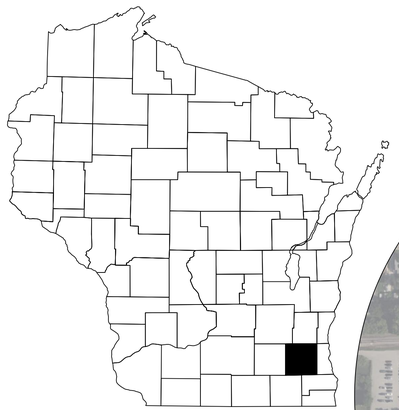
CARROLL UNIVERSITY REDEVELOPMENT

211 & 223 MAPLE AVE, WAUKESHA, WI

CIVIL ENGINEERING PLANS

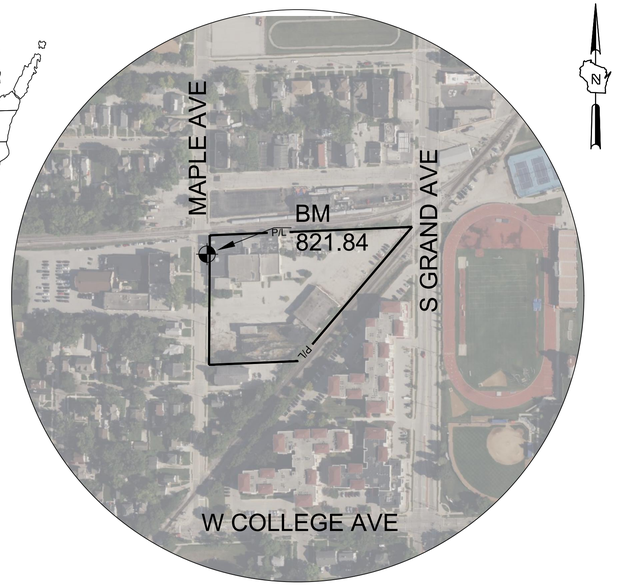
PREPARED BY:

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



SITE LOCATION MAP:

1" = 200'



SHEET INDEX	
Sheet No.	**Sheet Name**
C001	Site Survey
C002	Site Preporation & Erosion Control
C100	Site Plan
C200	Grading Plan
C300	Utility Plan
C400	Details
C401	Details
C500	Specifications
C501	Specifications
L100	Overall Landscape Plan
L200	Landscape Details
L201	Landscape Details
L300	Landscape Specifications

NOTE:

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

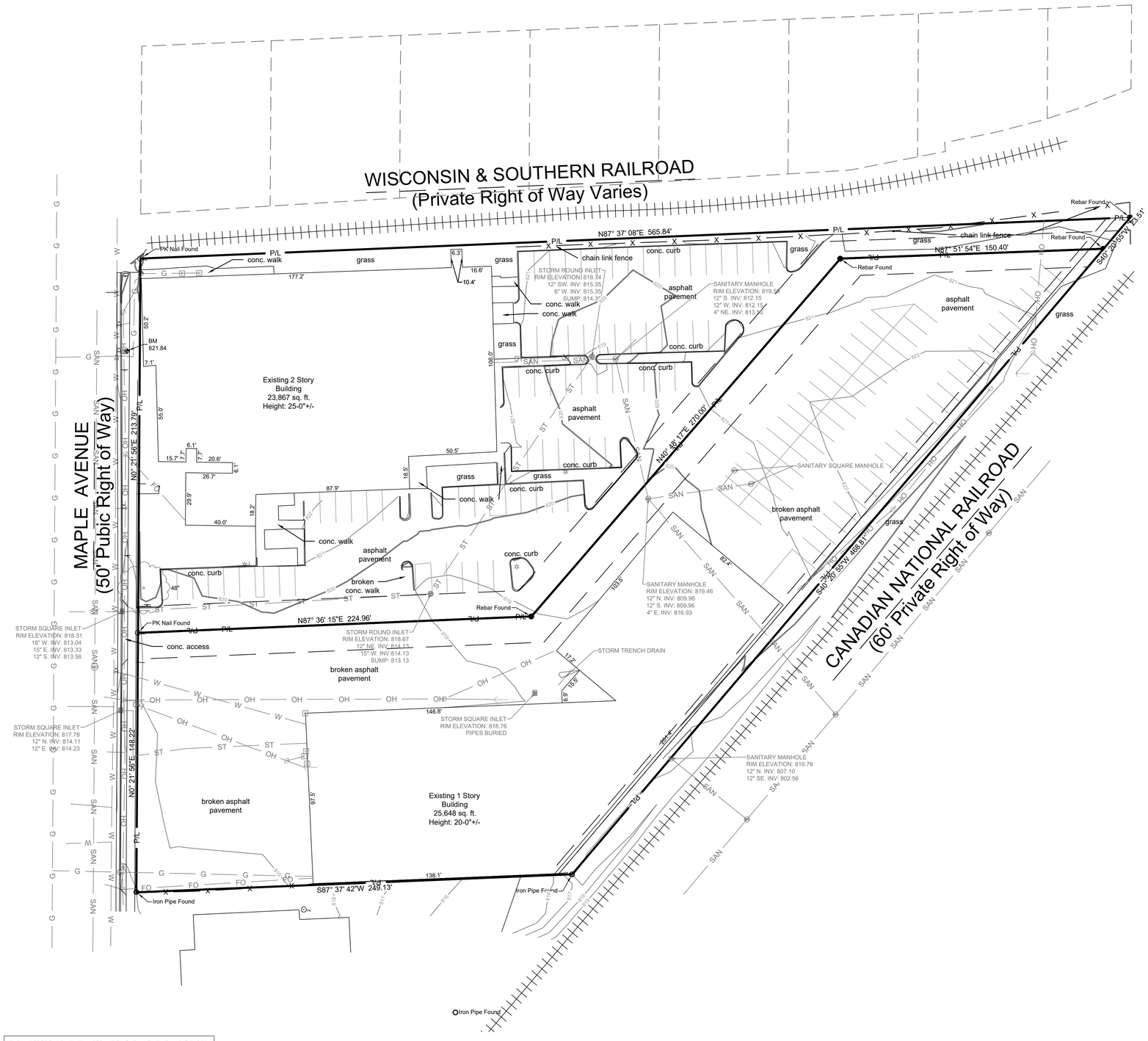
ALL WORK IN RIGHT-OF-WAY SHALL FOLLOW THE 2024 CITY OF WAUKESHA STANDARD CONSTRUCTION SPECIFICATIONS AND REQUIREMENTS IN THE *DEVELOPMENT HANDBOOK & INFRASTRUCTURE SPECIFICATIONS*.

BENCHMARKS:

1. HYDRANT LOCATED ON EAST SIDE OF MAPLE AVE IN FRONT OF FISCHER CREATIVE ARTS CENTER

DATE: 04/22/2024 CITY SUBMITTAL

2024.04.22



LEGEND:

	SECTION 1/4 SECTION LINE
	PROPERTY LINE
	EASEMENT
X X	CHAIN LINK FENCE
	GUARD RAIL
	METAL FENCE
	WOOD FENCE
	TREE LINE
OH	OVERHEAD UTILITY LINE
E	ELECTRIC
T	TELEPHONE
FO	FIBER OPTIC
CTV	CABLE TV
SAN	SANITARY SEWER
FS	FORCE MAIN
ST	STORM SEWER
W	WATER MAIN
G	GAS
670	EXISTING CONTOUR
WET	WETLAND
FP	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	8" DECIDUOUS TREE
HYDRANT	8" 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

GRAPHIC SCALE
0 98.43 196.85

TO OBTAIN LOCATIONS OF PARTICIPATING UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

MILW. AREA 259-1181

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.

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 FEBUARY 13TH, 2024.

4. DATUM FOR THE PROJECT SURVEY IS USGS NAVD 88. BENCHMARK FOR THE PROJECT SURVEY IS HYDRANT LOCATED ON EAST SIDE OF MAPLE AVE IN FRONT OF FISCHER CREATIVE ARTS CENTER. THE HORIZONTAL DATUM FOR THE PROJECT SURVEY IS NAD 1983.

5. CONTRACTOR TO VERIFY EXISTING CONDITIONS, CONTACT ENGINEER WITH DISCREPANCIES.

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CARROLL UNIVERSITY REDEVELOPMENT
211 & 223 MAPLE AVE
WAUKESHA, WI

SITE SURVEY

PRELIMINARY NOT FOR CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO.	REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC
SHEET NO:	C001

MGARNER
C001
22371

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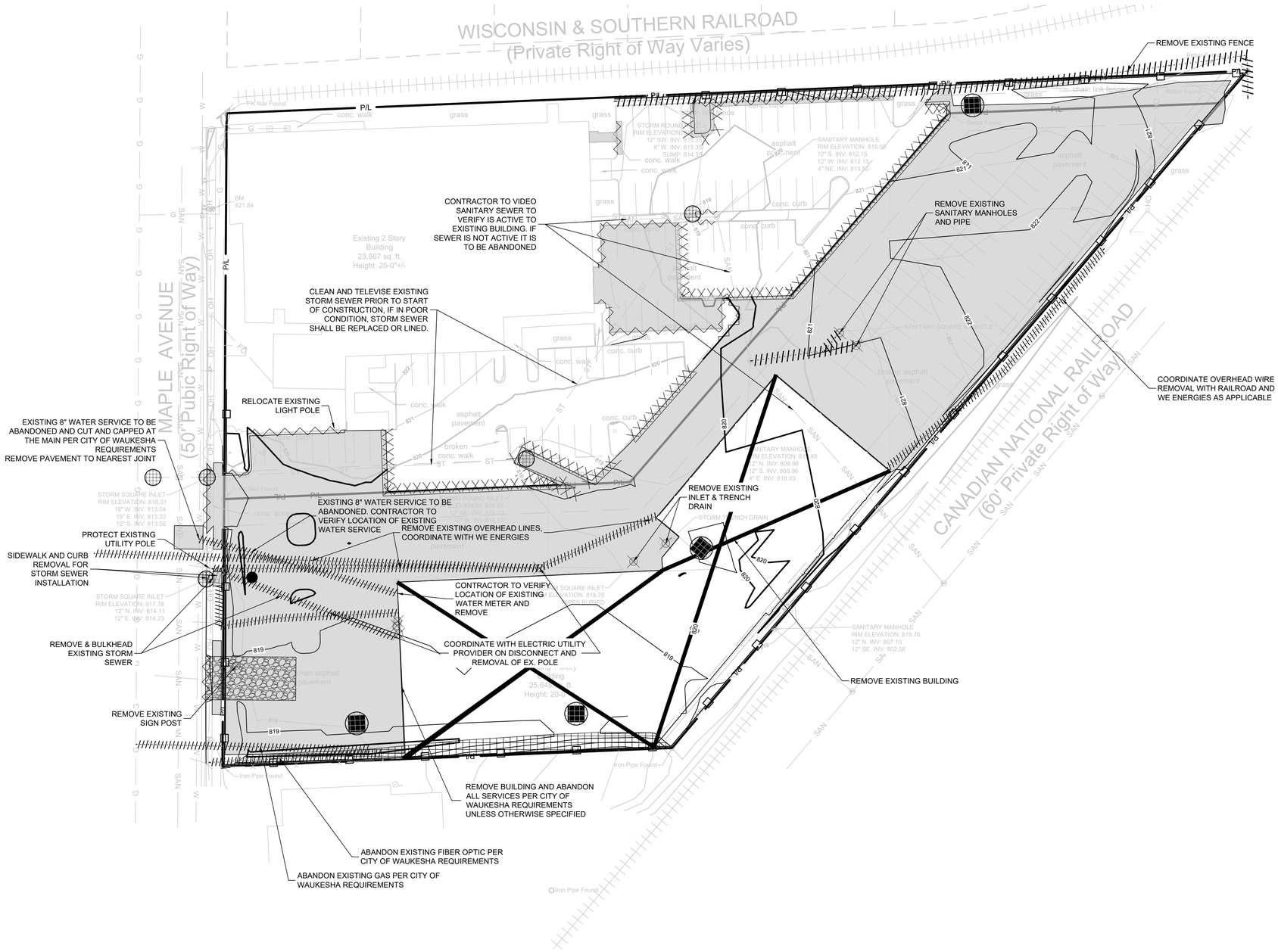
2024.04.22



LEGEND:

- PROPOSED SILT FENCE (C C400)
- PROPOSED INLET PROTECTION (A C400)
- PROPOSED TRACKING PAD (B C400)
- PROPOSED EROSION MATTING WISDOT APPROVED CLASS 1 TYPE B
- EXISTING CONTOUR (5)
- PROPOSED CONTOUR (5)
- UTILITY REMOVAL
- CURB REMOVAL
- SAWCUT
- STRUCTURE REMOVAL
- PAVEMENT REMOVAL

GRAPHIC SCALE
0 30 60

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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 CITY RIGHT-OF-WAY AND CITY EASEMENTS TO BE IN ACCORDANCE WITH CURRENT CITY OF WAUKESHA STANDARD SPECIFICATIONS AND DETAILS.
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CARROLL UNIVERSITY REDEVELOPMENT
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WAUKESHA, WI

SITE PREPORATION & EROSION CONTROL

PRELIMINARY NOT FOR CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO.	REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC

SHEET NO:
C002

MGARNER
C002
22371

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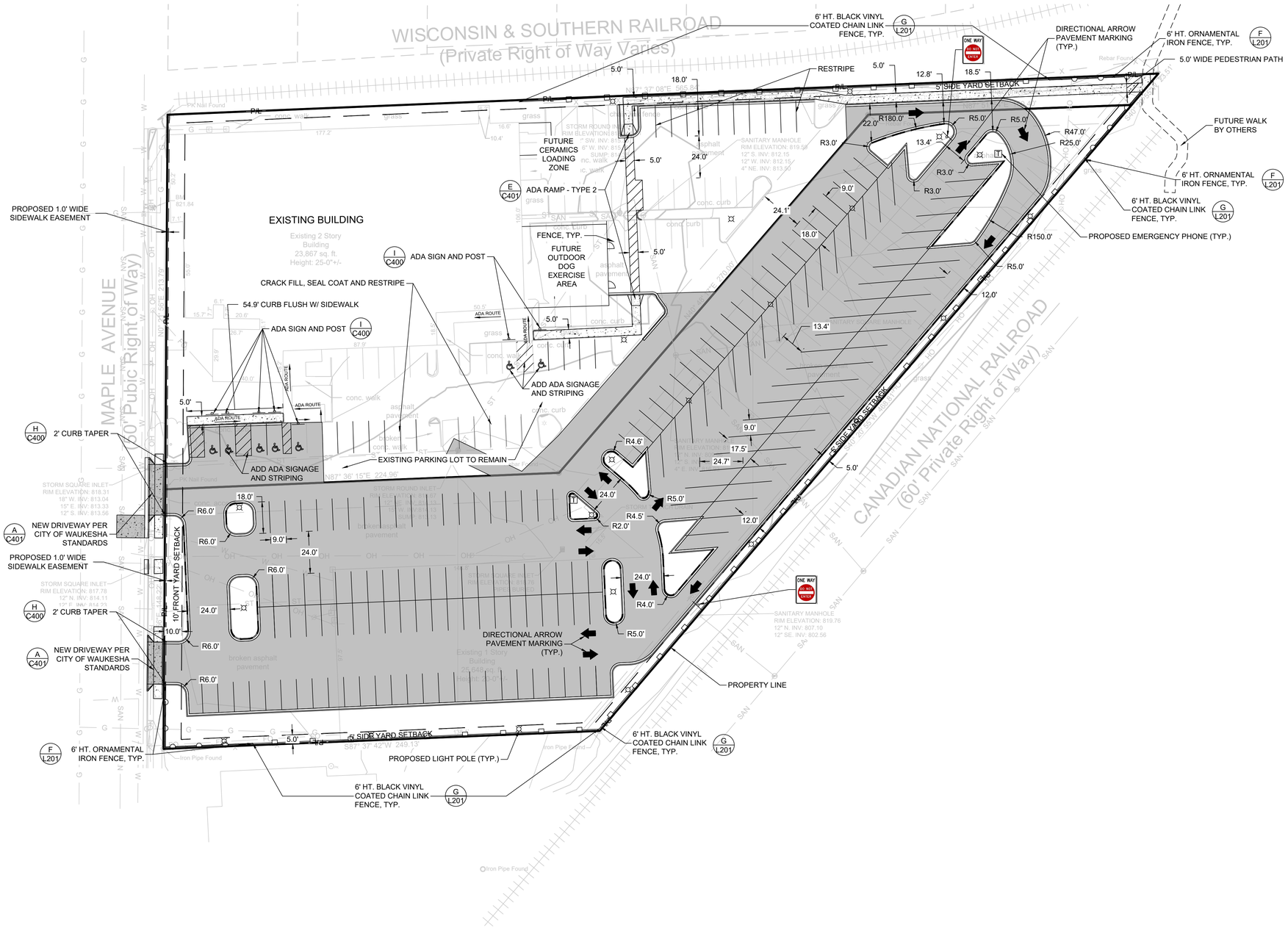
2024.04.22



SITE INFORMATION			
SITE AREA	147357	3.383 AC	
SITE DISTURBED AREA	91243	2.095 AC	
EXISTING IMPERVIOUS AREA	132418	3.040 AC	89.9 %
PROPOSED IMPERVIOUS AREA	124919	2.868 AC	84.8 %
TOTAL PARKING SPACES	229		
ADA PARKING SPACES	7		

LEGEND:

- E C400 — ASPHALT SURFACE
- G C400 — 5" THICK CONCRETE WALK
- F C400 — CONCRETE PAVEMENT
- D C400 — CURB & GUTTER (ACCEPT)
- D C400 — CURB & GUTTER (REJECT)
- PROPOSED MESH FENCE
- PROPOSED WROUGHT IRON FENCE

GRAPHIC SCALE
0 30 60

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5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
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WAUKESHA, WI

SITE PLAN

PRELIMINARY NOT FOR CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO.	REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC
SHEET NO:	C100

MGARNER
C100
22371

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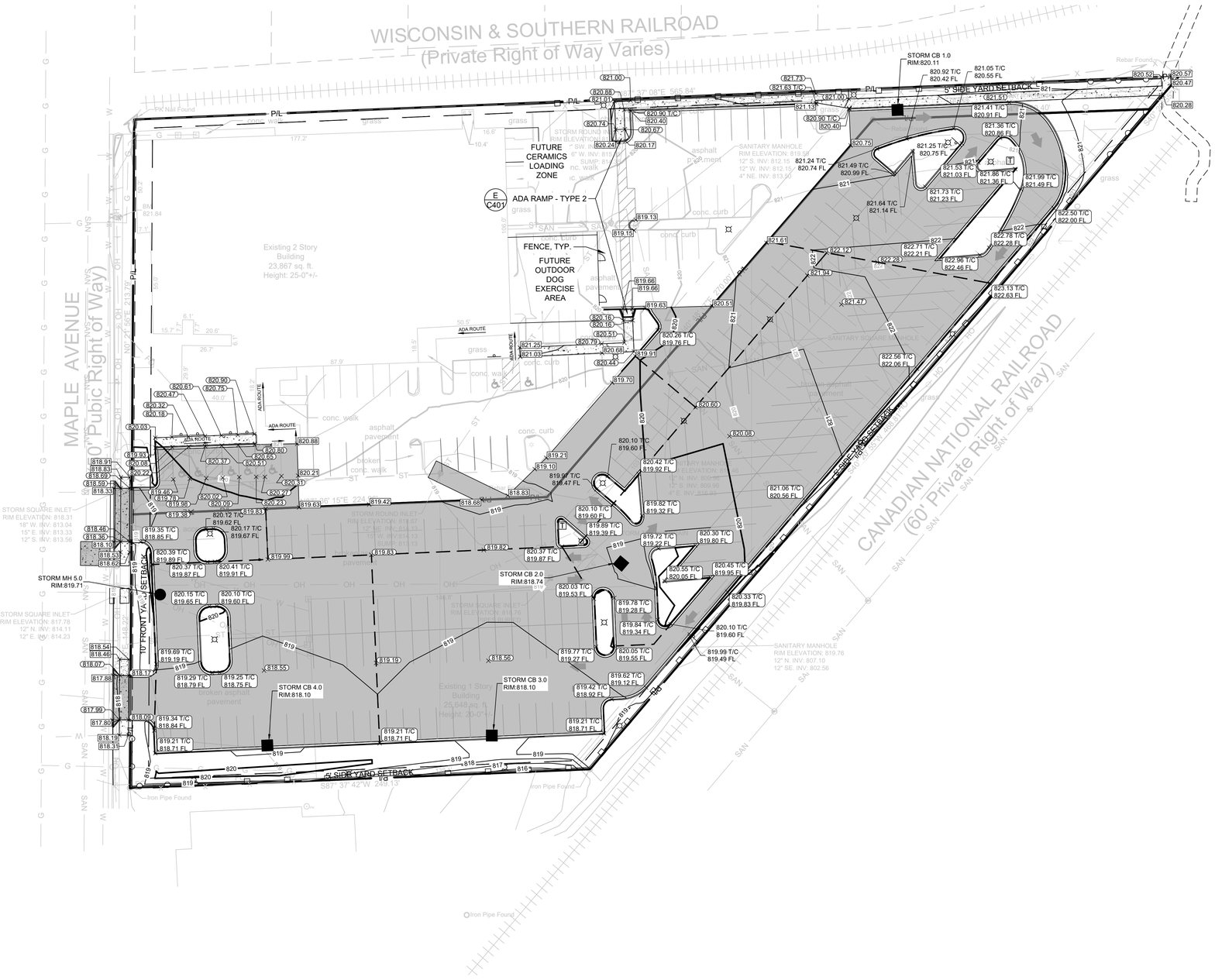
2024.04.22



LEGEND:

- E C400 — ASPHALT SURFACE
- G C400 — 5" THICK CONCRETE WALK
- F C400 — CONCRETE PAVEMENT
- D C400 — CURB & GUTTER (ACCEPT)
- D C400 — CURB & GUTTER (REJECT)
- GRADE BREAK LINE
- 5 — EXISTING CONTOUR
- 5 — PROPOSED CONTOUR
- 100.50 T/C 100.00 FL — PROPOSED CURB & GUTTER SPOT GRADE T/C: TOP OF CURB GRADE FL: FLOW LINE CURB GRADE
- 100.00 — PROPOSED SURFACE SPOT GRADE
- TW: 100.00 BW: 100.00 — PROPOSED TOP OF WALL AT FINISHED GRADE PROPOSED BOTTOM OF WALL AT FINISHED GRADE
- 100.00 — EXISTING SURFACE SPOT GRADE (MATCH)

GRAPHIC SCALE
0 30 60

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MILW. AREA 259-1181

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CARROLL UNIVERSITY REDEVELOPMENT
211 & 223 MAPLE AVE
WAUKESHA, WI

GRADING PLAN

PRELIMINARY NOT FOR CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO. REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC

SHEET NO:
C200

MGARNER
C200
22371

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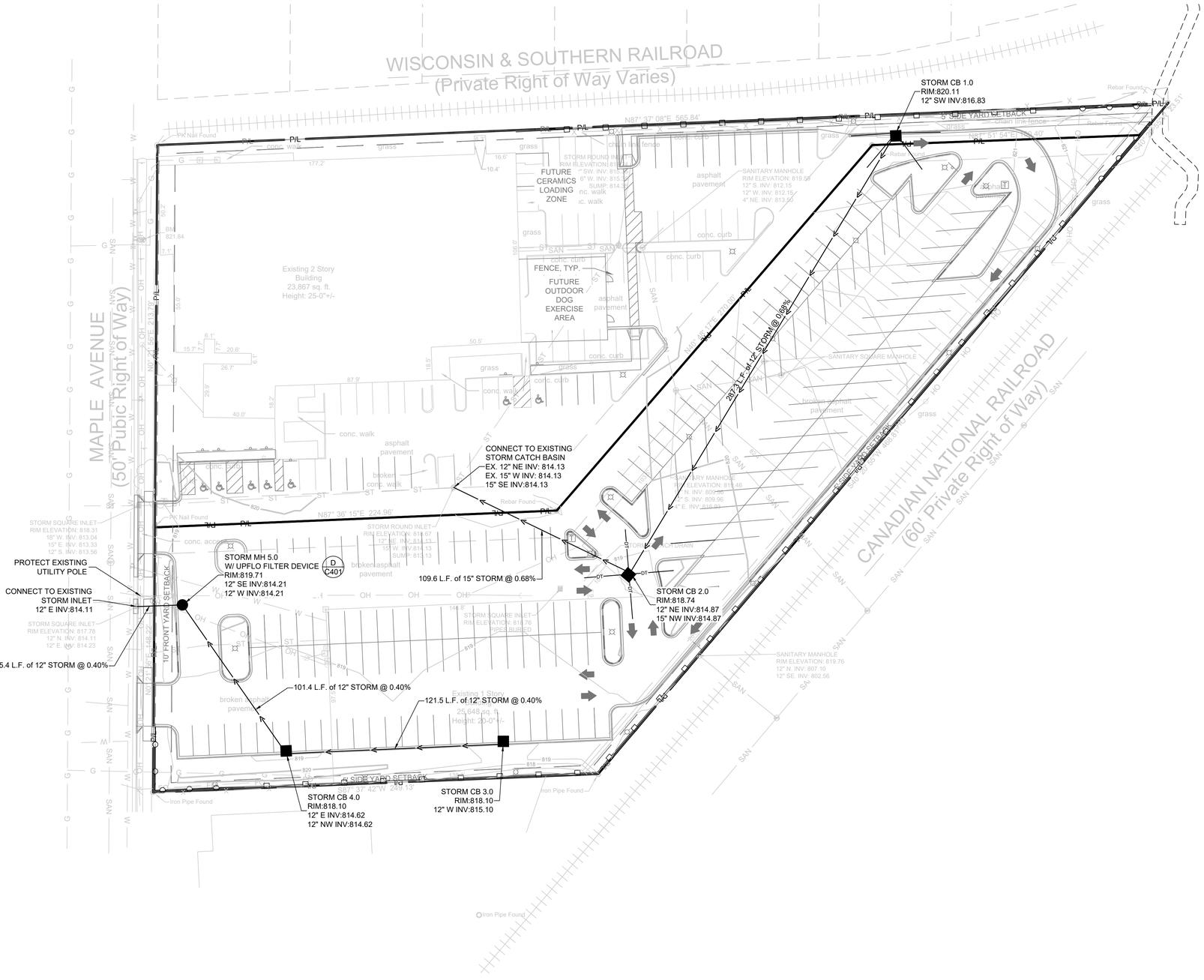
2024.04.22



LEGEND:

- PROPOSED STORM SEWER
- PROPOSED DRAIN TILE (UNDERDRAIN)
- PROPOSED STORM INLET (B / C401)
- PROPOSED STORM MANHOLE (C / C401)

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5. ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
6. PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUBS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
7. WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
8. 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 235 DR 18 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
9. COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES.
10. 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.
11. 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 HALL 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 BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS.
12. 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:44,45,46 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.
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GRAPHIC SCALE
0 30 60

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WAUKESHA, WI

UTILITY PLAN

PRELIMINARY NOT FOR CONSTRUCTION

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APPROVED BY:	CTC

SHEET NO:
C300

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MGARNER
C300
22371

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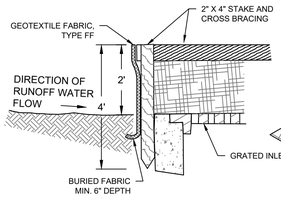
2024.04.22

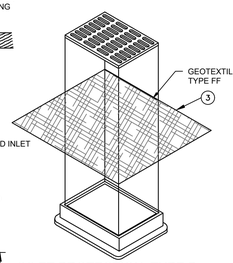
CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCING AND INLET PROTECTION.
3. INITIATE STOCKPILING OF IMPORTED MATERIAL. PLACE SILT FENCE AROUND STOCKPILE(S).
4. STRIP TOPSOIL FROM STORM WATER BASIN LOCATION AND STOCKPILE.
5. CONSTRUCT STORM WATER BASIN AND INSTALL TEMPORARY OUTLET AND EMERGENCY OVERFLOW. BASIN IS TO BE USED AS A SEDIMENTATION BASIN DURING THE COURSE OF CONSTRUCTION.
6. CONSTRUCT DIVERSION SWALES, DIRECT RUNOFF TO STORM BASIN. INSTALL ASSOCIATED DITCH CHECKS.
7. INSTALL RIP-RAP AT STORM WATER BASIN AS SHOWN ON THE PLANS.
8. STRIP TOPSOIL FROM REMAINDER OF SITE IN A PROGRESSIVE MANNER, AND STOCKPILE.
9. PERFORM ROUGH SITE GRADING. STABILIZE FINISHED AREAS AS THE WORK PROGRESSES. USE EROSION MATTING WHERE CALLED FOR ON THE PLANS. PER WDNR TECHNICAL STANDARD 1059: AREAS THAT RECEIVE TEMPORARY SEEDING SHALL HAVE A MINIMUM TOPSOIL DEPTH OF 2 INCHES. AREAS THAT RECEIVE PERMANENT SEEDING SHALL HAVE A MINIMAL TOPSOIL DEPTH OF 4 INCHES.
10. PREPARE BUILDING PAD AND BEGIN FOUNDATIONS WORK FOR BUILDING.
11. INSTALL UTILITIES. INSTALL ANY ADDITIONAL INLET PROTECTION ON NEW STORM SEWER AND INSTALL RIP-RAP AT NEW STORM SEWER OUTFALLS.
12. REMOVE TEMPORARY OUTLET CONTROL STRUCTURE ON BASIN AND INSTALL PAVEMENTS.
13. STABILIZE AREAS REMAINING AREAS WITHIN 7 DAYS OF COMPLETION OF FINAL GRADING AND TOPSOILING.
14. REMOVE EXCESS SEDIMENT FROM STORMWATER BASINS AND RETURN BASINS TO THEIR DESIGN DIMENSIONS AND VOLUMES.
15. REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED.

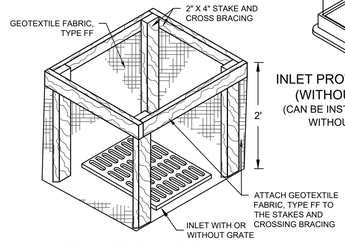
EROSION CONTROL NOTES:

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY 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 INSURE 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 WAUKESHA, 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 CITY OF WAUKESHA 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 OR PERMANENT 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 LOCAL MUNICIPALITY 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 SPILL KITS ON-SITE.
24. PERMAMENT 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 SEEDED WITH AN ANNUAL RYE GRASS PER WDNR TECHNICAL STANDARD 1059, WHERE THE TEMPORARY SEEDING MUST OCCUR PRIOR TO OCTOBER 15TH.
25. IF TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED TO DISTURBED AREA PER WDNR TECHNICAL STANDARD 1050. INSPECT ANIONIC PAM APPLICATION AT A MINIMUM FREQUENCY OF EVERY TWO MONTHS AND REAPPLY AS NECESSARY.

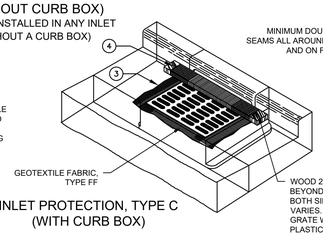




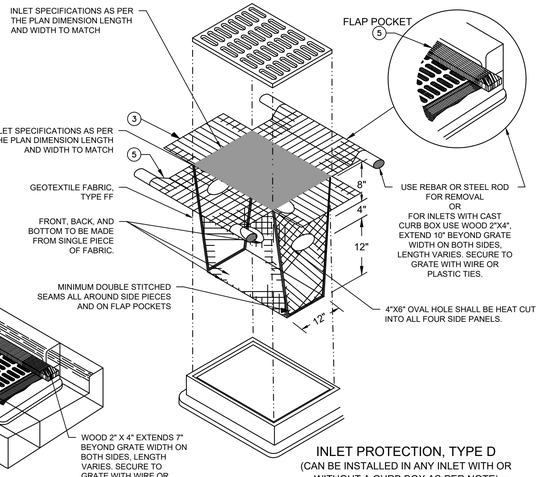
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE C
(WITH CURB BOX)



INLET PROTECTION, TYPE D
(CAN BE INSTALLED IN ANY INLET WITH OR WITHOUT A CURB BOX AS PER NOTE) 4

GENERAL NOTES:

1. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S 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

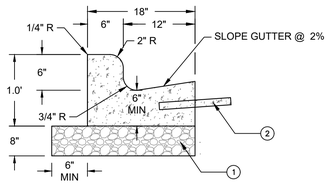
INSTALLATION NOTES:

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.

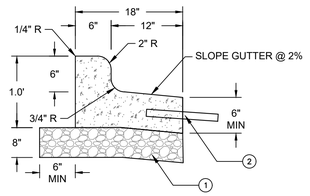
TYPE D
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACES AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

A INLET PROTECTION - WDNR TS-1060
SCALE:NTS

ACCEPT

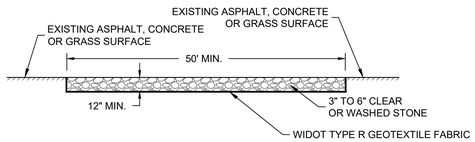


REJECT



NOTES:
1. 1-1/4" DENSE GRADED AGGREGATE BASE COURSE.
2. TIE-BAR IF ADJACENT TO CONCRETE (NO.4 X 2'-0" DEFORMED TIE BARS SPACED AT 3'-0" C-C)
3. 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" MINIMUM GUTTER THICKNESS IS MAINTAINED.

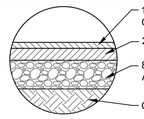
D 18 INCH CONCRETE CURB AND GUTTER
SCALE:NTS



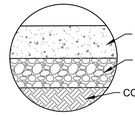
GENERAL NOTE:

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

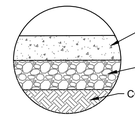
C TRACKING PAD
SCALE:NTS



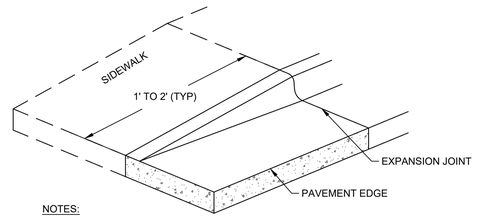
E ASPHALT PAVEMENT SECTION
SCALE:NTS



F CONCRETE PAVEMENT SECTION
SCALE:NTS



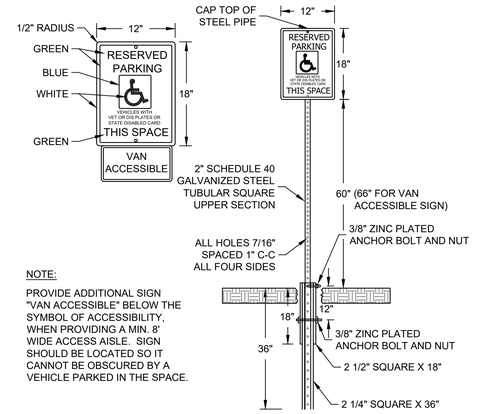
G CONCRETE SIDEWALK SECTION
SCALE:NTS



NOTES:

IF SIDEWALK IS ADJACENT TO CURB TAPER, TAPER SHALL BE EXTENDED TO 10' TO MAINTAIN 5% MAX SLOPE ON WALK FOR ADA ACCESS

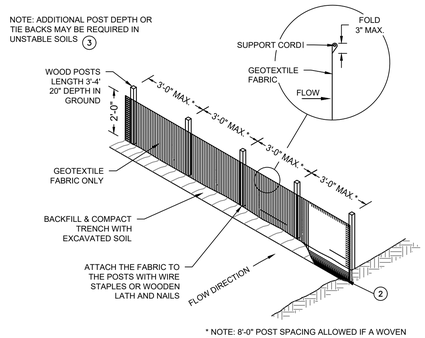
H CURB TAPER
SCALE:NTS



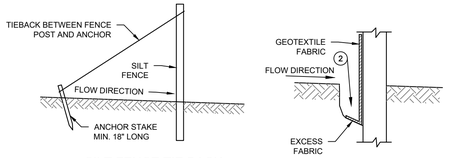
NOTE:

PROVIDE ADDITIONAL SIGN "VAN ACCESSIBLE" BELOW THE SYMBOL OF ACCESSIBILITY, WHEN PROVIDING A MIN. 8' WIDE ACCESS AISLE. SIGN SHOULD BE LOCATED SO IT CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

I ADA SIGN AND POST
SCALE:NTS

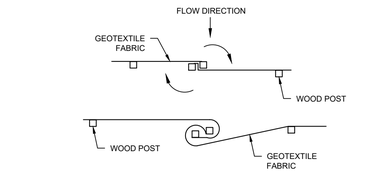


SILT FENCE

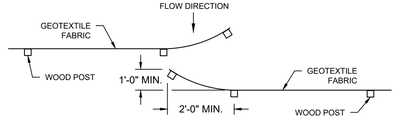


SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

TRENCH DETAIL



TWIST METHOD



HOOK METHOD 5

JOINING TWO LENGTHS OF SILT FENCE

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 & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1-1/32" X 1-1/32" OF OAK OR HICKORY.
4. WHERE SILT FENCE CROSSES A CULVERT, SILT FENCE SHALL BE DIVERTED OVER THE CULVERT OVER THE CULVERT TO NOT RESTRICT FLOW.
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 TWIST OR ROTATE, AT LEAST 180 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 9-6

B SILT FENCE - WDNR TS-1056
SCALE:NTS

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

CARROLL UNIVERSITY REDEVELOPMENT
211 & 223 MAPLE AVE
WAUKESHA, WI

DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

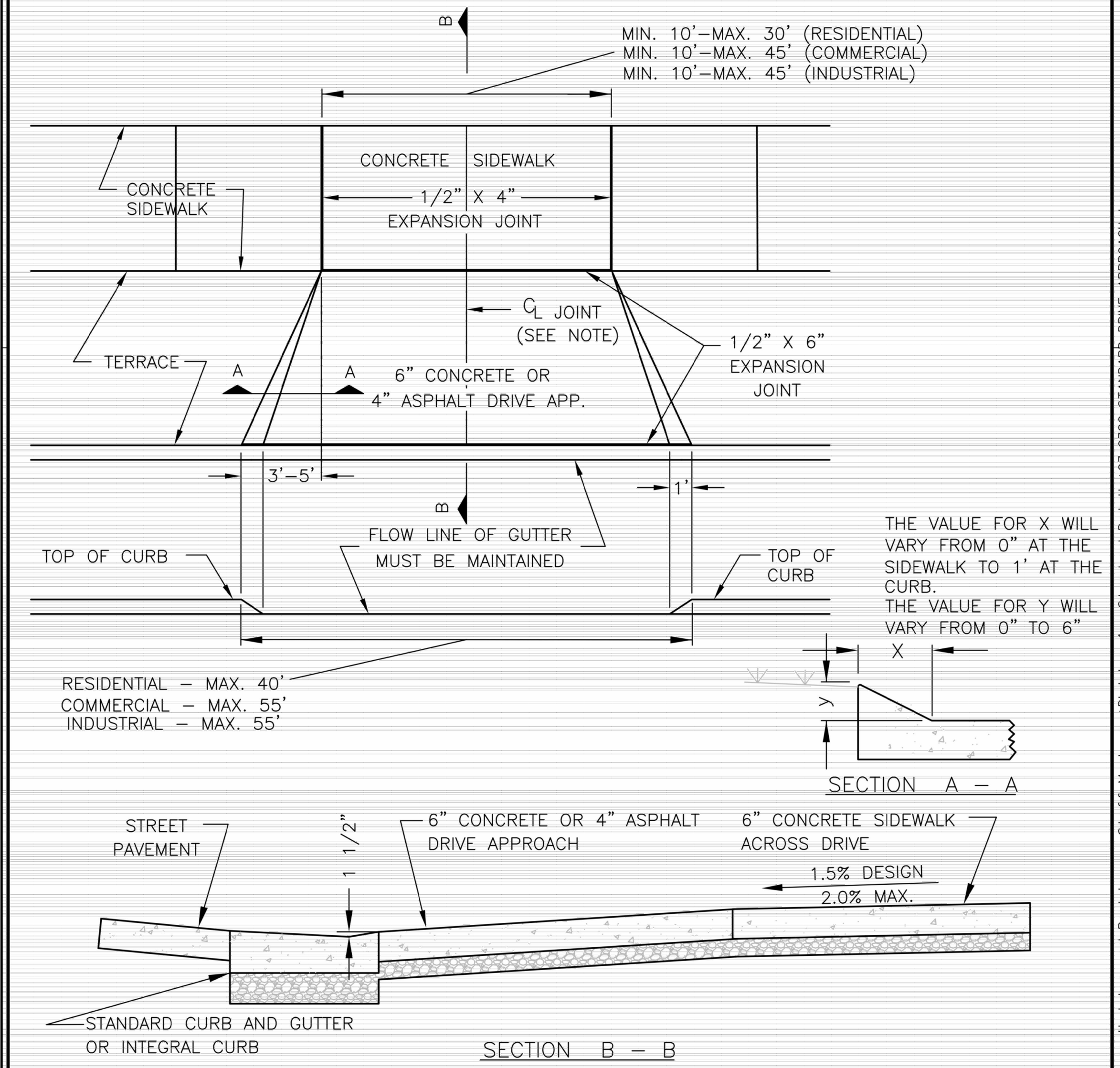
ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO.	REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC
SHEET NO:	C400

MGARNER
C400
22371

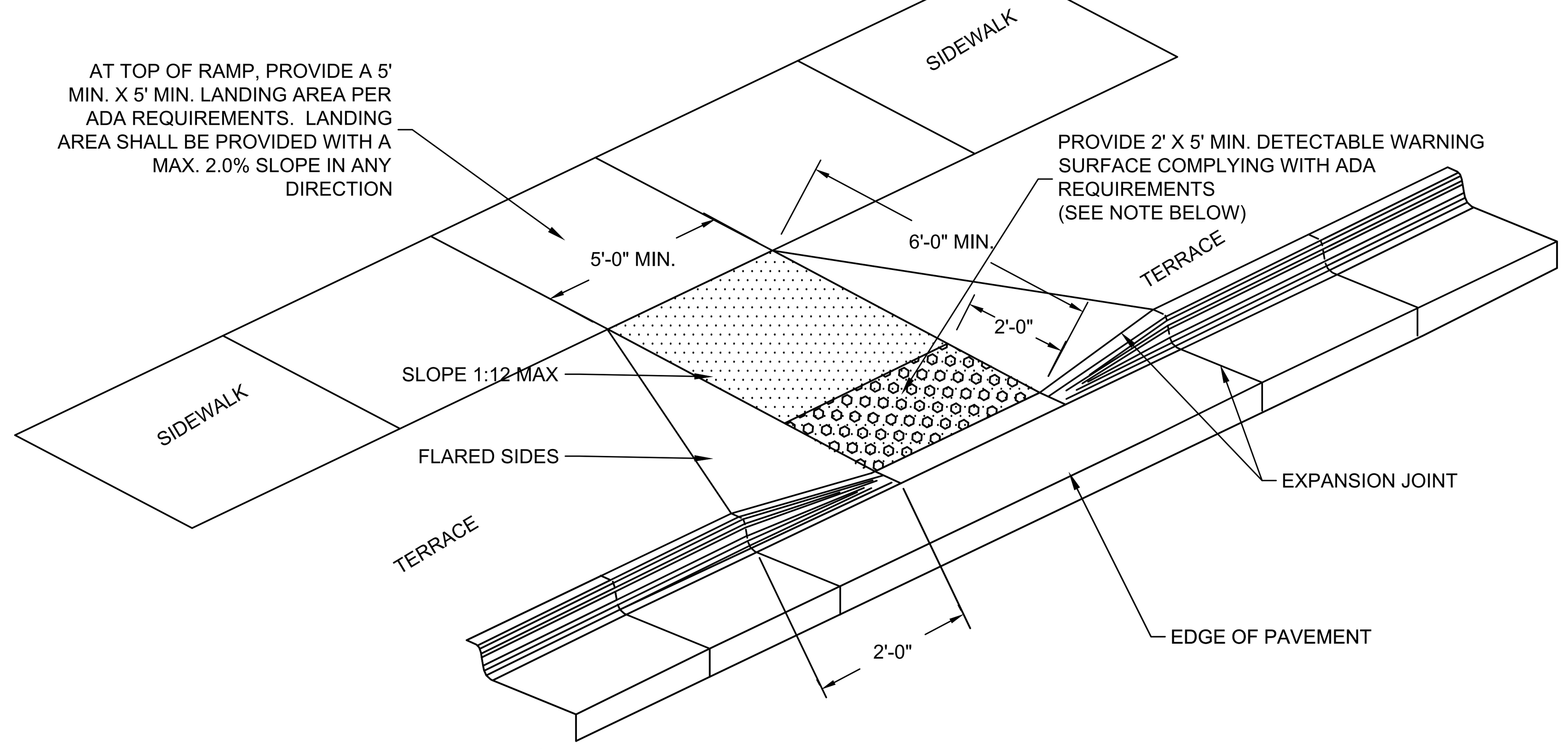
i:\vjs construction\22371 - carroll university redevelopment\060 CAD\030_Production Sheets\100_Civil\C400 Details.dwg



NOTES:
1. DRIVEWAYS 10' TO 20' WIDE SHALL HAVE ONE ℄ JOINT.
2. DRIVEWAYS 21' TO 30' WIDE SHALL HAVE TWO ℄ JOINTS EQUALLY SPACED.
3. DRIVEWAYS 31–40' WIDE SHALL HAVE THREE ℄ JOINTS EQUALLY SPACED.
4. 1/2" X 6" EXPANSION JOINT AT THE FACE OF WALK AND BACK OF CURB IS REQUIRED ONLY FOR CONCRETE DRIVE APPROACH.
5. FLARE WIDTH = 3' MIN. TO 5' MAX.
6. 8" CONCRETE ALLOWED FOR APPROACH AND SIDEWALK FOR HEAVY TRAFFIC.
7. 4" OF DENSE AGGREGATE BASE (3/4" OR 1–1/4") REQUIRED UNDER APPROACH AND SIDEWALK.
8. 6" MINIMUM OF DENSE AGGREGATE BASE (1–1/4") REQUIRED UNDER CURB AND GUTTER.
9. THE ENTIRE CURB AND GUTTER SHALL BE REMOVED AND REPLACED FOR THE WIDTH OF THE DRIVE APPROACH. SAWCUTTING OF THE HEAD (ONLY) IS NOT ALLOWED.
10. MAINTAIN A MIN 5-FEET BETWEEN CURB AND GUTTER JOINTS.

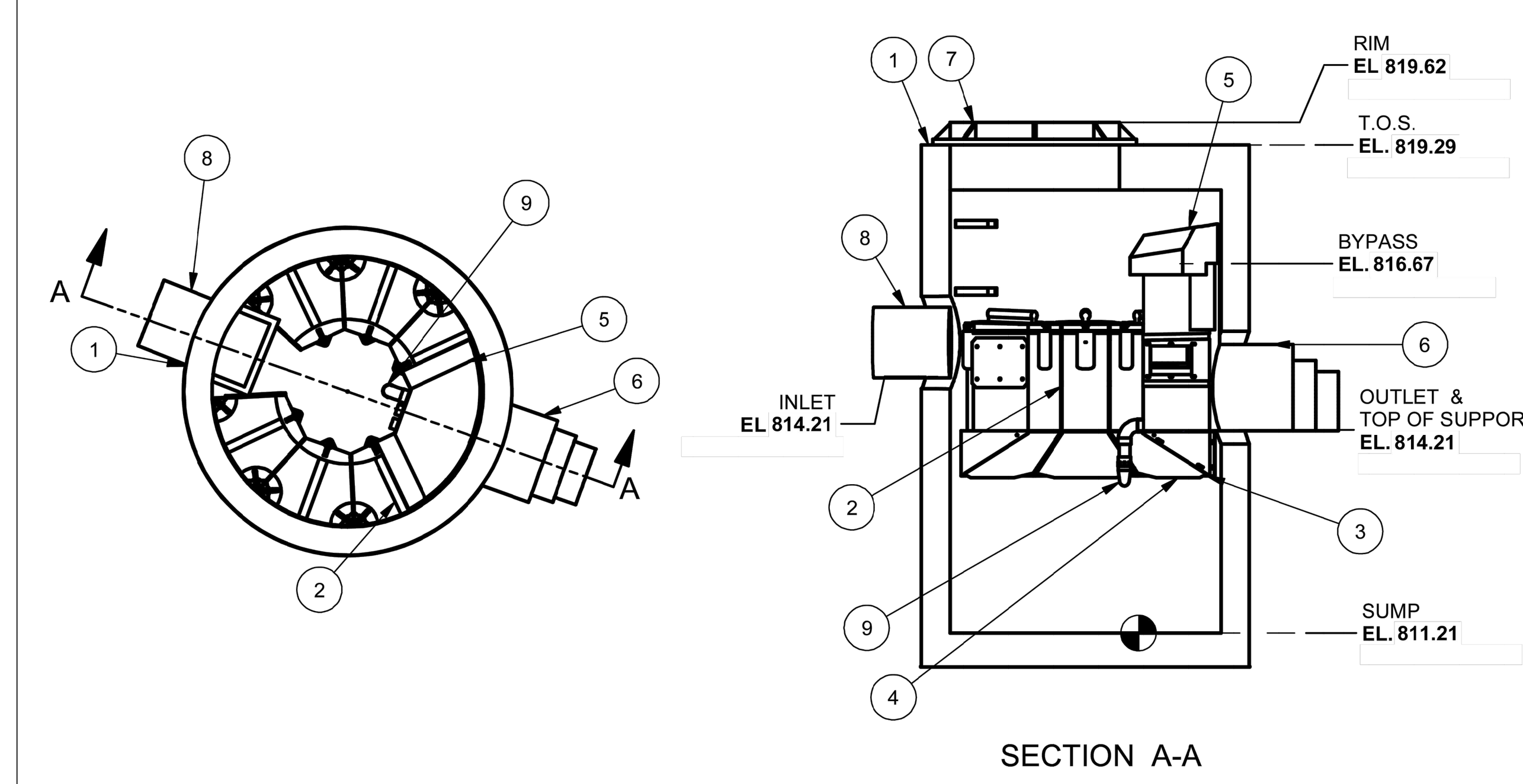
CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS
STANDARD CONSTRUCTION DETAILS
--STANDARD DRIVE APPROACH--
APPROVED: ALEX DAMIEN DATE:
DRAWN BY: DSB DATE:
CHECKED BY: DATE:
PLOT SCALE: 35_XREF
PLOT DATE: 1-10-2019 11:29 AM
DETAIL NUMBER: 07-0320
PROJECT NO.:

A WAUKESHA DRIVEWAY DETAIL
SCALE:NTS



NOTES:
1. CONTRACTOR TO VERIFY ADA RAMP DETAIL WITH CITY AND ADJUST AS NEEDED.
2. PROVIDE DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES OF SIZE, SPACING AND CONTRAST REQUIRED BY ADA GUIDELINES.
3. DETECTABLE WARNINGS SHALL BE PER CITY STANDARDS.

E ADA RAMP - TYPE 2
SCALE:NTS



EQUIPMENT PERFORMANCE
The stormwater filtration system shall adhere to the parameters listed below:
Minimum Performance Criteria: 80% removal of Sil-Co-Sil 106 at the peak treatment flow.
Peak Treatment Flow for 6 Filter Modules: 150 gpm (9.46 l/s)
Minimum Bypass Capacity: 1527 gpm (96.20 l/s)
Minimum Sediment Storage Capacity: 16.6 cu. ft. (0.47 cu. m.)
Minimum Oil Storage Capacity: 50 gal. (189 liters)

OUTLET PIPE STUB SIZE INFORMATION
Outside Diameter: 10.5", 12.5" or 15.3" OD
Concrete Penetration: Pipe Boot (by Hydro)
Hook-up: Fernco-type coupling (by others)

Parts List

ITEM	QTY	SIZE	DESCRIPTION
1	1	48 in	CONCRETE MANHOLE
2	6		FILTER MODULE
3	1		SUPPORT
4	1		ANGLED SCREEN
5	1		SIPHONIC BYPASS AND FLOATABLES BAFFLE
6	1		OUTLET MODULE AND PIPE STUB
7	1	30 in	FRAME AND COVER
8	1	12 in	INLET PIPE
9	1		DRAINDOWN FILTER

Notes

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
	RC	12/3/07	FIRST ISSUE
A	RC	1/14/08	STEPS & OFFSET MH COVER

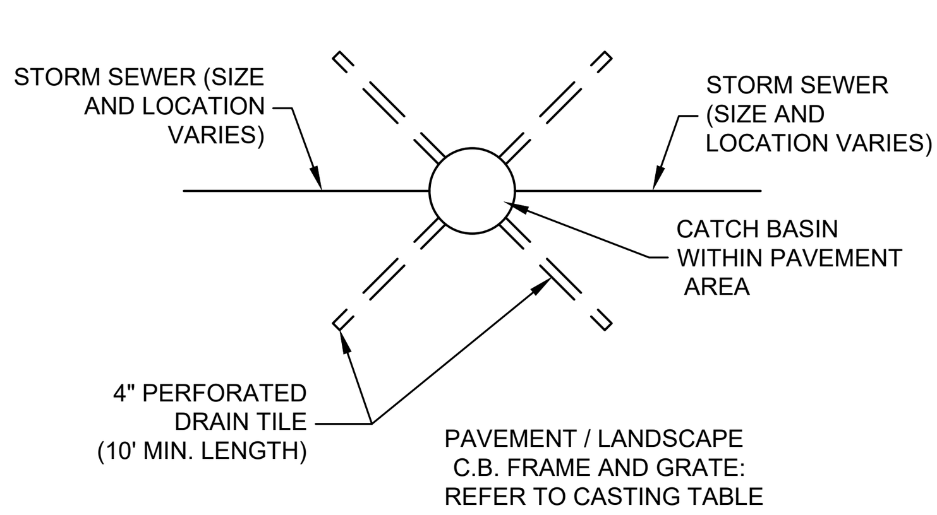
Date 1/14/2008 | Scale 3/8"=1'-0"
Drawn RC | Checked | Approved
Title
4-FT DIAMETER UP-FLO FILTER
GENERAL ARRANGEMENT

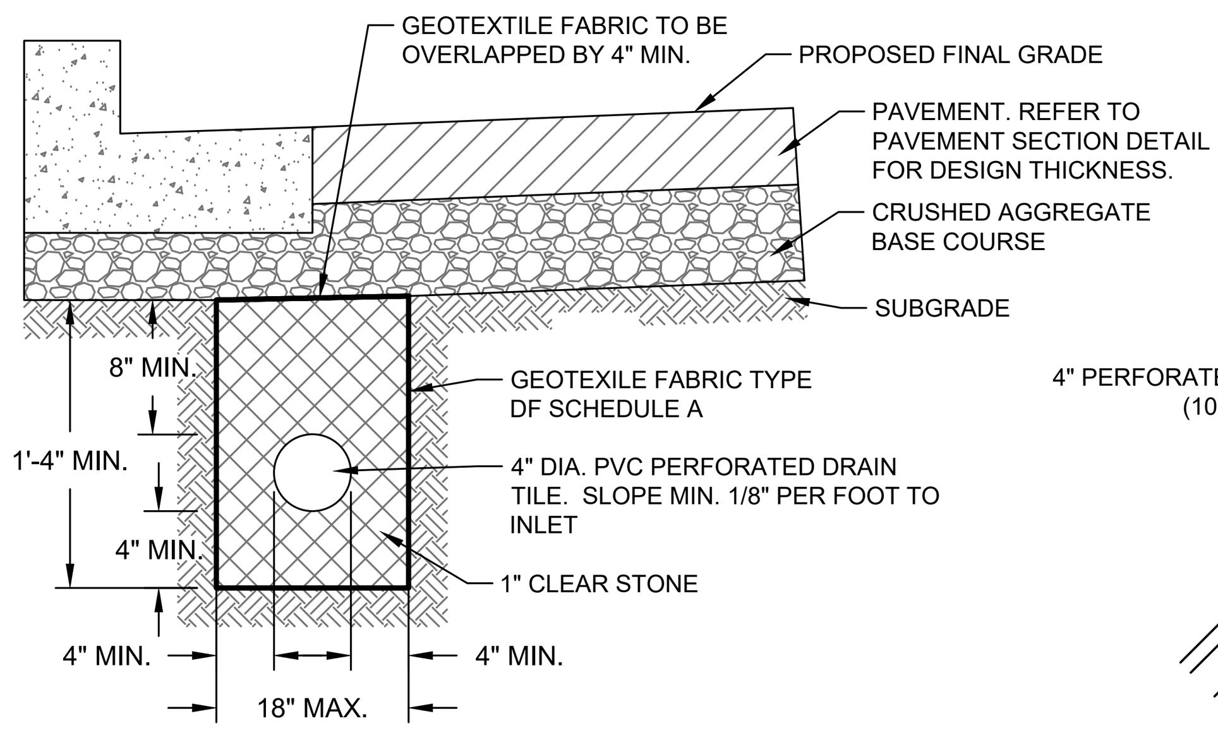
Hydro International
94 Hutchins Drive
Portland, Maine 04102
Tel: (207) 756-6200
Fax: (207) 756-6212
Email: hiltech@hil-tech.com

CAD Ref: U4S1
Project No.
Drawing No. U4S1 Rev. A

D UPFLO FILTER
SCALE:NTS

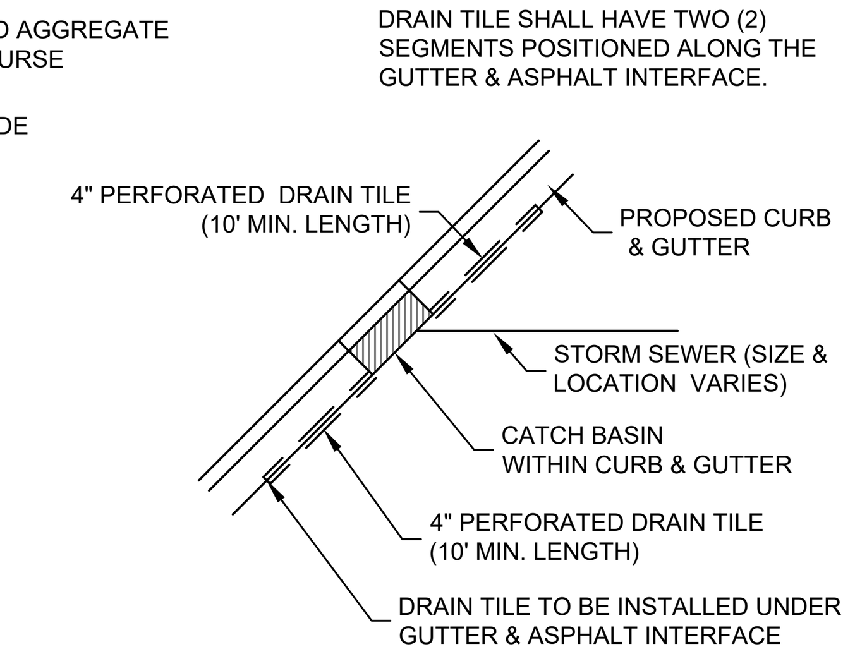
CATCH BASIN WITHIN LOW POINT OF PAVEMENT AREA



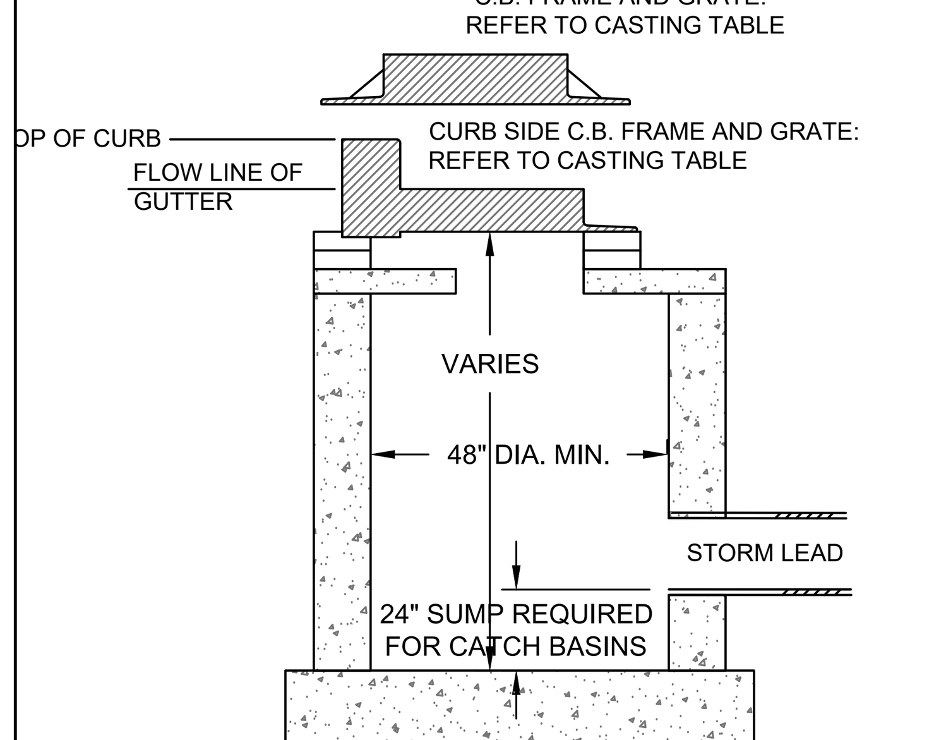


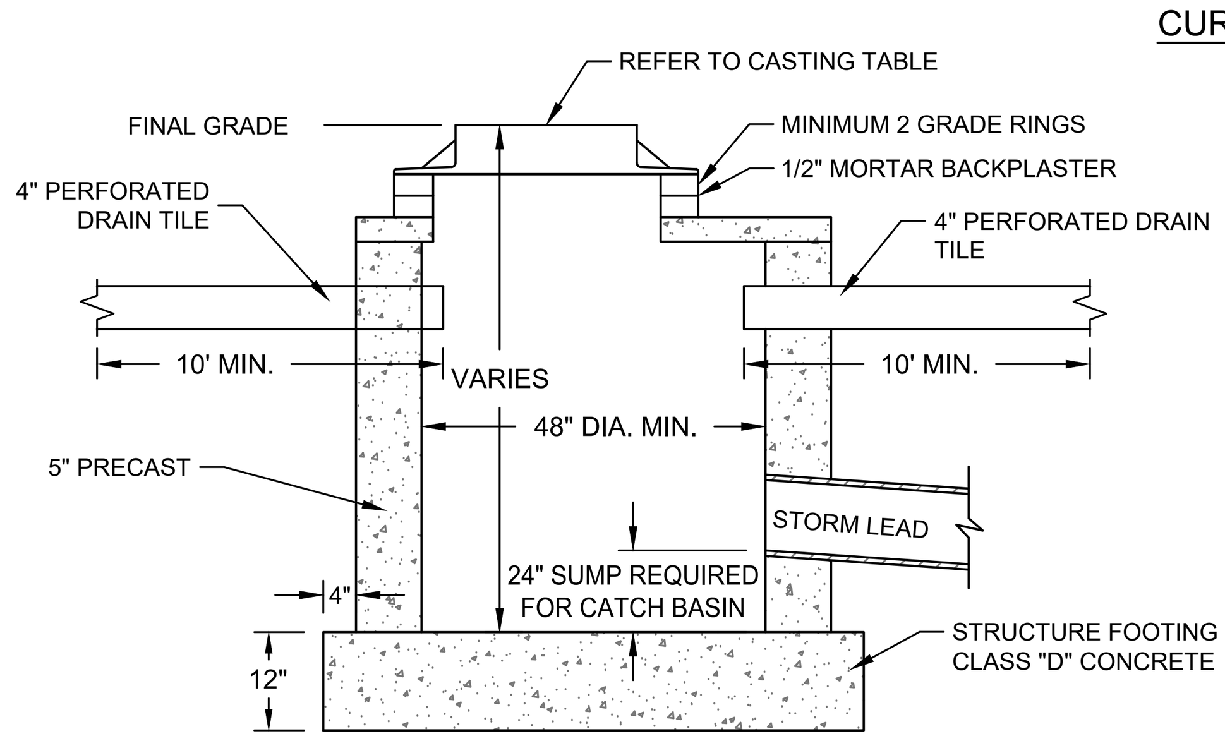
CURB INLET LOCATION SECTION

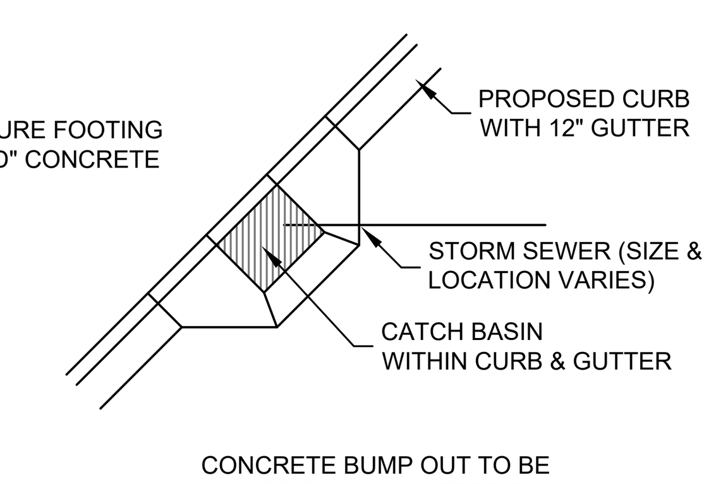
NOTE:
DRAIN TILE SHALL HAVE TWO (2) SEGMENTS POSITIONED ALONG THE GUTTER & ASPHALT INTERFACE.



CURB INLET WITHIN CURB & GUTTER PLAN





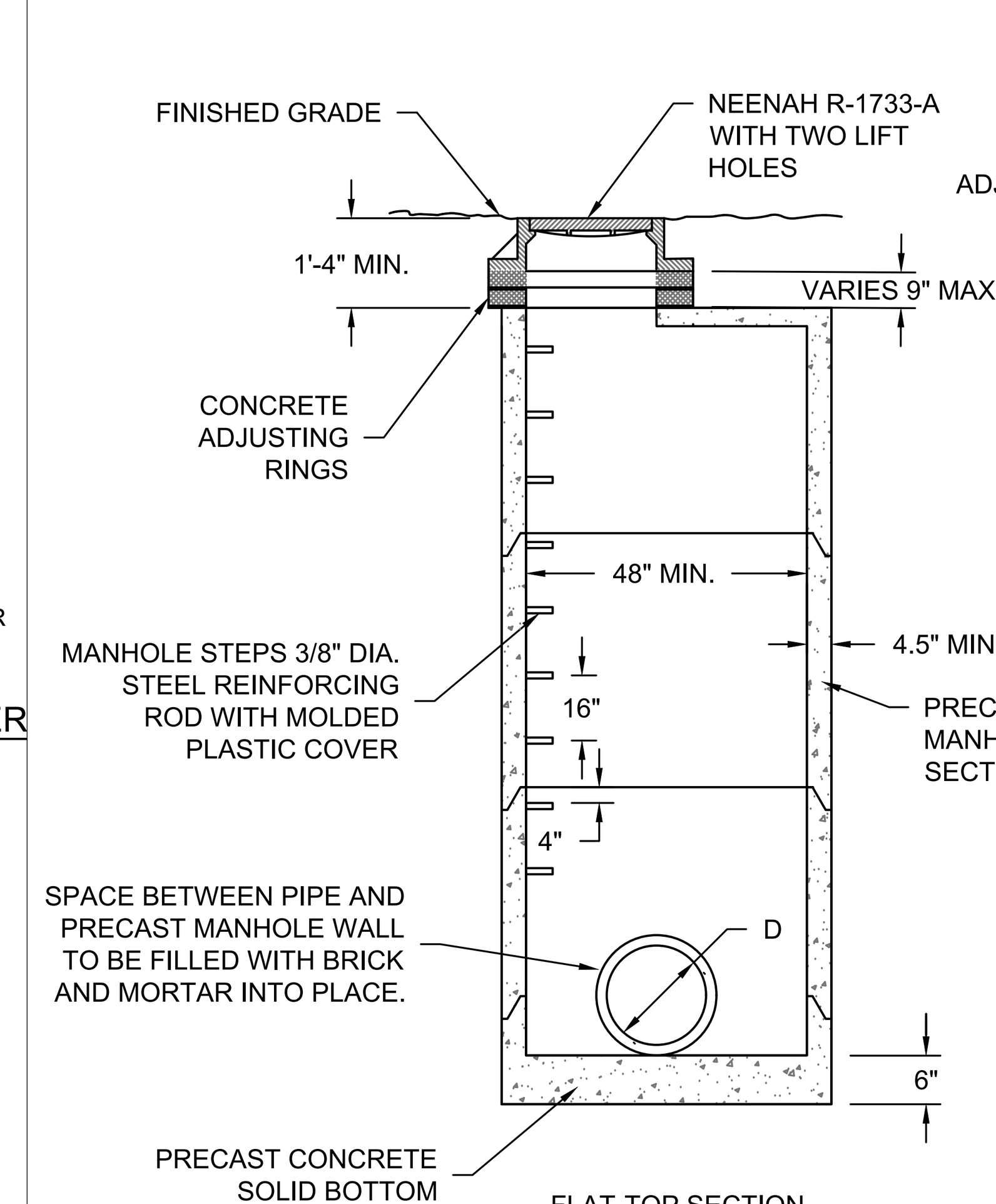


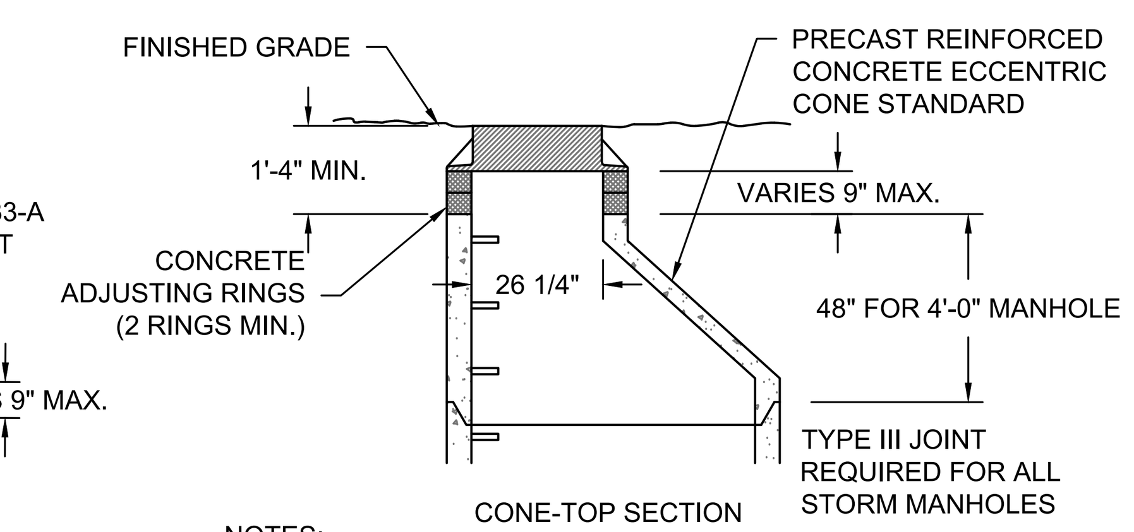
NOTES:
1. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6". MINIMUM RING HEIGHT = 2". CONCRETE RINGS SHALL BE REINFORCED WITH ONE LINE OF STEEL CENTERED WITHIN THE RING.
2. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
3. 3" MIN. BEDDING OF STONE UNDER BASE REQUIRED , ADDITIONAL BEDDING STOME MAY BE REQUIRED ON WET SUB-GRADE.
4. UNLESS NOTED ON THE PLANS CONTRACTOR IS RESPONSIBLE FOR ALL CATCH BASIN SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.

CATCH BASIN / INLET CASTING TABLE

	IF 18" CURB & GUTTER		IF 24" CURB & GUTTER		IF 30" CURB AND GUTTER	
	CASTING	GRATE	CASTING	GRATE	CASTING	GRATE
CURB INLET	NEENAH R-3067	A	NEENAH R-3067	A	NEENAH R-3228H	C
AREA INLET	NEENAH R-2050	C				

B INLET AND CATCH BASIN
SCALE:NTS





NOTES:
1. CONSTRUCT MANHOLE IN ACCORDANCE WITH FILE NO. 12 OF THE STATE STANDARD SPECIFICATIONS FOR SEWER AND WATER.
2. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6", MINIMUM RING HEIGHT = 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 SHALL BE WATERTIGHT AND SHALL BE MADE USING MORTAR, OR FLEXIBLE RUBBER TYPE GASKETS FOR STORM MANHOLES.
5. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT MIN.
6. 3" OF BEDDING STONE UNDER BASE.
7. UNLESS NOTED ON THE PLANS CONTRACTOR IS RESPONSIBLE FOR ALL MANHOLE SIZING AND SHALL PROVIDE A SHOP DRAWING TO THE SIGMA GROUP, INC. BEFORE THEY ARE RELEASED FOR PRODUCTION.

C PRECAST STORM MANHOLE
SCALE:NTS

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

CARROLL UNIVERSITY REDEVELOPMENT
211 & 223 MAPLE AVE
WAUKESHA, WI

DETAILS

PRELIMINARY NOT FOR CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO. REVISION DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC

SHEET NO:
C401

2024.04.22

GENERAL:

1. EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, AND NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR ENGINEER FOR THEIR ACCURACY OR COMPLETENESS.
2. CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. 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.
3. 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:

1. 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.
2. MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.
3. SALVABLE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNER'S PREMISES WHERE INDICATED.
4. UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
5. DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
6. PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
7. LOCATE AND CLEARLY FLAG TREES AND VEGETATION TO REMAIN OR TO BE RELOCATED.
8. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION; RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.
9. LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES INDICATED TO BE REMOVED; ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
10. 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.
11. 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.
12. REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
13. STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
14. STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.
15. REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
16. 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.
17. 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.
18. SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NONRECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMIXING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

SITE WATER SERVICE:

1. 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.
2. 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.
3. WATER SERVICE PIPING MAY BE EITHER DUCTILE IRON WATER PIPE OR PVC WATER PIPE AS ALLOWED BY THE LOCAL WATER UTILITY.
4. 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 8.18.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
    - a. CLASS 52
    - b. CEMENT MORTAR LINING AND INTERNAL AND EXTERNAL BITUMINOUS COATS IN ACCORDANCE WITH SECTION 51.8 OF AWWA C151.
    - c. PUSH-ON GASKET PIPE
    - d. PLAIN RUBBER GASKETS
    - e. BONDING STRAPS TO PROVIDE ELECTRICAL CONDUCTIVITY WITHOUT FIELD TESTING
5. 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)
6. 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 C110/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.
7. 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.
8. GATE VALVES: CONFORM TO AWWA C-500 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN SUITABLE FOR DIRECT BURY.
9. VALVE BOXES: CAST IRON CONFORMING TO ASTM DESIGNATION A-48, CLASS 20 AND STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
10. FIRE HYDRANTS: TO MEET LOCAL STANDARDS.
11. 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 HALL 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 BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS
12. GENERAL WATER PIPE INSTALLATION: IN ACCORDANCE WITH CHAPTER 4.3.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
13. 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.
14. ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C105, 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.
15. 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.
16. 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:44,45,46 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.:

17. 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.
18. INSTALL TRACER WIRE FOR NON-METALLIC WATER SERVICES IN ACCORDANCE WITH SPS SECTION 382.40(8)(K). TRACER WIRE INSULATION COLOR SHALL BE BLUE FOR POTABLE WATER SERVICE PIPING.
19. DUCTILE-IRON PIPING, RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 4.4.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
20. 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.
21. CONDUCT HYDROSTATIC TESTS IN ACCORDANCE WITH CHAPTER 4.15.0 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
22. CLEAN AND DISINFECT WATER SERVICE PIPING IN ACCORDANCE WITH SPS CHAPTER 82.40(8)(I) AND AWWA C651.

SANITARY SEWERAGE:

1. ALL PRIVATE SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DSPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
2. 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.
3. 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.
4. MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 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.
5. MANHOLES DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
6. 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 ACCORANCE WITH SPS SECTION 382.30(11)(H) AND 382.36(7)(D).
7. PIPE JOINT CONSTRUCTION: FOLLOW PIPING MANUFACTURER'S RECOMMENDATIONS; JOIN PVC SEWER PIPE ACCORDING TO ASTM D2321 AND ASTM D 3212 FOR ELASTOMERIC GASKET JOINTS. JOIN DISSIMILAR PIPE MATERIALS WITH NONPRESSURE-TYPE, FLEXIBLE COUPLINGS
7. 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.
8. 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.
9. 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.
10. MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
11. 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 3.2.6(I)4 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 AAND REPEAT TESTING UNTIL LEAKAGE IS WITHIN ALLOWANCES SPECIFIED.

STORM DRAINAGE:

1. ALL PRIVATE STORM SEWER WORK SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (DSPS) PLUMBING CODE - CHAPTERS SPS 382 AND SPS 384 AND LOCAL MUNICIPAL REQUIREMENTS.
2. 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.
3. 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.
4. REINFORCED CONCRETE PIPE: ASTM C76 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.
5. HDPE PIPE: ADS N12 PIPE AS APPROVED ON THE DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCT REGISTER.
6. 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.
7. FRAMES AND GRATES: AS INDICATED ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SPECIFIED FRAME/GRATE IS COMPATIBLE WITH STRUCTURE; IF NOT, NOTIFY ENGINEER.
8. MANHOLES: STANDARD PRECAST REINFORCED CONCRETE MANHOLES CONFORMING TO ASTM C478, SECTION 8.39.0 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.
9. MANHOLES AND CATCH BASINS DEEPER THAN FOUR FEET SHALL BE PROVIDED WITH MANHOLE STEPS CONFORMING TO SECTION 8.40.0 OF THE STANDARD SPECIFICATIONS.
10. 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).
11. 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.
12. 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.
13. 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.
14. MANHOLE INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3.5.0 OF THE STANDARD SPECIFICATIONS. SET MANHOLE RIMS TO ELEVATIONS INDICATED ON PLANS.
15. 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.
16. 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 3.2.6(I)4 OF THE STANDARD SPECIFICATIONS; REPLACE ANY PIPE SECTION NOT PASSING THE DEFLECTION TESTING USING NEW PIPE MATERIALS.

EARTH MOVING:

1. 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.
2. CONTRACTOR SHALL PROVIDE MATERIAL TEST REPORTS FROM A QUALIFIED TESTING AGENCY INDICATING TEST RESULTS FOR CLASSIFICATION ACCORDING TO ASTM D2487 AND LABORATORY COMPACTION CURVES ACCORDING TO ASTM D 1557 FOR EACH ON-SITE AND OFF-SITE SOIL MATERIAL PROPOSED FOR FILL AND BACKFILL.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; 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.
10. 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.
11. 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.
12. 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.
13. PIPE COVER MATERIAL: CONFORM TO SECTION 8.43.3 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
14. PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
15. 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.
16. 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.
17. 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 INOT THE SURROUNDING SUITABLE SOIL SO THAT EDGE FAILURE OF THE OVEREXCAVATED AREA DOES NOT OCCUR.
18. 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 DRAINTILE THAT IS IN KIND SLOPED TOWARD THE NEAREST STORM SEWER. MINIMUM SLOPES OF SUCH DRAINTILES SHALL BE 0.5%.
19. CONVENTIONAL DISKING AND AERATION TECHNIQUES SHALL BE USED TO DRY SOILS BEFORE PROOF ROLLING. ALLOT FOR PROPER DRYING TIME IN PROJECT SCHEDULE.
20. 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.
21. 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.
22. 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 8 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.
23. 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)
24. 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.
25. 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.
26. UTILITY BEDDING PLACEMENT: CONFORM TO SECTION 3.2.6 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).
27. 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.
28. 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.
29. 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 DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
30. TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY-CONTROL TESTING.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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.
36. 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
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO. REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC

SHEET NO:
C500

MGARNER

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22371

2024.04.22

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, GRADE A-2, OR A-FA CONFORMING TO SECTION 501.3.1.3 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 PREFORMED 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 RADIUS. 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 INDICATED OTHERWISE 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 PAVER. 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 450.3.2.6 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 ¼ INCH FOR BINDER COURSE AND PLUS ¼ 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: ¼ 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.

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22371

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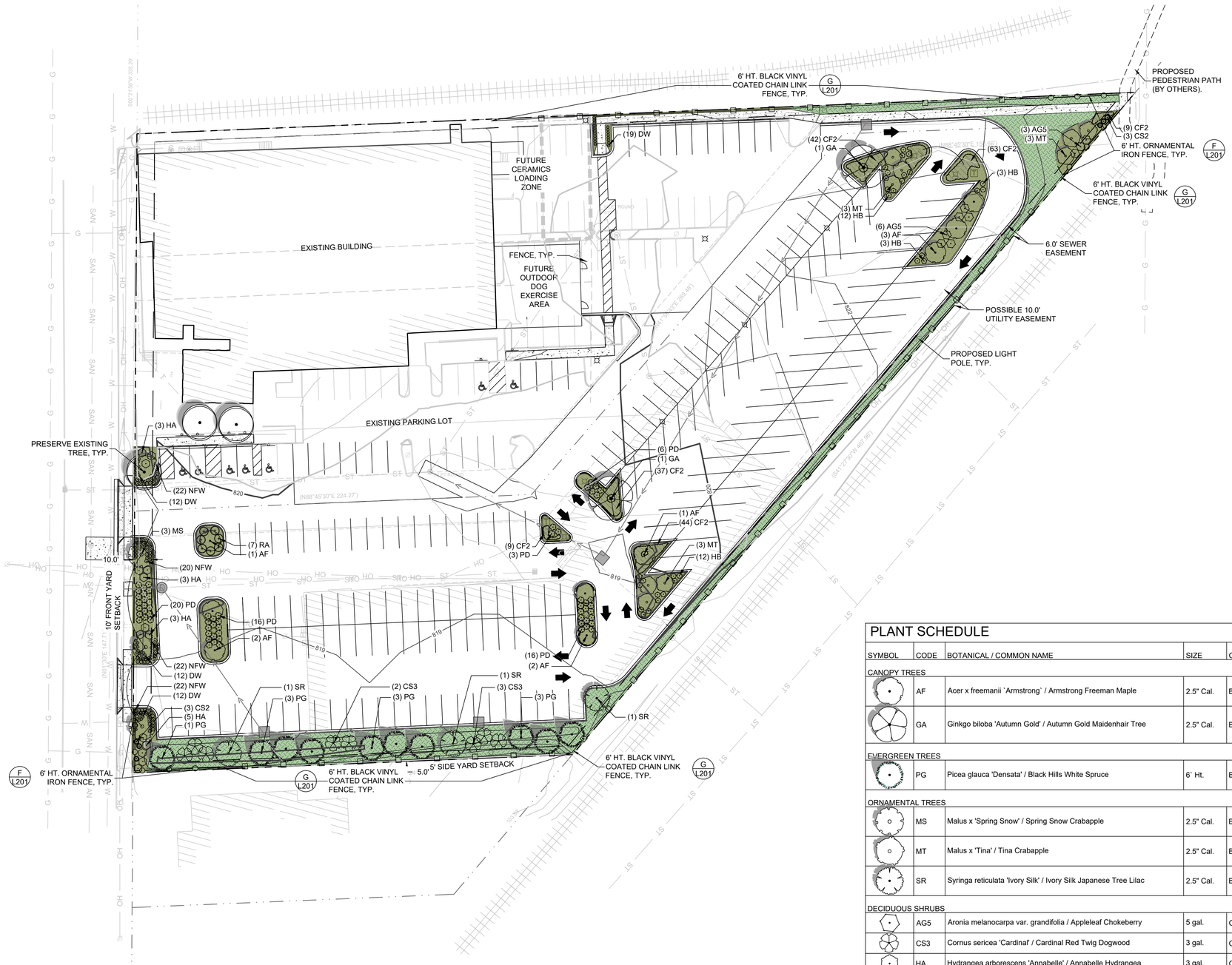
2024.04.22



LANDSCAPE LEGEND:

- NO-MOW TURFGRASS
- HARDWOOD BARK MULCH PLANT BED
- PROPERTY LINE
- SHOVEL CUT PLANT EDGING
- F L201 — 6' HT ORNAMENTAL IRON FENCE
- G L201 — 6' HT BLACK VINYL COATED CHAIN LINK FENCE
- EXISTING TREE, PRESERVE AND PROTECT.

LEGEND:

- E C400 — ASPHALT SURFACE
- G C400 — 5" THICK CONCRETE WALK
- F C400 — CONCRETE PAVEMENT

GRAPHIC SCALE
0 30 60

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
CANOPY TREES					
	AF	Acer x freemanii `Armstrong` / Armstrong Freeman Maple	2.5" Cal.	B&B	9
	GA	Ginkgo biloba 'Autumn Gold' / Autumn Gold Maidenhair Tree	2.5" Cal.	B&B	2
EVERGREEN TREES					
	PG	Picea glauca 'Densata' / Black Hills White Spruce	6` Ht.	B&B	10
ORNAMENTAL TREES					
	MS	Malus x 'Spring Snow' / Spring Snow Crabapple	2.5" Cal.	B&B	3
	MT	Malus x 'Tina' / Tina Crabapple	2.5" Cal.	B&B	9
	SR	Syringa reticulata 'Ivory Silk' / Ivory Silk Japanese Tree Lilac	2.5" Cal.	B&B	3
DECIDUOUS SHRUBS					
	AG5	Aronia melanocarpa var. grandifolia / Appleleaf Chokeberry	5 gal.	Cont.	9
	CS3	Cornus sericea 'Cardinal' / Cardinal Red Twig Dogwood	3 gal.	Cont.	8
	HA	Hydrangea arborescens 'Annabelle' / Annabelle Hydrangea	3 gal.	Cont.	14
	HB	Hydrangea paniculata 'ILVOBO' / Bobo® Panicle Hydrangea	3 gal.	Cont.	30
	PD	Physocarpus opulifolius 'Donna May' / Little Devil™ Dwarf Ninebark	3 gal.	Cont.	61
	RA	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal.	Cont.	7
PERENNIALS					
	CS2	Calamagrostis x acutiflora 'Stricta' / Karl Foerster Feather Reed Grass	1 gal.	Cont.	6
	DW	Dianthus gratianopolitanus 'Firewitch' / Firewitch Cheddar Pink	1 gal.	Cont.	66
	NFW	Nepeta x faassenii 'Walker's Low' / Walker's Low Catmint	1 gal.	Cont.	86
PERENNIALS					
	CF2	Coreopsis x 'Full Moon' / Big Bang™ Full Moon Tickseed	1 gal.	Cont.	204

LANDSCAPE GENERAL NOTES:

1. VERIFY EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES, AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
2. 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.
3. COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ADJACENT PAVEMENTS, DRAINAGE, CURB RELATED STRUCTURES WITH OTHER TRADES.
4. 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.
5. 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.
6. PROVIDE 3" DOUBLE SHREDDED BARK MULCH FOR ALL PLANTED TREES, SHRUBS AND LANDSCAPE BEDS.

TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WIS STATUTE 182.0175(1974) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE
MILW. AREA 259-1181

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.

THE SIGMA GROUP
Single Source. Sound Solutions.
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1300 West Canal Street
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CARROLL UNIVERSITY REDEVELOPMENT
211 & 223 MAPLE AVE
WAUKESHA, WI

OVERALL LANDSCAPE PLAN

PRELIMINARY NOT FOR CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO. REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC

SHEET NO:
L100

HJOHN
L100
22371

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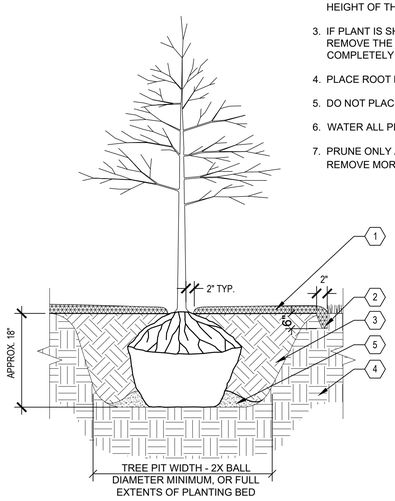
2024.04.22

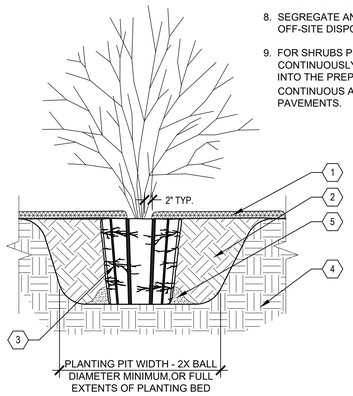
NOTES:
1. PLANT EACH TREE SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
2. DEPTH OF THE PLANTING HOLE SHOULD BE DETERMINED AND DUG AFTER THE ROOT FLARE IS LOCATED. PLANTING HOLE MUST BE NO DEEPER THAN THE HEIGHT OF THE ROOT BALL.
3. 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 ⅓ OF THE ORIGINAL PLANT MASS.



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

A TREE PLANTING
SCALE:NTS

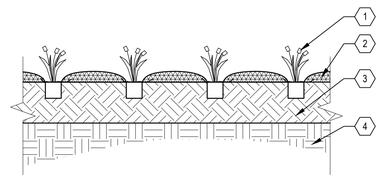
NOTES:
1. MAKE 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND THE CIRCUMFERENCE OF THE ROOT BALL BEFORE PLANTING TO LOOSEN POT-BOUND ROOTS.
2. PLANT EACH SHRUB SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
3. PLANTING HOLE MUST NOT BE DEEPER 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 ⅓ 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 ½" MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.



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

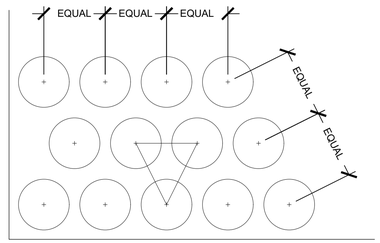
B SHRUB PLANTING
SCALE:NTS

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 ⅓ 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 ½" MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.



KEYED LEGEND
1. PERENNIAL, ORNAMENTAL GRASS, OR GROUNDCOVER PLUG, SEE LANDSCAPE PLAN SHEETS
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

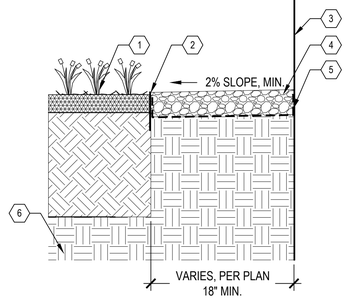
C PERENNIAL & ORNAMENTAL GRASS PLANTING
SCALE:NTS



NOTES
1. SET FINISH GRADE OF PLANTING AREA 2" BELOW FINISH SURFACE OF PAVING, CURB, OR HEADER
2. SEE PLANTING SCHEDULE FOR SPACING OF ALL SHRUBS AND GROUNDCOVERS
3. ALL SHRUBS / GROUNDCOVER TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS.
4. TO DETERMINE APPROPRIATE PLANT QUANTITIES REFER TO THE PLANTING SCHEDULE OR PLAN.

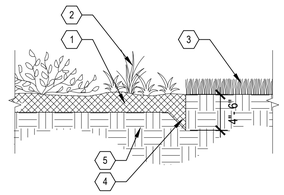
1. EDGE OF ADJACENT PAVEMENT
2. SHRUB, PERENNIAL OR ORNAMENTAL GRASS PLANT CENTER LOCATION

D PLANT SPACING
SCALE:NTS



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

E STONE MAINTENANCE EDGE
SCALE:NTS



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

F SHOVEL CUT PLANT EDGE
SCALE:NTS

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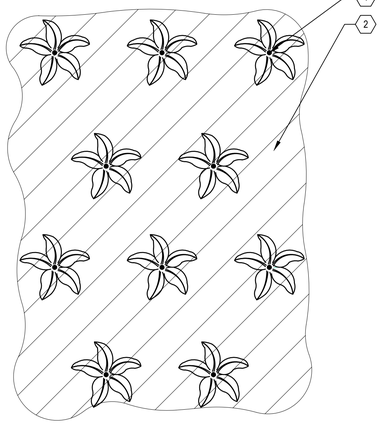
2024.04.22

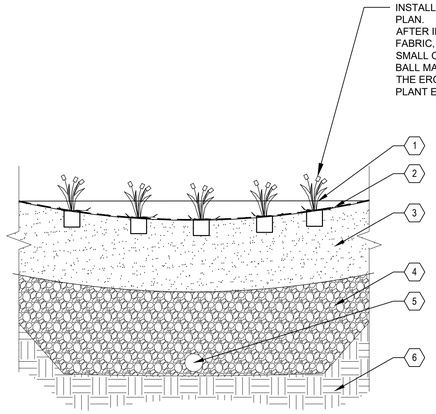
1 BIOFILTRATION BASIN PERENNIAL PLUGS (SEE PERENNIAL PLUGS PLANT LIST)

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



SECTION VIEW

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

A BIOFILTRATION PLUG PLANTING
SCALE:NTS

Botanical Name	Common Name	Quantity	Size	Comments
Asclepias incarnata	Marsh Milkweed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Aster Novae-angliae	New England Aster	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Carex stipdata	Common Fox Sedge	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Carex vulpinoidea	Brown Fox Sedge	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Eupatorium maculatum	Spotted Joe Pye Weed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Helenium autumnale	Sneezeweed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Liatris spicata	Marsh Blazingstar	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Lobelia cardinalis	Cardinal Flower	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Monarda fistulosa	Wild Bergamot	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Panicum virgatum	Switchgrass	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Ratibida pinnata	Yellow Coneflower	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Rudbeckia hirta	Black-Eyed Susan	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Scirpus atrovirens	Dark-Green Bulrush	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Scirpus cyperinus	Wool Grass	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Spartina pactinata	Prairie Cordgrass	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Tradescantia ohiensis	Ohio Spiderwort	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Verbena hastata	Blue Vervain	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species
Vernonia fasciculata	Ironweed	32.00	Round Tapered Plug	18" O.C. in clusters of 5-12 plants per species

B PERENNIAL PLUG PLANT LIST
SCALE:NTS

Reinder's Deluxe 50 Seed Mix	Seed at rate of 150-200 lbs/acre
20% Kentucky Bluegrass	
15% Newport Kentuckly Bluegrass	
15% Ken Blue Kentucky Bluegrass	
25% Creeping Red Fescue	
15% Quebec Perennial Ryegrass	
10% Fiesta III Perennial Ryegrass	

D TURF SEED MIX
SCALE:NTS

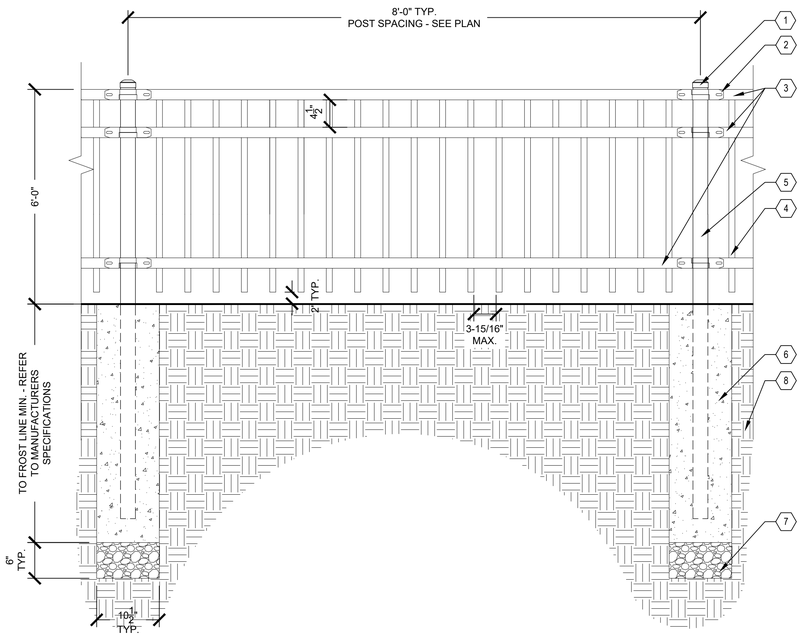
Reinder's No Mow/Low Grow Mix	Seed at rate of 175-250 lbs/acre
45% Spartan II Hard Fescue	
40% Quatro Sheep Fescue	
15% Turf Type Annual Ryegrass	

E NO-MOW SEED MIX
SCALE:NTS

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

C RAINWATER RENEWAL SEED MIX
SCALE:NTS

NOTE:
1. BASIS OF DESIGN: 6' TALL ORNAMENTAL METAL FENCE AS MANUFACTURED BY NORTHWAY FENCE CO. OR APPROVED EQUAL
2. COLOR AND FINISH : ALL COMPONENTS TO BE BLACK POWDER COAT
3. CONC. FOOTING - INSTALLATION TO BE COMPLETED ACCORDING TO MANUFACTURER'S RECOMMENDATION.
4. INSTALLATION TO BE COMPLETED ACCORDING TO MANUFACTURER'S RECOMMENDATION.
5. FENCE PICKETS AND POST OPENINGS SHALL NOT EXCEED 4".
6. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER AND/OR LANDSCAPE ARCHITECT PRIOR TO FABRICATION.



KEYED LEGEND

1 2-1/2" SQ. STEEL POST TOP CAP - POWDER COAT BLACK

2 RAIL BRACKET

3 1-3/8" x 1-1/2" U CHANNEL RAIL (OR APPROVED EQUAL)

4 1" SQ. 16 GA. STEEL PICKET - POWDER COAT BLACK

5 2-1/2" SQ. 14 GA. TUBULAR STEEL POST, EMBED IN CONCRETE FOOTING PER MANUFACTURERS RECOMMENDATIONS, SEE MANUFACTURER'S POST SIZING CHART

6 CONCRETE FOOTING, SEE MANUFACTUERS SPECIFICATIONS FOR POST FOOTING

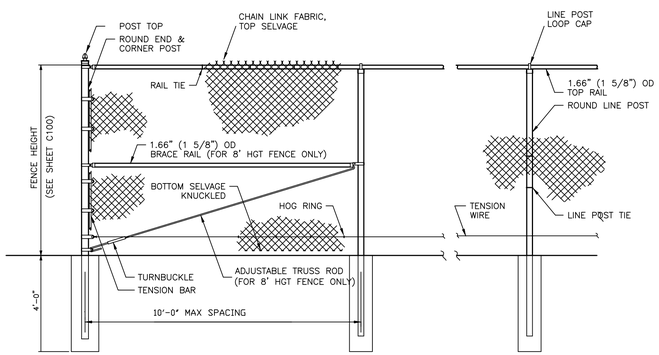
7 DENSE GRADED BASE

8 COMPACTED SUBGRADE

F 6' HT ORNAMENTAL IRON FENCE
SCALE:N.T.S.

NOTES:

THE FENCING LAYOUT SHOWN IS SCHEMATIC AND THE FENCING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL DESIGN AND LAYOUT. THE FENCING CONTRACTOR SHALL HYDRO-VAC THE PROPOSED FENCE POST LOCATIONS PRIOR TO COMMENCING INSTALLATION TO VERIFY THAT NO UNDERGROUND UTILITIES EXIST IN THAT AREA THAT WOULD INTERFERE WITH INSTALLATION. THE FENCING CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WORK. SHOP DRAWINGS SHALL INDICATE FENCE LAYOUT, SPACING OF COMPONENTS, POST FOUNDATION DIMENSIONS, HARDWARE ANCHORAGE, AND SCHEDULE OF COMPONENTS.



G 6' HT BLACK VINYL COATED CHAIN LINK FENCE
SCALE:N.T.S.

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2024.04.22

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, DISFIGURING KNOTS, INSECTS (INCLUDING EGGS AND LARVAE) OR INSECT DAMAGE, CANKERS/CANKEROUS LESIONS OR FUNGAL MATS, MOLD, PREMATURELY-OPENED BUDS, OR CUTS OF LIMBS OVER ¾" DIAMETER THAT ARE NOT COMPLETELY CALLUSED 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. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH SOLID 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 CHUNKS, 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 BIND-TIE 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 SMEARED 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 ANGELS 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 SIZE REQUIREMENTS. PLANT MATERIAL WITHOUT ROOT FLARE VISIBLE OR PLANTED TOO LOW WILL BE RE-PLANTED AT THE REQUEST OF THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
2. 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 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 PALLETS, 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-SHAPED, FULLY 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 BARK"); CROSSING TRUNKS; CUT-OFF LIMBS MORE THAN ¾" 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 (B&B, 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 8" 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 OF NOXIOUS WEEDS.
   - 3.2. STRIPPED, SALVAGED, OR MINED TOPSOIL MUST BE TAKEN FROM THE TOP 6-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.

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, UN-DYED
   - 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 'SCOTTS MIRACLE-GRO COMPANY" OR APPROVED EQUAL.
4. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN MET.
5. REMOVE ANY AND ALL UNDESIRABLE VEGETATION THAT HAS GERMINATED IN THE AREAS TO BE SEEDED OR SODDED. CONTRACTOR SHALL EVALUATE THE USE OF A BROAD SPECTRUM, NON-PERSISTENT GLYSOPHATE-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, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS ½ 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 SEEDED AND STABILIZED WITH EROSION CONTROL MATERIAL
7. MOISTEN PREPARED AREA BEFORE SEEDING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE DRY BEFORE SEEDING. DO NOT CREATE MUDDY SOIL.
8. NO SEEDING SHALL OCCUR ON FROZEN GROUND OR AT TEMPERATURES LOWER THAN 32 DEGREES FARENHEIT OR IN THE FOLLOWING 5 DAYS AFTER PLANNED SEEDING OR SODDING.
9. SEEDING RATES TO BE PERFORMED IN ACCORDANCE WITH SEED SUPPLIER RECOMMENDATIONS.

NO-MOW MIX 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 NO-MOW SEED MIX BASIS OF DESIGN: REINDERS NO MOW/LOW GROW MIX OR APPROVED EQUAL
   - 3.0.2. NO-MOW SEED MIX TO BE FERTILIZED WITH 'SCOTT'S STARTER FERTILIZER' BY THE 'SCOTTS MIRACLE-GRO COMPANY" OR APPROVED EQUAL.
4. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN MET.
5. REMOVE ANY AND ALL UNDESIRABLE VEGETATION THAT HAS GERMINATED IN THE AREAS TO BE SEEDED. CONTRACTOR SHALL EVALUATE THE USE OF A BROAD SPECTRUM, NON-PERSISTENT GLYSOPHATE-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, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS ½ 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 SEEDED AND STABILIZED WITH EROSION CONTROL MATERIAL
7. MOISTEN PREPARED AREA BEFORE SEEDING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE DRY BEFORE SEEDING. DO NOT CREATE MUDDY SOIL.
8. NO SEEDING SHALL OCCUR ON FROZEN GROUND OR AT TEMPERATURES LOWER THAN 32 DEGREES FARENHEIT OR IN THE FOLLOWING 5 DAYS AFTER PLANNED SEEDING OR SODDING.
9. SEEDING RATES TO BE PERFORMED IN ACCORDANCE WITH SEED SUPPLIER RECOMMENDATIONS.
10. IRRIGATE DURING THE ESTABLISHMENT PERIOD FOR 10 DAYS, AFTER THE ESTABLISHMENT PERIOD NO FERTILIZER OR IRRIGATION IS REQUIRED.
11. MOW TO A HEIGHT OF 4-INCHES OCCASIONALLY, IF UN-MOWED GRASS WILL GROW TO APPROXIMATELY 12-INCHES AND BEND OVER.

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, TIE TAPE, LABELS, WIRE, STRING, AND OTHER DEBRIS FROM PLANT MATERIAL, PLANTING AREAS, AND PROJECT SITE.

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LANDSCAPE SPECIFICATIONS

PRELIMINARY
NOT FOR
CONSTRUCTION

ISSUANCE	DATE
CITY SUBMITTAL	02/22/2024
CITY SUBMITTAL	04/22/2024

NO.	REVISION	DATE

PROJECT NO:	22371
DESIGN DATE:	----
PLOT DATE:	2024.04.22
DRAWN BY:	HLY
CHECKED BY:	PJI
APPROVED BY:	CTC

SHEET NO:
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