLATION ADJACENT TO THE WALL IS NOT PLACED IMMEDIATELY AFTER WALL COMPLETION. TEMPORARY GRADING AND DRAINAGE SHALL BE PROVIDED TO ENSURE WATER RUNOFF IS NOT DIRECTED AT THE WALL NOR ALLOWED TO COLLECT OR POND BEHIND THE WALL UNTIL FINAL CONSTRUCTION ADJACENT TO THE WALL IS COMPLETED.
49. SRW CAPS SHALL BE PROPERLY ALIGNED AND GLUED TO UNDERLYING UNITS WITH VERSA-LOK ADHESIVE. A FLEXIBLE, HIGH-STRENGTH CONCRETE ADHESIVE, RIGID ADHESIVE OR MORTAR ARE NOT ACCEPTABLE.
50. CAPS SHALL OVERHANG THE TOP COURSE OF UNITS BY 3/4 INCH TO 1 INCH. SLIGHT VARIATION IN OVERHANG IS ALLOWED TO CORRECT ALIGNMENT AT THE TOP OF THE WALL.
51. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION BY OTHERS ADJACENT TO THE WALL DOES NOT DISTURB THE WALL OR PLACE TEMPORARY CONSTRUCTION LOADS ON THE WALL THAT EXCEED DESIGN LOADS. INCLUDING LOADS SUCH AS WATER PRESSURE, TEMPORARY GRADES, OR EQUIPMENT LOADINGS. HEAVY PAVING OR GRADING EQUIPMENT SHALL BE KEPT A MINIMUM OF 3 FEET BEHIND THE BACK OF THE WALL FACE. EQUIPMENT WITH WHEEL LOADS IN EXCESS OF 150 PSF LIVE LOAD SHALL NOT BE OPERATED WITHIN 10 FEET OF THE FACE OF THE RETAINING WALL DURING CONSTRUCTION ADJACENT TO THE WALL. CARE SHOULD BE TAKEN BY THE GENERAL CONTRACTOR TO ENSURE WATER RUNOFF IS DIRECTED AWAY FROM THE WALL STRUCTURE UNTIL FINAL GRADING AND SURFACE DRAINAGE COLLECTION SYSTEMS ARE COMPLETED.

BIOFILTRATION BASIN:

1. BIOFILTRATION BASIN SHALL BE CONSTRUCTED IN GENERAL ACCORDANCE WITH WQRF TECHNICAL STANDARD 1004: BIORETENTION FOR INFILTRATION AND THESE SPECIFICATIONS.
2. ENGINEERED SOIL MIX SHALL CONSIST OF A MIX OF 70 TO 85% SAND AND 15 TO 30% COMPOST BASED ON VOLUME. SAND SHALL MEET THE REQUIREMENTS FOR FINE AGGREGATE SAND SPECIFIED SECTION 501.2.5.3.4 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION OR MEET ASTM C33 (FINE AGGREGATE CONCRETE SAND).
3. PRIOR TO PLACEMENT IN THE BIOFILTRATION BASIN, THE ENGINEERED SOIL SHALL BE PREMIXED AND THE MOISTURE CONTENT SHALL BE LOW ENOUGH TO PREVENT CLUMPING AND COMPACTION DURING PLACEMENT.
4. THE ENGINEERED SOIL SHALL BE PLACED IN MULTIPLE LIFTS, EACH APPROXIMATELY 12 INCHES IN DEPTH.
5. ENGINEERED SOIL MIX SHALL BE FREE OF ROCKS, STUMPS, ROOTS, BRUSH OR OTHER MATERIAL OVER ONE INCH IN DIAMETER. NO OTHER MATERIALS SHALL BE MIXED WITH THESE PLANTING SOIL THAT MAY BE HARMFUL TO PLANT GROWTH OR BE A HINDRANCE TO PLANTING OR MAINTENANCE.
6. ENGINEERED SOIL AND GRAVEL SHALL BE IN ACCORDANCE WITH THE LATEST WQRF TECHNICAL STANDARD 1004.
7. FEA GRAVEL SHALL BE GRADED SUCH THAT MINIMUM PARTICLE SIZE IS LARGE ENOUGH TO PREVENT FILLING THROUGH PERFORATIONS OF THE UNDERDRAIN PIPE.
8. BIOFILTRATION BASIN DRAIN PIPE: 6 INCH SCHEDULE 40 PVC PIPE MEETING PERFORATION REQUIREMENTS OF AASHTO M278 HIGHWAY UNDERDRAIN SPECIFICATIONS WITH 3/8" PERFORATIONS ON 6" CENTERS WITH 4 HOLES PER ROW.
8. BEEHIVE INLET: NEEVAH R-256L OR EQUAL.
10. RISER STRUCTURE: 36" DIAMETER PRECAST CATCH BASIN STRUCTURE WITH 24" TOP OPENING TO ACCOMMODATE BEEHIVE INLET. IN GENERAL ACCORDANCE WITH FILE NO. 26 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
11. GRAVEL STORAGE LAYER (IF INDICATED ON PLANS): COURSE AGGREGATE #2 IN ACCORDANCE WITH SECTION 501.2.5.4.4 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
12. FILTER FABRIC: GEOTEXTILE FABRIC IN ACCORDANCE WITH SECTION 645.2.2.4 OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION
13. EXCAVATE TO GRADES AS INDICATED ON PLANS.
14. CONSTRUCT TEMPORARY DIVERSION SWALES OR PROVIDE OTHER MEANS AS NECESSARY TO PREVENT CONSTRUCTION SITE RUNOFF FROM DISTURBED AREAS, AND RUNOFF FROM PERVIOUS AREAS WHICH HAVE NOT YET BEEN STABILIZED, FROM ENTERING THE BIORETENTION AREA.
15. CONSTRUCTION SHALL BE SUSPENDED DURING PERIODS OF RAINFALL OR SNOWMELT. CONSTRUCTION SHALL REMAIN SUSPENDED IF EXCESS WATER FROM DISTURBED AREAS OR CONSTRUCTION CONTRIBUTES SIGNIFICANTLY TO THE POTENTIAL FOR SOIL SMEARING, CLUMPING OR OTHER FORMS OF COMPACTION.
16. COMPACTION AND SMEARING OF THE ENGINEERED SOIL AND TOP SOIL BENEATH THE FLOORS, IN THE SOIL PLANTING BED, AND THE SIDE SLOPES OF THE BASIN, AND COMPACTION OF THE ENGINEERED SOILS IN THE BASIN SHALL BE MINIMIZED. DURING SITE DEVELOPMENT, THE AREA DEDICATED TO THE BIOFILTRATION BASIN SHALL BE ORDOINED OFF TO PREVENT ACCESS BY HEAVY EQUIPMENT. ACCEPTABLE EQUIPMENT FOR CONSTRUCTING THE BIOFILTRATION BASIN INCLUDES EXCAVATION HOES, LIGHT EQUIPMENT WITH TURF TYPE TIRES, MARCH EQUIPMENT OR WIDE-TRACK LOADERS.
17. IF COMPACTION OCCURS AT THE BASE OF THE BIOFILTRATION BASIN, THE SOIL SHALL BE REFRACTURED TO A DEPTH OF AT LEAST 12 INCHES, IF SMEARING OCCURS, THE SMEARED AREAS OF THE INTERFACE SHALL BE CORRECTED BY RAKING OR ROTO-TILLING.
18. STEPS MAY BE TAKEN TO INDUCE MILD SETTLING OF THE ENGINEERED SOIL BED AS NEEDED TO PREPARE A STABLE PLANTING MEDIUM AND TO STABILIZE THE PONDING DEPTH. VIBRATING PLATE-STYLE COMPACTORS SHALL NOT BE UTILIZED.
19. ANY SEDIMENT ACCUMULATED IN THE BASIN DUE TO CONSTRUCTION ACTIVITIES SHOULD BE REMOVED AND THE ENGINEERED SOIL SHALL BE DEEP TILLED PRIOR TO PLANTING.
20. IMPERVIOUS LINER SHALL BE 45 MIL FIRESTONE EPDM (GSI PRODUCTS), OR 30 MIL PVC (GSI PRODUCTS), OR EQUAL.

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SPECIFICATIONS

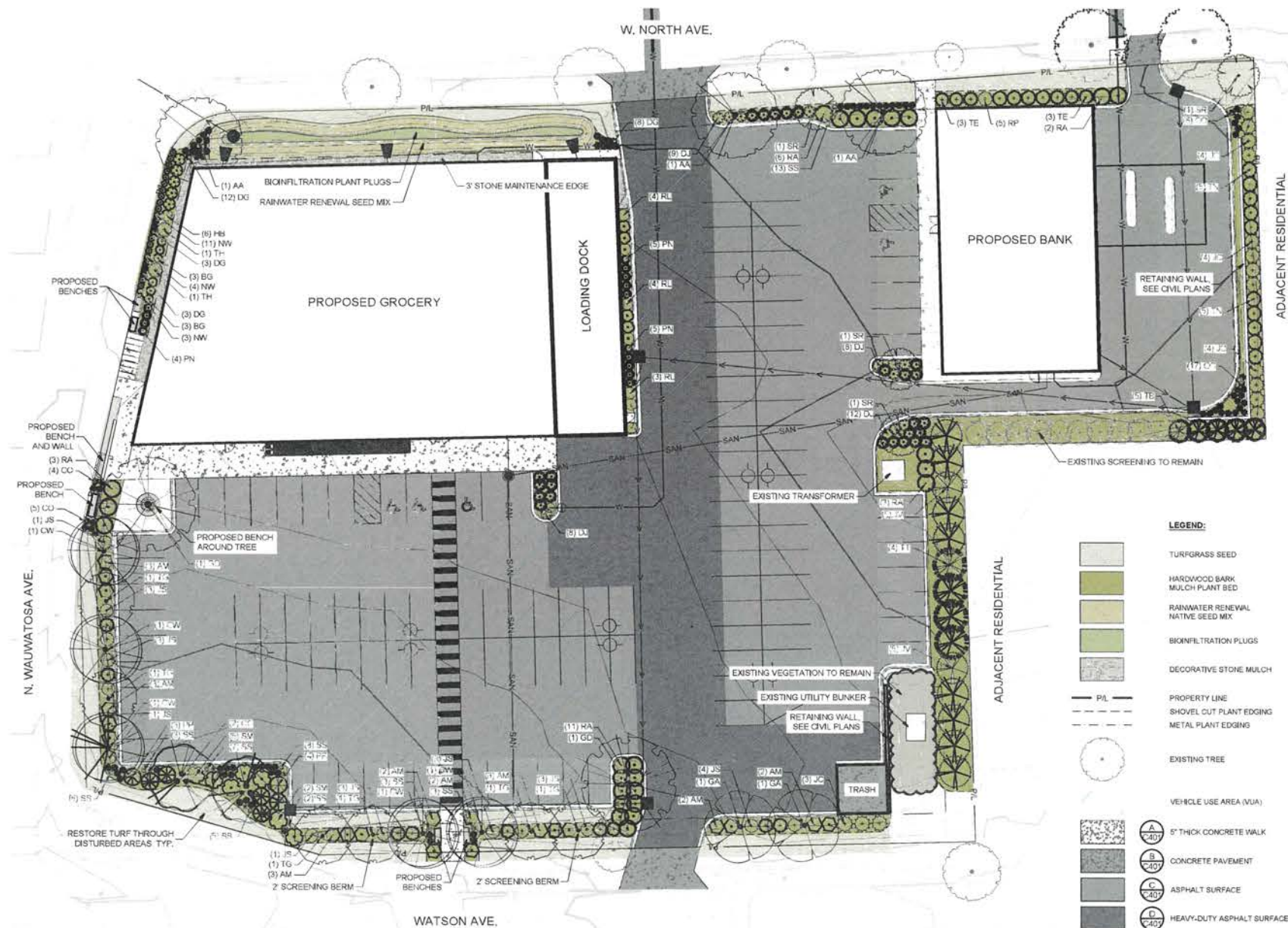
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NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2026
DRS SUBMITTAL	05/27/2026
DRS SUBMITTAL	07/08/2026

NO. REVISION	DATE
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PROJECT NO:	25057
DESIGN DATE:	---
PLOT DATE:	2026.07.08
DRAWN BY:	JMJ
CHECKED BY:	PJJ
APPROVED BY:	---
SHEET NO:	

C501



Site Landscaping Requirements Zoning: General Commercial (C2)				
Category	Requirement	Public VUA Frontage	Quantity Required	Quantity Provided
Perimeter Vehicle Use Area (VUA)	2 Deciduous Trees per 50 LF	444 LF	18 Trees	18 Trees
	8 Shrubs per 50 LF		72 Shrubs	72 Shrubs
Interior Vehicle Use Area (VUA)	10% of Interior VUA Landscaped	Interior VUA	Landscaping Required	Landscaping Provided
	1 Shade Tree per 180 SF of Interior Landscape Area	4,777 SF	27 Trees	5 Trees*

*NOTE: INTERIOR VUA LANDSCAPING PROVIDED TO GREATEST EXTENT POSSIBLE DUE TO SITE RESTRICTIONS

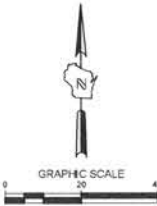
LANDSCAPE GENERAL NOTES:

- VERIFY EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES, AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
- INSPECT THE SITE PRIOR TO COMMENCING WORK. DOCUMENT IN WRITING AND PHOTOGRAPH EXISTING CONDITIONS WITHIN, AND IN AREAS ADJACENT TO THE LIMITS OF CONSTRUCTION. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES NOT DOCUMENTED IN THE PHOTOGRAPHS PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
- COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ADJACENT PAVEMENTS, DRAINAGE, CURB RELATED STRUCTURES WITH OTHER TRADES.
- RESTORE AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. DAMAGE CAUSED DURING LANDSCAPE INSTALLATION TO EXISTING CONDITIONS AND IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- CONTRACTOR SHALL THOROUGHLY REVIEW ALL SPECIFICATIONS RELATED TO TREE PROTECTION, SOIL PREPARATION, TURF, GRASSES AND PLANTS. THESE SECTIONS PROVIDE ADDITIONAL INFORMATION ON MATERIALS AND SET STANDARDS FOR QUALITY AND INSTALLATION REQUIREMENTS.
- PROVIDE 3" DOUBLE SHREDDED BARK MULCH FOR ALL PLANTED TREES, SHRUBS AND LANDSCAPE BEDS.

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
DECIDUOUS TREES					
AA	AA	Acer x freemanii 'Jeffersred' / Autumn Blaze® Freeman Maple	2.5" Cal.	B&B	3
CW	CW	Carpinus caroliniana 'Wisconsin Red' / Wisconsin Red Muscadine	2.5" Cal.	B&B	5
GA	GA	Ginkgo biloba 'Autumn Gold' / Autumn Gold Maidenhair Tree	2.5" Cal.	B&B	2
GD	GD	Gymnodendron dioica 'Espresso' / Kentucky Coffeetree	2.5" Cal.	B&B	2
TG	TG	Tilia cordata 'Greenspire' / Greenspire Littleleaf Linden	2.5" Cal.	B&B	6
EVERGREEN TREES					
JC	JC	Juniperus chinensis 'Mountbatten' / Mountbatten Juniper	6" Ht.	B&B	15
JV	JV	Juniperus virginiana / Eastern Redcedar	6" Ht.	B&B	10
TB	TB	Thuja occidentalis 'Ball John' / Technitree® Arborvitae	6" Ht.	B&B	5
TN	TN	Thuja occidentalis 'Nigra' / Black Arborvitae	6" Ht.	B&B	10
TT	TT	Thuja occidentalis 'Techny' / Techny Arborvitae	6" Ht.	B&B	4
ORNAMENTAL TREES					
CC	CC	Cercis canadensis / Eastern Redbud	8" Ht. (Multi-Stem)	B&B	2
SR	SR	Syringa reticulata Ivory Silk / Ivory Silk Japanese Tree Lilac	2.5" Cal.	B&B	4
BROADLEAF EVERGREEN SHRUBS					
BG	BG	Buxus x 'Green Mountain' / Green Mountain Boxwood	3 gal.	Cont.	6
RP	RP	Rhododendron x 'P.J.M.' / P.J.M. Rhododendron	3 gal.	Cont.	5
DECIDUOUS SHRUBS					
AM	AM	Aronia melanocarpa elata / Glossy Black Chokeberry	3 gal.	Cont.	20
DJ	DJ	Diervilla lonicera 'Jewel' / Jewel Bush Honeysuckle	3 gal.	Cont.	37
HB	HB	Hydrangea macrophylla 'Pili-M-H' / BloomStruck® Hydrangea	3 gal.	Cont.	6
RA	RA	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	Cont.	25
RL	RL	Rosa rugosa 'Purple Pavement' / Purple Pavement Rose	3 gal.	Cont.	11
SM	SM	Syringa meyeri 'Palibin' / Dwarf Korean Lilac	3 gal.	Cont.	7
EVERGREEN SHRUBS					
JS	JS	Juniperus chinensis 'Sea Green' / Sea Green Juniper	3 gal.	Cont.	22
PP	PP	Pinus mugo 'Pumilo' / Dwarf Mugo Pine	3 gal.	Cont.	7
TE	TE	Taxus x media 'Everlow' / Everlow Anglo-Japanese Yew	3 gal.	Cont.	6
TH	TH	Taxus x media 'Hicks' / Hicks Anglo-Japanese Yew	3 gal.	Cont.	2
ORNAMENTAL GRASSES					
CO	CO	Calamagrostis x acutiflora 'Overdam' / Overdam Feather Reed Grass	1 gal.	Cont.	32
DG	DG	Deschampsia cespitosa 'Goldtau' / Gold Dew Tufted Hair Grass	1 gal.	Cont.	26
PN	PN	Panicum virgatum 'Northwind' / Northwind Switch Grass	1 gal.	Cont.	14
SS	SS	Schizachyrium scoparium 'Standing Ovation' / Standing Ovation Little Bluestem	1 gal.	Cont.	50
PERENNIALS					
NV	NV	Nepeta x faasseni 'Walker's Low' / Walker's Low Catmint	1 gal.	Cont.	18

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LANDSCAPE PLAN

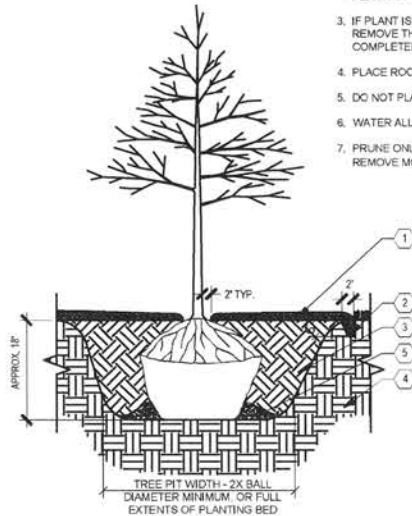
**PRELIMINARY
NOT FOR
CONSTRUCTION**

ISSUANCE DATE
CONDITIONAL USE SUBMITTAL 05/20/2026
DRS SUBMITTAL 05/27/2026
DRS SUBMITTAL 07/09/2026

NO. REVISION DATE

PROJECT NO. 25067
DESIGN DATE ---
PLOT DATE 2026.07.08
DRAWN BY: AJR
CHECKED BY: PJJ
APPROVED BY: ---
SHEET NO.

L100

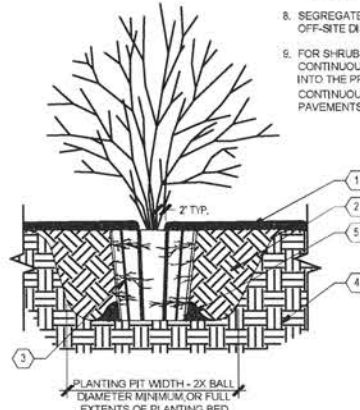


A TYPICAL TREE PLANTING
SCALE: N.T.S.

- NOTES:
1. PLANT EACH TREE SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
 2. DEPTH OF THE PLANTING HOLE SHOULD BE DETERMINED AND DUG AFTER THE ROOT FLARE IS LOCATED. PLANTING HOLE MUST BE NO DEEPER THAN THE HEIGHT OF THE ROOT BALL.
 3. IF PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, CUT AND REMOVE THE WIRE BASKET ENTIRELY. REMOVE ALL TWINE, ROPE, AND BURLAP COMPLETELY FROM ALL ROOT BALLS.
 4. PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.
 5. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
 6. WATER ALL PLANTS WITHIN 2 HOURS OF INSTALLATION.
 7. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY BRANCHES. DO NOT REMOVE MORE THAN $\frac{1}{4}$ OF THE ORIGINAL PLANT MASS.

KEYED LEGEND

- 1 3" DEPTH SHREDDED HARDWOOD BARK MULCH. PROVIDE 4'-0" DIAMETER MULCH RINGS AT THE BASE OF ANY TREES PLANTED IN LAWN.
- 2 PROVIDE SPADED EDGE, 2" WIDE, 6" DEEP FOR ENTIRE PERIMETER OF BARK MULCH RINGS AT BASE OF TREES PLANTED IN LAWNS.
- 3 PLANTING SOIL. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED.
- 4 PREPARED SUBGRADE.
- 5 TAMP SOIL AROUND BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT BALL DOES NOT SHIFT.



B TYPICAL SHRUB PLANTING
SCALE: N.T.S.

- NOTES:
1. MAKE 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND THE CIRCUMFERENCE OF THE ROOT BALL BEFORE PLANTING TO LOOSEN POT-BOUND ROOTS.
 2. PLANT EACH SHRUB SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
 3. PLANTING HOLE MUST NOT BE DEEPER THAN THE HEIGHT OF THE ROOT BALL.
 4. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
 5. PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.
 6. WATER ALL PLANTS WITHIN 2 HOURS OF INSTALLATION.
 7. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY BRANCHES. DO NOT REMOVE MORE THAN $\frac{1}{4}$ OF THE ORIGINAL PLANT MASS.
 8. SEGREGATE ANY SOIL FROM BELOW WARNING LAYER EXCAVATED DURING PLANTING FOR OFF-SITE DISPOSAL. COORDINATE DISPOSAL WITH ENVIRONMENTAL CONSULTANT.
 9. FOR SHRUBS PLANTED WITHIN PLANTING BEDS, CONTRACTOR SHALL PROVIDE PLANTING SOIL CONTINUOUSLY FOR THE ENTIRE PLANTING BED AND INDIVIDUAL SHRUBS SHALL BE PLANTED INTO THE PREPARED PLANTING SOIL. MULCH SURFACE FOR PLANTING BEDS SHALL ALSO BE CONTINUOUS ACROSS THE ENTIRE SURFACE AND HELD $\frac{1}{2}$ " MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.

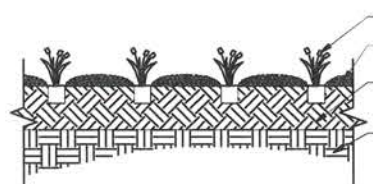
KEYED LEGEND

- 1 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH. UNLESS OTHERWISE INDICATED, KEEP 2" CLEAR OF STEMS.
- 2 PLANTING SOIL AS SPECIFIED. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED.
- 3 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND PERIMETER.
- 4 PREPARED SUBGRADE.
- 5 TAMP SOIL AROUND BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT BALL DOES NOT SHIFT.

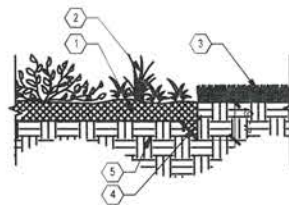
- NOTES:
1. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
 2. PLANTING HOLE MUST NOT BE DEEPER THAN THE HEIGHT OF THE ROOT BALL.
 3. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
 4. WATER ALL PLANTS THOROUGHLY WITHIN 2 HOURS OF INSTALLATION.
 5. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY OR DEAD PLANT PARTS. DO NOT REMOVE MORE THAN $\frac{1}{4}$ OF THE ORIGINAL PLANT MASS.
 6. FOR PLANTS PLANTED WITHIN PLANTING BEDS, CONTRACTOR SHALL PROVIDE PLANTING SOIL CONTINUOUSLY FOR THE ENTIRE PLANTING BED AND INDIVIDUAL SHRUBS SHALL BE PLANTED INTO THE PREPARED PLANTING SOIL. MULCH SURFACE FOR PLANTING BEDS SHALL ALSO BE CONTINUOUS ACROSS THE ENTIRE SURFACE AND HELD $\frac{1}{2}$ " MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.

KEYED LEGEND

- 1 PERENNIAL, ORNAMENTAL GRASS, OR GROUNDCOVER PLUG. SEE LANDSCAPE PLAN SHEETS L100-L103.
- 2 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH. UNLESS OTHERWISE INDICATED, KEEP 3" CLEAR OF STEMS.
- 3 PLANTING SOIL. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED.
- 4 PREPARED SUBGRADE.



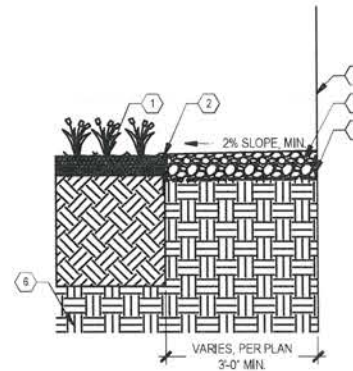
C TYPICAL PERENNIAL & ORNAMENTAL GRASS PLANTING
SCALE: N.T.S.



D SHOVEL CUT PLANT EDGE
SCALE: N.T.S.

KEYED LEGEND

- 1 3" DEPTH OF MULCH LAYER
- 2 SHRUB PLANTING BED
- 3 LAWN ADJACENT TO PLANTING BED
- 4 45 DEGREE ANGLE SHOVEL CUT EDGE TOWARD PLANTING BED.
- 5 COMPACTED SUBGRADE



E STONE MAINTENANCE EDGE
SCALE: N.T.S.

KEYED LEGEND

- 1 ADJACENT PLANTING BED
- 2 BLACK ANODIZED ALUMINUM EDGING
- 3 BUILDING FACE
- 4 3" DEPTH STONE MULCH
- 5 WOVEN GEOTEXTILE FILTER FABRIC. WRAP UP SIDES OF BUILDING AND EDGING
- 6 PREPARED SUBGRADE

**PRELIMINARY
NOT FOR
CONSTRUCTION**

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/20/2026
DRB SUBMITTAL	05/27/2026
DRB SUBMITTAL	07/09/2026

NO.	REVISION	DATE
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PROJECT NO.	25067
DESIGN DATE	---
PLOT DATE	2026.07.08
DRAWN BY	AJR
CHECKED BY	PJL
APPROVED BY	---
SHEET NO.	

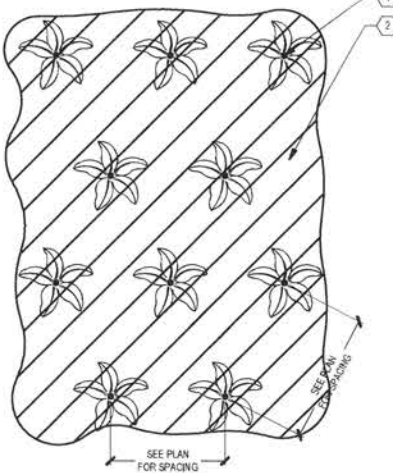
L200

KEYED LEGEND

- 1 BIOFILTRATION BASIN PERENNIAL PLUGS
(SEE PERENNIAL PLUGS PLANT LIST)

- 2 STRAW MULCH

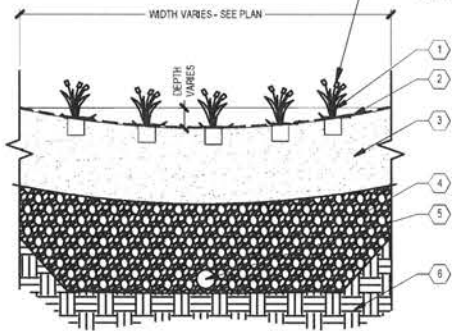
PERENNIAL PLUG SPACING
1 PLUG PER 2.25 SQUARE FEET
(18" SPACING O.C.)
PLANT IN CLUSTERS OF 5-12 PLANTS PER SPECIES



PLAN VIEW

A BIOINFILTRATION PLUG PLANTING
SCALE: N.T.S.

INSTALL PERENNIALS AND GRASSES PER PLAN.
AFTER INSTALLING EROSION CONTROL FABRIC, CUT A SMALL OPENING THE SIZE OF THE ROOT BALL MASS IN THE EROSION CONTROL FABRIC TO PLANT EACH INDIVIDUAL PLANT.



SECTION VIEW

KEYED LEGEND

- 1 BIOFILTRATION BASIN PLANTING (SEE PERENNIAL PLUGS PLANT LIST)
- 2 BIODEGRADABLE EROSION CONTROL MATTING ON BOTTOM AND SLOPES OF BASIN
- 3 ENGINEERED SOIL MIX - SEE CIVIL FOR DEPTH
- 4 STONE STORAGE LAYER - SEE CIVIL FOR DEPTH
- 5 PVC DRAIN TILE - SEE CIVIL PLAN
- 6 PREPARED SUBGRADE

Botanical Name	Common Name	Quantity	Size	Comments	%	Total Quantity	Total Trays	Total Plants
<i>Asclepias incarnata</i>	Marsh Milkweed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	4%	6	0.19	32.00
<i>Aster novae-angliae</i>	New England Aster	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Carex stipitata</i>	Common Fox Sedge	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	4%	6	0.19	32.00
<i>Carex vulpinoidea</i>	Brown Fox Sedge	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Eupatorium maculatum</i>	Spotted Joe Pye Weed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Helenium autumnale</i>	Sneezeweed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Liatris spicata</i>	Marsh Blazingstar	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Lobelia cardinalis</i>	Cardinal Flower	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Monarda fistulosa</i>	Wild Bergamot	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Panicum virgatum</i>	Switchgrass	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Ratibida pinnata</i>	Yellow Coneflower	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Rudbeckia hirta</i>	Black-Eyed Susan	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Scirpus atrovirens</i>	Dark-Green Bulrush	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Scirpus cyperinus</i>	Wool Grass	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Spartina pectinata</i>	Prairie Cordgrass	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Tradescantia hiensis</i>	Ohio Spiderwort	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	6%	9	0.28	32.00
<i>Verbena hastata</i>	Blue Vervain	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	4%	6	0.19	32.00
<i>Vernonia fasciculata</i>	Ironweed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species	4%	6	0.19	32.00
					100%	150		

C BIOINFILTRATION PLANTING PLUGS LIST
SCALE: N.T.S.

Botanical Name	Common Name	PLS Ounces/Acre
Wildflower Forbs:		
<i>Asclepias incarnata</i>	Marsh (Red) Milkweed	3.00
<i>Aster ericoides</i>	Heath Aster	0.10
<i>Aster novae-angliae</i>	New England Aster	1.50
<i>Baptisia leucantha (alba)</i>	White Wild Indigo	4.00
<i>Eupatorium maculatum</i>	Spotted Joe Pye Weed	0.80
<i>Eupatorium perfoliatum</i>	Boneset	0.50
<i>Liatris pycnostachya</i>	Prairie Blazing Star	2.50
<i>Liatris spicata</i>	Marsh Blazing Star	5.00
<i>Lobelia cardinalis</i>	Cardinal Flower	0.25
<i>Lobelia siphilitica</i>	Great Blue Lobelia	0.50
<i>Monarda fistulosa</i>	Wild Bergamot	1.50
<i>Physostegia virginiana</i>	Obedient Plant	1.50
<i>Pycnanthemum virginianum</i>	Mountain Mint	0.30
<i>Ratibida pinnata</i>	Yellow Coneflower	2.25
<i>Rudbeckia hirta</i>	Black-Eyed Susan	2.00
<i>Rudbeckia subtomentosa</i>	Sweet Black-Eyed Susan	2.00
<i>Solidago ohioensis</i>	Ohio Goldenrod	0.50
<i>Tradescantia hiensis</i>	Ohio Spiderwort	1.25
<i>Verbena hastata</i>	Blue Vervain	1.00
<i>Vernonia fasciculata</i>	Ironweed	1.00
Totals =		31.45
Perennial Grasses, Sedges & Rushes:		
<i>Bromus ciliatus</i>	Fringed Brome	20.00
<i>Colamagrostis canadensis</i>	Blue Joint Grass	1.00
<i>Carex bebbii</i>	Bebb's Oval Sedge	2.00
<i>Carex crawfordii</i>	Crawford's Sedge	1.00
<i>Carex crinita</i>	Fringed Sedge	0.75
<i>Carex stipitata</i>	Common Fox Sedge	1.50
<i>Carex vulpinoidea</i>	Brown Fox Sedge	1.00
<i>Elymus canadensis</i>	Canada Wild Rye	24.00
<i>Elymus virginicus</i>	Virginia Wild Rye	32.00
<i>Glyceria grandis</i>	Reed Manna Grass	1.00
<i>Panicum virgatum</i>	Switchgrass	3.50
<i>Scirpus atrovirens</i>	Dark-Green Bulrush	0.50
<i>Scirpus cyperinus</i>	Wool Grass	0.30
<i>Sorghastrum nutans</i>	Indian Grass	5.00
<i>Spartina pectinata</i>	Prairie Cordgrass	3.00
Totals =		96.55

B RAINWATER RENEWAL NATIVE SEED MIX
SCALE: N.T.S.

WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

LANDSCAPE DETAILS

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CONDITIONAL USE SUBMITTAL	05/22/2025
DRS SUBMITTAL	06/27/2025
DRS SUBMITTAL	07/09/2025

NO. REVISION	DATE
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PROJECT NO:	25057
DESIGN DATE:	---
PLOT DATE:	2026.07.08
DRAWN BY:	AJR
CHECKED BY:	PJJ
APPROVED BY:	---
SHEET NO:	

L201

PLANTING QUALITY ASSURANCE

1. PLANTS ARE TO BE INSPECTED UPON DELIVERY TO PROJECT SITE AND THE LANDSCAPE ARCHITECT OR OWNER'S PROJECT REPRESENTATIVE MAY REJECT ANY SPECIMENS NO LONGER MEETING THE SPECIFIED STANDARDS OR THAT HAVE BEEN DAMAGED IN TRANSIT.
2. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES AND VARIETY/HYBRID/CULTIVAR SPECIFIED, AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE OF THE SITE LOCATION. SPECIMENS NURSERY-DUG TO BE REPLANTED SHALL HAVE BEEN FRESHLY DUG AND PROPERLY PREPARED FOR PLANTING.
3. TREES:
 - 3.1. SHALL BE TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, COMPACTNESS AND SYMMETRY. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED OTHERWISE, AND SHRUBS WITH DAMAGED OR CUT MAINSTEM(S), WILL BE REJECTED.
 - 3.2. WITH A DAMAGED, CUT OR CROOKED LEADER, ABRASION OF BARK, SUNSCALD, FROST CRACK, EMERGING KNOTS, INSECTS (INCLUDING EGGS AND LARVAE) OR INSECT DAMAGE, CANKERS/CANKEROUS LESIONS OR FUNGAL MATS, MOLD, PREMATURELY-OPENED BUDS, OR CUTS OF LIMBS OVER 1/4" DIAMETER THAT ARE NOT COMPLETELY CALLEDUS WILL BE REJECTED.
 - 3.3. SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS, AND BE FREE FROM PHYSICAL DAMAGE OR OTHER HINDRANCES TO HEALTHY GROWTH.
 - 3.4. SUFFICIENT AND BURLAPPED PLANTS SHALL BE DUG WITH SOLO BALLS OF A DIAMETER NOT LESS THAN THAT RECOMMENDED BY THE AMERICAN STANDARDS FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE BOTH FIBROUS AND FEEDING ROOTS. BALLS SHALL BE SECURELY WRAPPED WITH BURLAP, AND TIGHTLY BOUND WITH ROPE OR TWINE. NO PLANTS SHALL BE BOUND WITH ROPE OR WIRE IN SUCH A MANNER AS TO DAMAGE BARK OR BREAK BRANCHES. THE ROOT FLARE SHOULD BE WITHIN THE TOP 2" OF THE SOIL BALL. BALLED AND BURLAPPED PLANTS WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED, OR BROKEN BEFORE OR DURING PLANTING.
4. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED WITHIN THE PLANT SCHEDULE.

PLANTING PROJECT CONDITIONS:

1. VERIFY SERVICE AND UTILITY LOCATIONS AND DIMENSIONS OF CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK.
2. INTERRUPTION OF EXISTING SERVICES OR UTILITIES: DO NOT INTERRUPT SERVICES OR UTILITIES UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY SERVICES OR UTILITIES ACCORDING TO REQUIREMENTS INDICATED:
 - 2.1. NOTIFY OWNER'S PROJECT REPRESENTATIVE NO FEWER THAN TWO DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF EACH SERVICE OR UTILITY.
 - 2.2. DO NOT PROCEED WITH INTERRUPTION OF SERVICES OR UTILITIES WITHOUT REPRESENTATIVE'S WRITTEN PERMISSION.
3. PLANTING RESTRICTIONS: PLANTING SHALL OCCUR DURING THE FOLLOWING ACCEPTABLE INSTALLATION PERIODS:
 - 3.1. DECIDUOUS TREES AND SHRUBS: APRIL 15 TO OCTOBER 15.
 - 3.2. NATIVE SEEDING AND TURFGRASS: APRIL 15 - OCTOBER 15
4. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS.
5. CONTRACTOR SHALL PROTECT ALL EXISTING AND/OR NEWLY INSTALLED PLANTS, LAWNS, AND GRASS AREAS FROM DAMAGE AT ALL TIMES. DAMAGED PLANTS, LAWNS OR GRASS AREAS SHALL BE REPLACED OR TREATED AS REQUIRED TO CONFORM TO SPECIFICATIONS HEREIN FOR FRESH STOCK. WORK AREA SHALL BE KEPT CLEAN AND ORDERLY DURING THE INSTALLATION PERIOD. UNDER NO CONDITION SHALL DEBRIS FROM PLANTING ACTIVITIES RESULT IN A SAFETY HAZARD ON-SITE OR ADJACENT OFF-SITE PROPERTY. DAMAGE TO SITE IMPROVEMENTS OR ADJACENT LANDSCAPES INCURRED AS A RESULT OF PLANTING OR REPLACEMENT OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR THAT CAUSES THE DAMAGE AT NO COST TO THE OWNER.
6. EXAMINE AREAS TO RECEIVE PLANTS FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 6.1. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHALKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN PLANTING AREAS.
- 6.2. DO NOT MIX OR PLACE SOILS IN FROZEN, WET, OR MUDDY CONDITIONS.

PLANTING DELIVERY, STORAGE, & HANDLING:

1. BULK MATERIALS:
 - 1.1. DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
2. DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BEND TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.
3. HANDLE PLANTING STOCK BY ROOT BALL.
4. DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN SHADED LOCATION, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
 - 4.1. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
 - 4.2. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

EXCAVATION FOR TREES & SHRUBS

1. EXCAVATE CIRCULAR PLANTING PITS AS INDICATED IN DRAWINGS, TRIM PERIMETER OF BOTTOM LEAVING CENTER AREA OF BOTTOM RAISED SLIGHTLY TO SUPPORT ROOT BALL AND ASSIST IN DRAINAGE AWAY FROM CENTER. DO NOT FURTHER DISTURB BASE. ENSURE THAT ROOT BALL WILL SIT ON UNDISTURBED BASE SOIL, TO PREVENT SETTLING. SCARIFY SIDES OF PLANTING PIT SMOOTHED OR SMOOTHED DURING EXCAVATION.
 - 1.1. EXCAVATE APPROXIMATELY THREE TIMES AS WIDE AS BALL DIAMETER FOR BALLED AND BURLAPPED STOCK.
 - 1.2. DO NOT EXCAVATE DEEPER THAN DEPTH OF THE ROOT BALL, MEASURED FROM THE ROOT FLARE TO THE BOTTOM OF THE ROOT BALL.
 - 1.3. IF AREA UNDER THE PLANT WAS INITIALLY DUG TOO DEEP, ADD SOIL TO RAISE IT TO CORRECT LEVEL AND THOROUGHLY TAMP THE ADDED SOIL TO PREVENT SETTLING.
 - 1.4. MAINTAIN REQUIRED ANGLES OF REPOSE OF ADJACENT MATERIALS AS SHOWN IN DRAWINGS. DO NOT EXCAVATE SUBGRADES OF ADJACENT PAVING, STRUCTURES, HARDSCAPES, OR OTHER NEW OR EXISTING IMPROVEMENTS.
 - 1.5. MAINTAIN SUPERVISION OF EXCAVATIONS DURING WORKING HOURS.
 - 1.6. KEEP EXCAVATIONS COVERED OR OTHERWISE PROTECTED WHEN UNATTENDED BY INSTALLER'S PERSONNEL.
2. SUBSOIL AND TOPSOIL REMOVED FROM EXCAVATIONS MAY BE USED AS PLANTING SOIL IF THEY CONFORM TO THE REQUIREMENTS LISTED IN THESE SPECIFICATIONS.
3. NOTIFY OWNER'S PROJECT REPRESENTATIVE IF UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED IN EXCAVATIONS.
4. NOTIFY OWNER'S PROJECT REPRESENTATIVE IF SUBSOIL CONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.

TREE & SHRUB PLANTING

1. BEFORE PLANTING VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL, TO EXPOSE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS RZ REQUIREMENTS. PLANT MATERIAL WITHOUT ROOT FLARE VISIBLE OR PLANTED TOO LOW WILL BE REPLANTED AT THE REQUEST OF THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
2. TREES:
 - 2.1. PLANTS FOUND TO HAVE STEM GIRDLING ROOTS AND/OR KINKED ROOTS AT THE TIME OF PLANTING WILL BE REJECTED AND REPLACEMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
3. REMOVE ALL TWINE, STRING, WIRE, AND ALL OTHER NON-BIODEGRADABLE MATERIAL ENTIRELY FROM ROOT BALL AREA.
4. REMOVE ONLY DEAD, DYING, OR BROKEN BRANCHES. DO NOT PRUNE FOR SHAPE. DO NOT CUT TREE LEADERS.
5. SET BALLED AND BURLAPPED STOCK PLUMB AND IN CENTER OF PLANTING PIT OR TRENCH WITH ROOT FLARE 2 INCHES ABOVE ADJACENT FINISH GRADES.
 - 5.1. USE SOIL MATERIALS FROM EXCAVATION FOR BACKFILL.
 - 5.2. CAREFULLY CUT AND REMOVE BURLAP, ROPE, AND WIRE BASKETS FROM THE ENTIRE ROOT BALL. REMOVE FAULTS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF ROOT BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
 - 5.3. BACKFILL AROUND ROOT BALL IN LAYERS, TAMPING TO SETTLE SOIL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN PLANTING PIT IS APPROXIMATELY ONE-HALF FILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE WATER IS ABSORBED.
 - 5.4. CONTINUE BACKFILLING PROCESS, WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF SOIL.

TREE & SHRUB MATERIAL:

1. GENERAL: FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN AND DRAWINGS; AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING, PROVIDE WELL-BRANCHED, HEALTHY, BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.
 - 1.1. TREES WITH DAMAGED, CROOKED, OR MULTIPLE LEADERS; TIGHT VERTICAL BRANCHES WHERE BARK IS SQUEEZED BETWEEN TWO BRANCHES OR BETWEEN BRANCH AND TRUNK (INCLUDED STOK); CROSSING TRUNKS; CUT-OFF LIMBS MORE THAN 1/4" IN DIAMETER; OR WITH STEM GIRDLING ROOTS WILL BE REJECTED.
 - 1.2. COLLECTED STOCK DO NOT USE PLANTS HARVESTED FROM THE WILD, FROM NATIVE STANDS, FROM AN ESTABLISHED LANDSCAPE PLANTING, OR NOT GROWN IN A STATE CERTIFIED NURSERY.
 - 1.3. PLANT MATERIAL SHALL BE PROVIDED IN THE CONTAINER TYPE INDICATED IN THE DRAWINGS (BAG, CONTAINER, BARE ROOT, ETC.), UNLESS THE CONTRACTOR RECEIVES WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT THAT SUBSTITUTION OF CONTAINER TYPE IS ACCEPTABLE.
2. FURNISH TREES WITH ROOT BALLS MEASURED FROM TOP OF ROOT BALL. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING.
3. SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD.

PLANTING SOIL:

- PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE WIDTH OF LANDSCAPE AREAS, AND A MINIMUM OF 3X THE DIAMETER OF THE ROOT BALL LENGTHWISE.
1. INSTALL PLANTING SOIL FOR PLANT BEDS IN 6" LIFTS, MINIMUM 6" DEPTH.
 2. DO NOT APPLY PLANTING SOIL TO SATURATED OR FROZEN SUBGRADES.
 3. PLANTING SOIL SHALL BE A MIX OF 6-PARTS TOPSOIL, 1-PART COMPOST (APPROVED FOR USE ON THE PROJECT), THOROUGHLY BLEND PLANTING SOIL OFF-SITE BEFORE SPREADING.
 - 3.1. THE PROJECT WILL ACCEPT ONLY CLEAN, SALVAGED OR IMPORTED TOPSOIL, CAPABLE OF PASSING THE 1" sieve, FREE OF ROCKS, DEBRIS, AND ANY NOXIOUS WEEDS.
 - 3.2. STRIPPED, SALVAGED, OR MINED TOPSOIL MUST BE TAKEN FROM THE TOP 8-INCHES OF THE A-HORIZON, HAVING A DARK BROWN TO BLACK COLOR WITH A GRANULAR STRUCTURE AND CLAY CONTENT OF LESS THAN 25%, VERIFIED WITH A RIBBON TEST THAT YIELDS NO MORE THAN 1-INCH.

METAL EDGING

1. STANDARD PROFILE, COMMERCIAL-GRADE, EXTRUDED ALUMINUM EDGING, FABRICATED IN STANDARD LENGTHS WITH INTERLOCKING SECTIONS WITH LOOPS STAMPED FROM FACE OF SECTIONS TO RECEIVE STAKES.
 - 1.1. BARS OF DESIGN, CLEANLINE BY PERMALOC OR APPROVED EQUAL.
 - 1.2. EDGING SIZE: 3/16-INCH-WIDE BY 5.5 INCHES DEEP.
 - 1.3. STAKES: ALUMINUM, ASTM 221, ALLOY 6061-T6, 18-INCHES LONG.
 - 1.4. FINISH: BLACK DURAFLUX.
 - 1.5. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: CURT-WHITE, INC., PERMALOC CORPORATION, RUSSELL, J.D. COMPANY (THE), BUREL-LOC EDGING CORPORATION.
2. INSTALL METAL EDGE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. ENSURE THAT METAL EDGING IS PROPERLY INSTALLED AND SECURED BEFORE INSTALLING STONE MULCH.

STONE MULCH MATERIAL & INSTALLATION:

1. SHALL BE HARD, DURABLE, STONE, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN SUBSTANCES, OF THE FOLLOWING TYPE, SIZE RANGE, AND COLOR:
 - 1.1. MATERIAL: ANGULAR WASHED STONE.
 - 1.2. SIZE: 1-1/2" DIAMETER.
 - 1.3. DEPTH: 3" MINIMUM DEPTH PLACING ONE LIFT.
 - 1.4. COLOR RANGE: BLEND OF DARK GREY & BLUE TONES.
 - 1.5. BASIS OF DESIGN: 1-1/2" AMERICAN HERITAGE AGGREGATE BY COUNTY MATERIALS.
2. LIGHTLY COMPACT AREAS TO RECEIVE STONE MULCH.
3. INSTALL WEED BARRIER FABRIC IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COMPLETELY COVER AREA TO BE MULCHED. OVERLAPPING EDGES OF FABRIC LENGTHS A MINIMUM OF 6-INCHES AND SECURING SEAMS WITH GALVANIZED PINS. WEED BARRIER FABRIC SHALL BE WRAPPED VERTICALLY UP THE OUTSIDE EDGES OF SURROUNDING CONCRETE FLATWORK OR CURB AND SECURED IN PLACE. HOLD FABRIC 2" CLEAR OF TOP OF ADJACENT CURB AND CONCRETE FLATWORK SO IT IS NOT VISIBLE FROM SURFACE.
4. PLACE AND FINISH STONE MULCH AS INDICATED IN DRAWINGS, ENSURING A SMOOTH, LEVEL, TOP SURFACE FOR ALL STONE MULCH AREAS HELD APPROXIMATELY 1/2" BELOW THE TOP SURFACE OF ADJACENT PAVED AREAS OR METAL EDGING.

BARK MULCH MATERIAL & INSTALLATION

1. TWICE-SHREDDED HARDWOOD BARK MULCH TO BE PROVIDED AS TOP-DRESSING FOR ALL AT-GRADE PLANTING BEDS IN LOCATIONS INDICATED ON PLANTING PLANS.
 - 1.1. SIZE RANGE: MAXIMUM 2.5" TO 3"
 - 1.2. COLOR: NATURAL, UNDYED
 - 1.3. PROVIDE 3" DEPTH MULCH FOR ALL PLANTING BEDS INDICATED AS BARK MULCH PLANTING BED.
2. KEEP BARK MULCH 2" CLEAR OF ALL STEMS OF PLANT MATERIAL.

TURF SEEDING:

1. DELIVERY:
 - 1.1. DELIVER PACKAGED SEED MATERIALS IN ORIGINAL, UNOPENED CONTAINERS LABELED AS TO NAME AND ADDRESS OF SUPPLIER, SPECIFIC BLEND OF SEED, AND INDICATION OF CONFORMANCE WITH STATE AND FEDERAL LAWS, AS APPLICABLE.
2. PROJECT CONDITIONS:
 - 2.1. SEED DURING ONE OF THE FOLLOWING PERIODS:
 - 2.1.1. SPRING SEEDING SEASON: APRIL 1 TO JUNE 15.
 - 2.1.2. FALL SEEDING SEASON: AUGUST 15 TO OCTOBER 1.
3. PRODUCTS:
 - 3.0.1. PROVIDE THE FOLLOWING FOR TURFGRASS SEED BASIS OF DESIGN: REINDEERS DELUXE 50 SEED MIX OR APPROVED EQUAL.
 - 3.0.2. TURFGRASS SEED MIX TO BE FERTILIZED WITH 'SCOTT'S STARTER FERTILIZER' BY THE 'SCOTT'S MIRACLE-GRO COMPANY' OR APPROVED EQUAL.
4. PROCEED WITH INSTALLATION ONLY AFTER SATISFACTORY CONDITIONS HAVE BEEN MET.
5. REMOVE ANY AND ALL UNDESIRABLE VEGETATION THAT HAS GERMINATED IN THE AREAS TO BE SEEDDED OR SODDED. CONTRACTOR SHALL EVALUATE THE USE OF A BROAD SPECTRUM, NON-PERSISTENT GLYPHOSATE-BASED HERBICIDE BASED ON SITE CONDITIONS.
 - 5.1. DO NOT APPLY SEED UNTIL FIVE TO SEVEN DAYS AFTER LAST HERBICIDE TREATMENT.
6. FINISH GRADING, GRADE AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNFORMALLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1 INCH OF FINISH ELEVATION. ROLL AND RAKE. REMOVE RIDGES AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISH GRADING TO AREAS THAT CAN BE IMMEDIATELY SEEDDED AND STABILIZED WITH EROSION CONTROL MATERIAL.
7. MOISTEN PREPARED AREA BEFORE SEEDING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE DRY BEFORE SEEDING OR SODDING. DO NOT CREATE MOIST SPOTS.
8. NO SEEDING SHALL OCCUR ON FROZEN GROUND OR AT TEMPERATURES LOWER THAN 32 DEGREES FAHRENHEIT OR IN THE FOLLOWING 5 DAYS AFTER PLANNED SEEDING OR SODDING.
9. SEEDING RATES TO BE PERFORMED IN ACCORDANCE WITH SEED SUPPLIER RECOMMENDATIONS.

NATIVE SEEDING:

1. PROVIDE THE FOLLOWING SEED TYPES FROM AGRECOLD LLC 10101 N. CASEY ROAD EVANSVILLE, INDIANA 46336:
 - 1.1. AGRECOLD'S RAINWATER RENEWAL SEED MIX FOR AREAS SHOWN AS 'RAINWATER RENEWAL, NATIVE SEED MIX'
 - 1.2. REFER TO DETAIL B ON SHEET L201, FOR SEED MIX COMPOSITION.
2. REFER TO CIVIL PLANS FOR LOCATIONS AND EXTENTS OF EROSION CONTROL, MAT, IN GENERAL, PROVIDE CURLEX NET FREE FOR SEEDDED AREAS WITH SLOPES OF 4:1 OR LESS AND CURLEX II EROSION CONTROL MAT IN ALL OTHER SEEDDED AREAS. MANUFACTURER'S STANDARD BIODEGRADABLE ANCHORING STAKES (OR ALTERNATIVE SOURCE FOR BIODEGRADABLE STAKES, IF APPROVED IN WRITING BY OWNER'S REPRESENTATIVE), INSTALL PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
3. WITHIN 4 WEEKS FOLLOWING THE ISSUANCE OF THE NOTICE TO PROCEED, SUBMIT NAME AND LOCATION OF SEED SUPPLIER(S) AND A COMPLETE LIST OF EACH SEED MIX BY WEIGHT AND PROPORTION THAT IS BEING SUPPLIED BEFORE THE SEED MIX IS ORDERED. SUBSTITUTIONS WILL NOT BE PERMITTED. PROVIDE GEOGRAPHIC ORIGINS OF EACH SEED SPECIES.
4. ALL SEED MATERIAL SHALL ORIGINATE FROM LOCAL SOURCES TO THE EXTENT POSSIBLE, SPECIFICALLY FROM USDA PLANT HARDINESS ZONE 4 OR LOWER.
5. ALL SEEDING ZONE BOUNDARIES SHALL BE SURVEYED AND STAKED ON THE PROJECT SITE BY THE CONTRACTOR. NO SEED MIX SHALL BE INSTALLED UNTIL THE GRADE PREPARATION AND LAYOUT HAVE BEEN APPROVED.
6. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST SEED LIMITS WITHOUT ADJUSTING TOTAL SEEDDED AREAS, TO MEET FIELD CONDITIONS, AT NO ADDITIONAL COST TO THE OWNER.
7. COORDINATION IS REQUIRED TO ENSURE RAINFALL/GROUNDWATER SEEPAGE DOES NOT RESULT IN SOIL MOISTURE CONDITIONS THAT WILL CAUSE EXCESSIVE RUTTING DURING SEEDING AND MULCHING OPERATIONS. FAILURE TO MEET THIS REQUIREMENT WILL NOT BE AN ACCEPTABLE REASON FOR NOT INSTALLING THE SEED AS SPECIFIED.
8. WHERE SEEDING OCCURS IN CLOSE PROXIMITY TO OTHER SITE IMPROVEMENTS OR AREAS TO REMAIN UNDISTURBED SUCH AS EXISTING WETLANDS AND UPLANDS AREAS, CARE SHALL BE TAKEN TO NOT DISTURB THE EXISTING AREAS OR ANY AREAS DAMAGED DURING PLANTING OPERATIONS SHALL BE PROMPTLY RESTORED TO THEIR ORIGINAL CONDITION AT NO COST TO THE OWNER.
9. FOLLOWING NATIVE SEED MIX INSTALLATION, THE LANDSCAPE ARCHITECT AND CONTRACTOR SHALL CONDUCT A SUBSTANTIAL COMPLETION INSPECTION ON ALL SEEDDED AREAS. (SEE WARRANTY, MAINTENANCE AND ACCEPTANCE PERIOD)
10. GENERAL INSTALLATION:
 - 10.1. SEEDING OF NATIVE SEED MIXES SHALL OCCUR IN THE EARLY SPRING:
 - 10.1.1. APRIL 15 THROUGH MAY 31.
 - 10.2. DO NOT SOW SEED DURING ADVERSE WEATHER OR WHEN WIND SPEEDS EXCEED TEN MILES PER HOUR.
 - 10.3. DO NOT SOW SEED IN AREAS WHERE STANDING WATER IS PRESENT.
11. GRADE PREPARATION:
 - 11.1. SUBGRADE AND FINISH GRADE PREPARATION SHALL BE IN ACCORDANCE WITH SITE EARTHWORK REQUIREMENTS, AND TOPSOIL SHALL BE A MINIMUM 4-INCHES DEEP.
 - 11.2. NON-BIORETENTION AREAS AFTER LIGHT COMPACTION TO PREVENT SETTLEMENT, BIORETENTION AREAS SHALL HAVE SOIL MIX PLACED PER DETAIL.
 - 11.3. PRIOR TO SEEDING, REPAIR ANY RUTS, RILLS, OR GULLIES GREATER THAN 2 INCHES IN DEPTH TO CREATE SMOOTH CONTINUOUS GRADES.
 - 11.4. IF THE PREPARED GRADE IS ERODED OR COMPACTED BY RAINFALL OR OTHER REASONS, REWORK THE TOPSOIL TO THE FULL 4-INCH DEPTH.
 - 11.5. IMMEDIATELY BEFORE SEEDING, SCARIFY, LOOSEN, FLOAT, AND DRAG TOPSOIL, AS NECESSARY TO BRING IT TO THE PROPER CONDITION. REMOVE FOREIGN MATTER LARGER THAN 1/4-INCH DIAMETER.
 - 11.6. NO FURTHER GRADE PREPARATION IS REQUIRED.
12. IF REQUIRED DUE TO CONSTRUCTION SEQUENCING, SEED THE SITE WITH A TEMPORARY COVER CROP TO HOLD IT FOR SPRING SEEDING AS FOLLOWS:
 - 12.1. IF SEEDDED MAY 15 THROUGH SEPTEMBER 1: MIX OF 32 POUNDS PER ACRE OF SEED OATS (AVENA SATIVA) AND 5 POUNDS PER ACRE OF ANNUAL RYE (LOLIUM MULTIFLORUM).
 - 12.2. IF SEEDDED SEPTEMBER 1 THROUGH OCTOBER 15: 20 POUNDS PER ACRE WINTER WHEAT (TRITICUM AESTIVUM) OR REDTIDE STERILE WHEAT (WHEAT/GRASS HYBRID (TRITICUM AESTIVUM X ELYTRIGIA ELONGATA) FROM).
13. BROADCASTING:
 - 13.1. FOR SPRING SEEDING OF NATIVE SEED, SOW SEED DIRECTLY ONTO BARE GROUND OR GROUND WHERE THE PREVIOUS YEAR'S PLANT STUBBLE HAS BEEN CUT TO 2-INCH HEIGHT.
 - 13.2. INCREASE THE VOLUME OF THE BROADCASTED SEED MIX BY MIXING IT WITH AN APPROVED CARRIER, ACCEPTABLE CARRIER MATERIALS INCLUDES MULCH, COMPOST, PEAT MOSS, CORN COB BLAST MEDIA, OR COARSE-GRADE VERMICULITE. SAND AND SAWDUST ARE UNACCEPTABLE CARRIER MATERIALS. USE ONE BUSHEL BASKET OF CARRIER PER 1,000 SQUARE FEET OF AREA TO BE SEEDDED (1 BUSHEL EQUALS 8 GALLONS OR 1.24 CUBIC FEET).
 - 13.2.1. USE HALF OF THE TOTAL SEED QUANTITY AND CROSS THE ENTIRE AREA TO BE SEEDDED. EVENLY SPREADING THE SEED, WALK PERPENDICULAR TO THE ORIGINAL SEEDING AND EVENLY BROADCAST THE SECOND HALF OF THE SEED.
 - 13.2.2. LIGHT SEEDS, AWNED SEEDS, OR BEARDED SEEDS TEND TO RISE TO THE TOP OF THE SPREADER. THEREFORE, MIX SEED ACCORDINGLY AS PLANTED DEPTHS.
 - 13.2.3. RAKE OR DRAG THE SEED INTO THE SOIL, BUT NOT MORE THAN 1/4-INCH DEEP. ROLL THE AREA WITH A ROLLER TO FIRM THE SEED INTO THE SOIL. ROLLING IS NOT NECESSARY ON DORMANT SEEDINGS.
14. DRILL SEEDER OR DROP SEEDER/SPREADER:
 - 14.1. FOR SPRING DRILL SEEDING, SOW SEED DIRECTLY ONTO BARE GROUND OR GROUND WHERE THE PREVIOUS YEAR'S PLANT STUBBLE HAS BEEN CUT TO 2-INCH HEIGHT; FOR SPRING DROP SEEDING, CULTIVATE THE GROUND BEFORE INSTALLING SEED MIX.
 - 14.2. CHECK THE EQUIPMENT FREQUENTLY TO ENSURE THE SEED IS DISPERSING EVENLY AND IS NOT CLOGGING.
 - 14.3. IF THE EQUIPMENT IS NOT EQUIPPED WITH A ROLLER, PASS OVER THE SEEDDED AREA WITH A ROLLER TO FIRM THE SEED INTO THE SOIL. ROLLING IS NOT NECESSARY WITH DORMANT SEEDING.

- 14.3.1. DO NOT MIX THE NATIVE SEED WITH ANY CARRIER MATERIAL.
- 14.3.2. EVENLY DISTRIBUTE THE SEED ACROSS THE ENTIRE SITE TO BE SEEDDED.
- 14.4. KEEP THE TOPSOIL MOIST (TO A DEPTH OF 3 INCHES) FOR 3-6 WEEKS FOLLOWING SEEDING. AFTERWARD, APPLY ONE INCH OF WATER DURING THE GROWING SEASON IF RAIN HAS NOT OCCURRED FOR MORE THAN ONE WEEK. DO NOT APPLY WATER WITH SUCH A FORCE AS TO DISTURB SEED, SEEDLINGS, AND/OR TOPSOIL, OR THAT WOULD RUN OFF SOIL SURFACE.
15. ALL AREAS OVER WHICH HAULING OPERATIONS HAVE BEEN CONDUCTED SHALL BE KEPT CLEAN ON A DAILY BASIS. PROMPTLY REMOVE ALL MATERIALS SPILLED ON PAVEMENT.
16. UPON COMPLETION OF SEED INSTALLATION, REMOVE FROM THE SITE AND LEGALLY DISPOSE OF ALL TRASH AND DEBRIS INCLUDING ANY MATERIAL REMOVED DURING GRADE PREPARATION.
17. RESTORE ANY EXISTING AREAS DAMAGED BY OPERATIONS UNDER THE CONTRACT. RESTORATION SHALL INCLUDE FINISH GRADING AND SEEDING AS REQUIRED TO MATCH EXISTING GRADE AND/OR WETLANDS, AND MAINTENANCE OF RESTORED AREAS.
18. ANY DAMAGE BY THE CONTRACTOR TO ESTABLISHED OR NEWLY SEEDDED AREAS NOT WITHIN THE PROJECT SCOPE OF WORK SHALL BE REPAIRED AND RESEEDDED AT NO COST TO THE OWNER.

CLEAN-UP AND PROTECTION

1. DURING PLANTING, KEEP ADJACENT PAVING AND CONSTRUCTION CLEAN AND WORK AREA IN AN ORDERLY CONDITION.
2. PROTECT PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND OPERATIONS OF OTHER CONTRACTORS AND TRADES. MAINTAIN PROTECTION DURING INSTALLATION, TREAT, REPAIR, OR REPLACE DAMAGED PLANTINGS.
3. AFTER INSTALLATION REMOVE ALL NURSERY TAGS, NURSERY STAKES, THE TAPE, LABELS, WIRE, STRING, AND OTHER DEBRIS FROM PLANT MATERIAL, PLANTING AREAS, AND PROJECT SITE.

VEGETATION MONITORING AND MANAGEMENT

MANAGEMENT AND MONITORING:
THE MANAGEMENT AND MONITORING OF NATIVE PLANTINGS (INCLUDING SEED MIXES, FORBS, AND PLUGS) SHOULD BE DIRECTED TOWARD THE GOAL OF CREATING A STABLE, NATIVE PLANT COMMUNITY. INVASIVE AND WEEDY PLANT SPECIES WILL NEED TO BE CONTROLLED UNTIL THE DESIRED NATIVE PLANT COMMUNITIES ARE ESTABLISHED. THIS TYPICALLY WILL TAKE THREE (3) TO FIVE (5) YEARS AFTER SOWING OR PLUG INSTALLATION.

UNDESIRABLE PLANT CONTROL:
OVERALL MANAGEMENT OF VEGETATED AREAS MAY INCLUDE, BUT ARE NOT LIMITED TO: RESEEDING OR REPLANTING DAMAGED OR NON-ACTIVE GROWTH AREAS, IRRIGATION, STRATEGIC MOWING TO REDUCE WEED COVER AND PREVENT WEED SEED SET, REMOVAL OF TREE SEEDLINGS, TARGETED HERBICIDE APPLICATION(S), AND MECHANICAL WEED CONTROL (HAND PULLING AND SEED HEAD REMOVAL). SELECTED HERBICIDE APPLICATIONS SHOULD BE DONE SPARINGLY AND ONLY WHEN NECESSARY. SELECTION OF HERBICIDE FOR USE MUST CONSIDER THE PROXIMITY TO THE WATERWAY, IN COMPLIANCE WITH STATE AND APPLICABLE FEDERAL LAW.

SHORT-TERM VEGETATION MANAGEMENT:
SHORT-TERM VEGETATION MANAGEMENT (MAINTENANCE PERIOD AFTER SEEDING/PLUG INSTALLATION) OCCURS WHILE THE LANDSCAPE CONTRACTOR OR SPECIALTY SEEDING/RESTORATION CONTRACTOR IS RESPONSIBLE TO THE PROJECT OWNER FOR THE GUARANTEE OF ALL PLANTINGS TO BE ALIVE AND IN VIGOROUS GROWING CONDITIONS. SEEDING SHOULD ACHIEVE AN AVERAGE OF 80% VEGETATION COVERAGE FROM SPECIFIED SEED MIXES. IF UNSATISFACTORY PLANTS ARE FOUND ON SITE, THEY SHOULD BE REPLACED BY THE LANDSCAPE CONTRACTOR OF SPECIALTY SEEDING/RESTORATION CONTRACTOR DURING THE FIRST MONTH OF THE NEXT FAVORABLE PLANTING SEASON. SUPPLEMENTAL SEEDING WILL BE NEEDED TO FILL IN BARE SPOTS WHERE NATIVE SEED GERMINATION IS POOR. IT IS ALSO THE LANDSCAPE CONTRACTOR / SPECIALTY SEEDING/RESTORATION CONTRACTOR'S RESPONSIBILITY TO ELIMINATE ALL NOXIOUS WEED GROWTH FROM THE SITE DURING THIS GUARANTEE PERIOD.

INSPECTIONS SHOULD BE MADE FREQUENTLY DURING THE GROWING SEASON TO PROPERLY DOCUMENT ANY INVASIVE SPECIES, WEEDS, DEHYDRATION, DAMAGE, EROSION, DISEASES, BARE AREAS, AND PESTS. THE NECESSARY REPAIRS, TREATMENTS, SEEDING AND PLANTING SHOULD BE DONE AS SOON AS WEATHER CONDITIONS ARE APPROPRIATE. THE INSPECTIONS AND SUBSEQUENT ACTIONS SHOULD BE PROPERLY DOCUMENTED AND GRAPHICALLY IDENTIFIED ON THE APPROVED LANDSCAPE PLAN FOR THE PROJECT.

LONG TERM VEGETATION MANAGEMENT:
LONG-TERM MANAGEMENT (AFTER MAINTENANCE AGREEMENT ENDS) WILL BE THE RESPONSIBILITY OF THE PROJECT OWNER/MANAGEMENT ASSOCIATION. LONG-TERM VEGETATION MANAGEMENT TASKS WILL INCLUDE MOWING, RESEEDING OR REPLANTING DAMAGED AREAS, REMOVAL OF TREE SEEDLINGS, TARGETED HERBICIDE APPLICATION AND MECHANICAL WEED CONTROL (HAND-PULLING AND SEED HEAD REMOVAL), AND REPAIR OF EROSION AREAS. SELECTIVE HERBICIDE APPLICATIONS SHOULD BE DONE SPARINGLY. INSPECTIONS SHOULD BE MADE FREQUENTLY DURING THE GROWING SEASON TO IDENTIFY ANY INVASIVE SPECIES, WEEDS, DEHYDRATION DAMAGE, EROSION, DISEASES, BARE AREAS, AND PESTS. THE NECESSARY REPAIRS, TREATMENTS, SEEDING AND PLANTING SHOULD BE DONE AS SOON AS WEATHER AND GROWING CONDITIONS ARE APPROPRIATE.

MOWING FREQUENCIES:
MOWING FREQUENCIES WILL DEPEND ON FIELD CONDITIONS. THE NATIVE SEEDING/GRASS AREAS SHOULD NEVER BE MOWED SHORTER THAN SIX (6) INCHES. GROWTH OF THE VEGETATION ALONG THE WATER'S EDGE (WHERE APPLICABLE) WILL PROVIDE BANK STABILIZATION. THE VEGETATION SHOULD PREVENT NUISANCE LEVELS OF GEESE IN WATERWAYS, WHICH WOULD ADD TO THE NUTRIENT LEVEL IN THE WATER AND FURTHER DEGRADE THE WATER QUALITY. IN ADDITION, THE GROUND-SLOPE ABOVE NORMAL WATER ELEVATION SHOULD PROVIDE GOOD DRAINAGE OF THE SURFACE SOILS REDUCE PONING, AND THUS MOSQUITO HABITAT. THE NATIVE VEGETATION WILL PROVIDE HABITAT CONDUCTIVE TO THE BREEDING AND ESTABLISHMENT OF EFFECTIVE MOSQUITO PREDATORS SUCH AS DRAGONFLIES.

MOWING SHOULD BE DONE THREE (3) TIMES DURING THE ESTABLISHMENT PERIOD.

ACTIVITY	TIMING	SUGGESTED MOWING HEIGHTS	REASON
FIRST MOWING	LATE MAY-EARLY JUNE	NO LESS THAN (8) INCHES	TARGET EARLY WEEDS
SECOND MOWING	EARLY AUGUST	NO LESS THAN (12) INCHES	CONTROL WARM SEASON WEED GROWTH
THIRD MOWING	LATE OCTOBER	NO LESS THAN (12) INCHES	VEGETATION SHOULD BE MOWED AT LEAST 12 INCHES BEFORE THE GROWTH OF NATURAL GRASSES AND UNDESIRABLE WEEDS

AFTER THE DESIRED VEGETATION HAS BECOME ESTABLISHED THE FIRST AND SECOND MOWINGS (MAY, AUGUST) MAY NOT BE NECESSARY. THE THIRD MOWING (OCTOBER), HOWEVER, SHOULD BE DONE ANNUALLY.

BURNING (IF APPROPRIATE FOR SITE):
PRIOR TO BURNING, CONTACT WITH THE LOCAL MUNICIPALITY / FIRE DEPARTMENT IS REQUIRED. SOME MUNICIPALITIES MAY HAVE RESTRICTIONS ON OPEN BURNING, OR ONLY ALLOW SUCH PRACTICES AT CERTAIN TIMES. ADDITIONALLY, A PERMIT TO BURN MAY BE REQUIRED IN SOME MUNICIPALITIES. THE SUPERVISING CREW SHOULD BE COMPRISED OF EXPERIENCED PROFESSIONALS WHO ARE TRAINED AND CERTIFIED IN THESE TYPES OF PRESCRIBED BURNS.

IF ALLOWED BY LOCAL CODE AND ORDINANCES, ONLY BURN WHEN THE DEAD VEGETATION MATTER CAN SUSTAIN FIRE, WET OR DAMP PLANT MATTER IS NOT EFFECTIVE IN A CONTROL, BURN SETTING. IT MAY TAKE UP TO THREE (3) YEARS FOR A NEWLY PLANTED PRARIE TO HAVE ENOUGH "FUEL" TO STAGE AN EFFECTIVE CONTROLLED BURN.



WAWATOSA GROCERY
7501 W. NORTH AVENUE
WAWATOSA, WI
LANDSCAPE SPECIFICATIONS

PRELIMINARY
NOT FOR
CONSTRUCTION

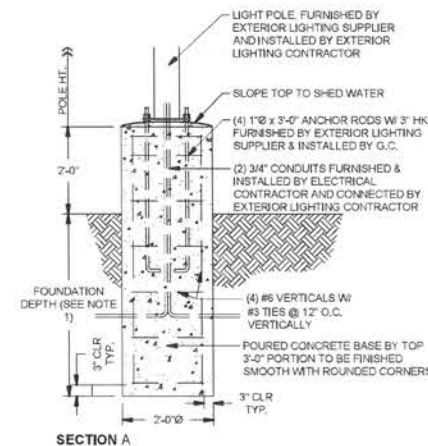
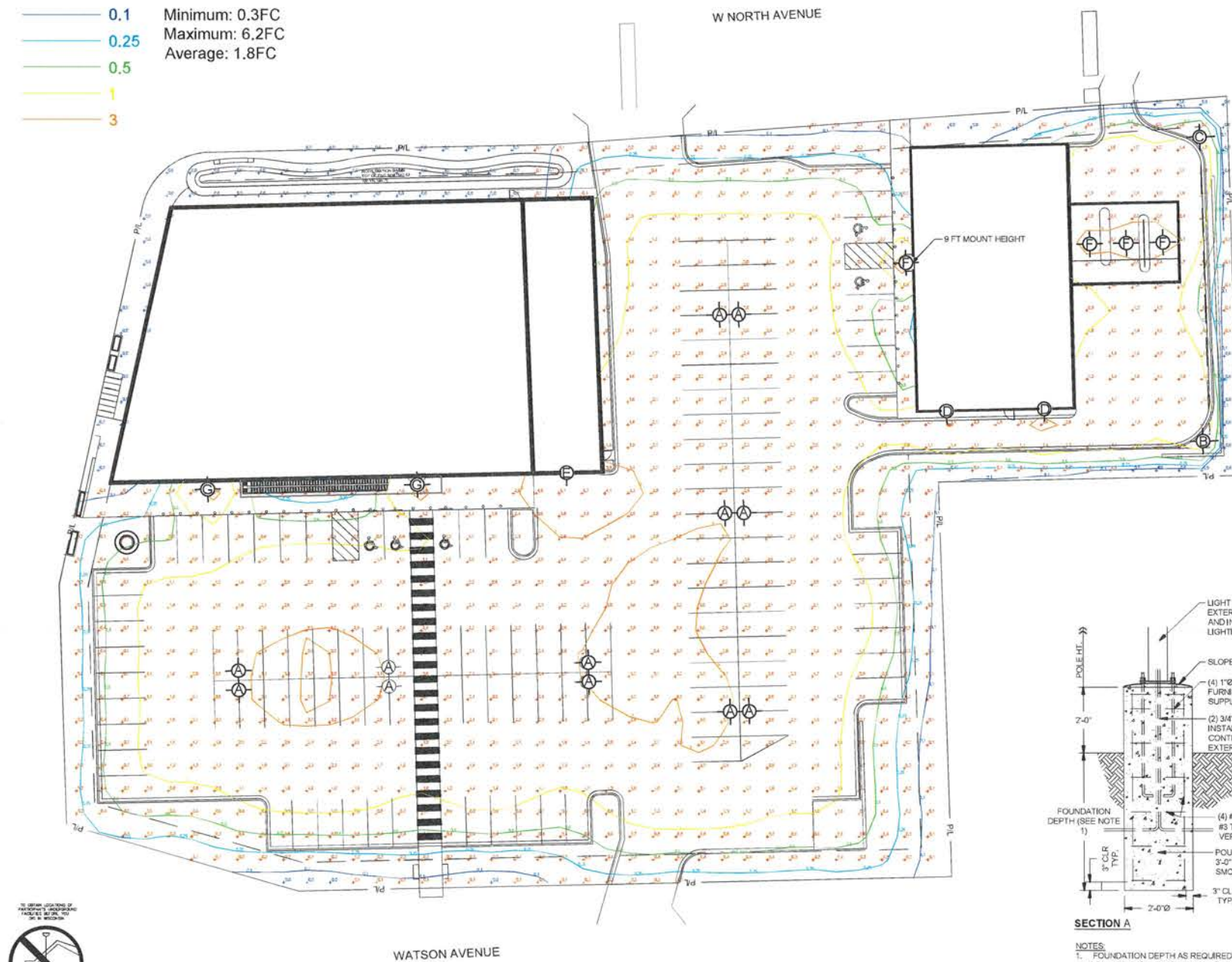
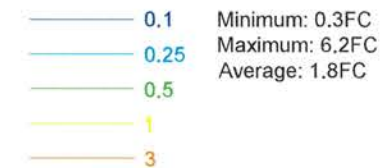
ISSUANCE	DATE
CONVENTIONAL USE SUBMITTAL	05/20/2026
DRS SUBMITTAL	06/07/2026
DRS SUBMITTAL	07/09/2026

NO. REVISION	DATE
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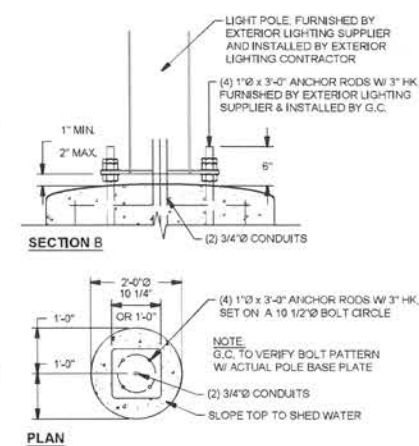
PROJECT NO.	25067
DESIGN DATE	---
PLOT DATE	2026.07.08
DRAWN BY	AJR
CHECKED BY	PJH
APPROVED BY	---
SHEET NO.	---

L300

Label	Quantity	Catalog Number	Description	Lamp	Mount Height	Lamp Lumens	Watts
A	12	DSX0 LED P2 40K 70CRI T5LG	D-Series Size 0 Area Luminaire P2 Performance Package Type 5 Low GRating	4000K CCT 70 CRI	23FT Pole, 2FT Base	6472.1	45.1
B	1	DSX0 LED P2 40K 70CRI LCCO	D-Series Size 0 Area Luminaire P2 Performance Package Left Corner Cutoff Extreme Backlight Control	4000K CCT 70 CRI	23FT Pole, 2FT Base	4535.9	45.1
C	1	DSX0 LED P2 40K 70CRI RCCO	D-Series Size 0 Area Luminaire P2 Performance Package Right Corner Cutoff Extreme Backlight Control	4000K CCT 70 CRI	23FT Pole, 2FT Base	4535.9	45.1
D	2	WDGE2 LED P1 40K 70CRI T2M	WDGE2 LED WITH P1 - PERFORMANCE PACKAGE TYPE 2 MEDIUM OPTIC	4000K CCT 70 CRI	8FT	1426.9	11.2
E	1	WDGE3 LED P1 40K 70CRI R4	WDGE3 LED WITH P1 - PERFORMANCE PACKAGE TYPE 4 OPTIC	4000K CCT 70 CRI	16FT	7752.9	51.2
F	4	WF4 SMM5 90CRI 4000K	WF4 SMM5 4in Flat Wafer	4000K 50CCT 90CRI	11FT	693.6	8.9
G	2	WF6 SMM5 90CRI 4000K	WF6 SMM5 6in Flat Wafer	4000K 50CCT 90CRI	11FT	986.5	13.1



- NOTES:
1. FOUNDATION DEPTH AS REQUIRED BY CODE OR TO ACHIEVE ADEQUATE SOIL BEARING CAPACITY AS DETERMINED IN A SOILS REPORT BY A LICENSED GEOTECHNICAL ENGINEER. 5'-0" DEPTH MINIMUM, IF THE EXISTING EARTH IS NON-VIRGIN FILL MATERIAL OR OTHERWISE UNSUITABLE CONSULT A LICENSED GEOTECHNICAL ENGINEER.
 2. PROVIDE CONCRETE MIXTURE IN ACCORDANCE WITH ACI301, $f_c = 3000\text{psi}$
 -AIR ENTRAINMENT = 6% $\pm 1\%$
 -WATER TO CEMENT RATIO = 0.45 MAX.



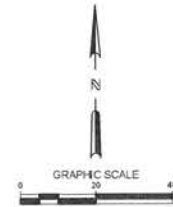
- NOTES:
3. ANCHOR RODS SHALL BE SET IN ACCORDANCE WITH THE AISC "CODE OF STANDARD PRACTICE".
 4. COMPLY WITH THE FOLLOWING ACI GUIDES:
 -ACI304 FOR CONCRETE PLACEMENT
 -ACI306.1 FOR COLD WEATHER PLACEMENT
 -ACI301 FOR HOT WEATHER PLACEMENT
 -ACI308.1 FOR CONCRETE CURING
 5. COMPLY WITH CRSB'S "MANUAL OF STANDARD PRACTICE" AND ACI318 FOR PLACING REINFORCEMENT.



CALL DIGGERS HOTLINE
1-800-242-8511
TOL. FREE

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

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WAUWATOSA GROCERY
7501 W. NORTH AVENUE
WAUWATOSA, WI

LIGHTING PLAN

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE DATE
CONDITIONAL USE SUBMITTAL 05/22/2026
CRS SUBMITTAL 05/27/2026
DRS SUBMITTAL 07/09/2026

NO. REVISION DATE

PROJECT NO. 25057
DESIGN DATE: ---
PLOT DATE 2026.07.08
DRAWN BY: JMJ
CHECKED BY: PJJ
APPROVED BY: ---
SHEET NO.

LT-100