# SITE DEVELOPMENT PLANS FOR

## PROJECT MALLARD

SECTION 4, TOWNSHIP 29N, RANGE 18W VILLAGE OF ROBERTS, ST. CROIX COUNTY, WISCONSIN

#### PROJECT TEAM:

ENGINEER/ LANDSCAPE ARCHITECT KIMLEY-HORN AND ASSOCIATES, INC.

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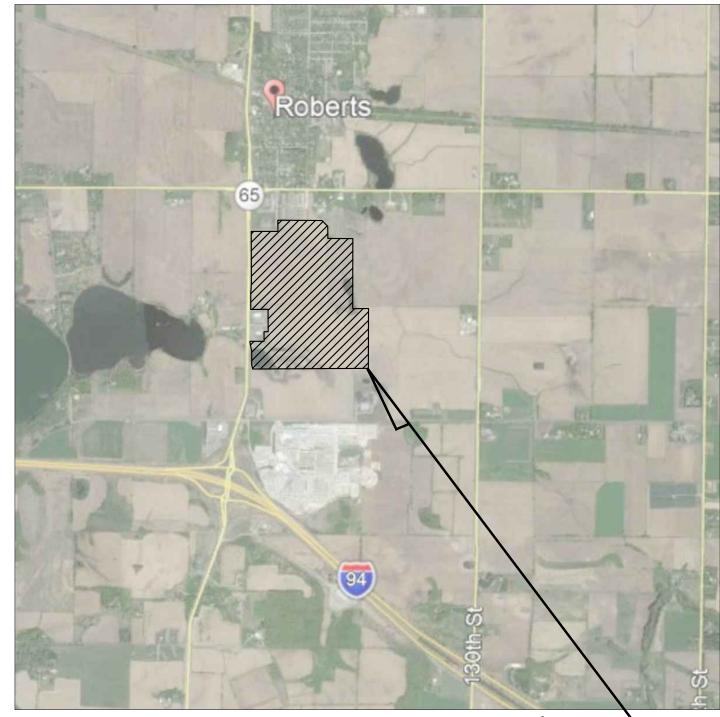
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#### NOTES:

- CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.
- IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 30x42 SHEET.
   ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICES COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
- 4. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

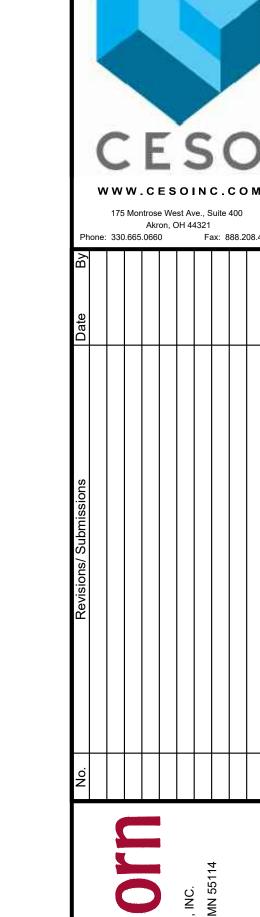
DRAWING INDEX				
SHEET NO.	SHEET TITLE			
C000	COVER SHEET			
C100	GENERAL NOTES			
V100	ALTA SURVEY 1 OF 2			
V101	ALTA SURVEY 2 OF 2			
C200	DEMO PLAN			
C300	OVERALL EROSION CONTROL PH1 PLAN			
C301	OVERALL EROSION CONTROL PH2 PLAN			
C302	EROSION AND SEDIMENT CONTROL DETAILS			
C400	OVERALL SITE PLAN			
C401	SITE PLAN			
C402	SITE PLAN			
C403	SITE PLAN			
C404	SITE PLAN			
C405	SITE PLAN			
C406	SITE PLAN			
C407	SITE PLAN			
C408	SITE PLAN			
C409	SITE PLAN			
C410	SITE PLAN			
C411	SITE PLAN			
C412	SITE PLAN			
C413	SITE DETAILS			
C414 SITE DETAILS				
C415	SITE DETAILS			
C417	PAVEMENT JOINTING PLAN			
C500	OVERALL GRADING AND STORM PLAN			
C501	GRADING AND STORM WATER PLAN			
C502	GRADING AND STORM WATER PLAN			
C503	GRADING AND STORM WATER PLAN			
C504	GRADING AND STORM WATER PLAN			
C505	GRADING AND STORM WATER PLAN			
C506	GRADING AND STORM WATER PLAN			
C507	GRADING AND STORM WATER PLAN			
C508	GRADING AND STORM WATER PLAN			
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C510	GRADING AND STORM WATER PLAN			
C511	GRADING AND STORM WATER PLAN			
C512 GRADING AND STORM WATER PLAN				
C513	GRADING DETAILS			

**OVERALL UTILITY** 

C600

C601	UTILITY PLAN
C602	UTILITY PLAN
C603	UTILITY PLAN
C604	UTILITY PLAN
C605	UTILITY PLAN
C606	UTILITY PLAN
C607	UTILITY PLAN
C608	UTILITY PLAN
C609	UTILITY PLAN
C610	UTILITY PLAN
C611	UTILITY PLAN
C612	UTILITY PLAN
C613	UTILITY DETAILS
C614	UTILITY DETAILS
C701	PAVEMENT MARKING PLAN
C702	PAVEMENT MARKING PLAN
C703	NOT INCLUDED G PLAN
C704	PAVEMENT MARKING PLAN
C705	PAVEMENT MARKING PLAN
C706	PAVEMENT MARKING PLAN
C707	PAVEMENT MARKING PLAN
C708	PAVEMENT MARKING PLAN
C709	PAVEMENT MARKING PLAN
C710	PAVEMENT MARKING PLAN
C711	PAVEMENT MARKING PLAN
C712	PAVEMENT MARKING PLAN
L100	OVERALL LANDSCAPE PLAN
L101	LANDSCAPE PLAN
L102	LANDSCAPE PLAN
L103	LANDSCAPE PLAN
L104	LANDSCAPE PLAN
L105	LANDSCAPE PLAN
L106	LANDSCAPE PLAN
L107	LANDSCAPE PLAN
L108	LANDSCAPE PLAN
L109	LANDSCAPE PLAN
L110	LANDSCAPE PLAN
L111	LANDSCAPE PLAN
L112	LANDSCAPE PLAN
L113	LANDSCAPE DETAILS
L114	SEED MIX SCHEDULE





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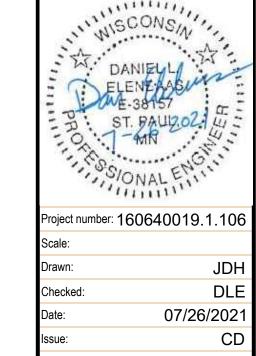
SCALE AS SHOWN

DESIGNED BY JDH

DRAWN BY JDH

CHECKED BY DLE

PROJECT MALLA
RYAN COMPANIES US, IN
ROBERTS, WI



COVER SHEET

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.

3. THE EXISTING SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS QUALITY LEVEL "D" UNLESS OTHERWISE NOTED. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ACSE 38/02, ENTITLED STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF SUBSURFACE QUALITY DATA BY THE FHA. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.

6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.

7. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.

8. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER DIRECTLY FROM THE TESTING AGENCY.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF WISCONSIN PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.

10. ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.

11. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.

13. SHOULD CONTRACTOR ENCOUNTER ANY DEBRIS LADEN SOIL, STRUCTURES NOT IDENTIFIED IN THE DOCUMENTS, OR OTHER SOURCE OF POTENTIAL CONTAMINATION, THEY SHALL IMMEDIATELY CONTACT

#### **EROSION CONTROL MAINTENANCE**

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION AS REQUIRED BY ALL JURISDICTIONS UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A CERTIFIED PERSON AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO THE STANDARD SPECIFICATIONS.

2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.

3. THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

5. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

#### TYPICAL OWNER/ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY OWNER AND/OR ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

> - PRE-CONSTRUCTION MEETING, SUBGRADE PREPARATION, BASE INSTALLATION ASPHALT INSTALLATION, UNDERGROUND PIPING AND UTILITIES INSTALLATION, INSTALLATION OF STRUCTURES, CHECK VALVES, HYDRANTS, METERS, ETC., SIDEWALK INSTALLATION, CONNECTIONS TO WATER AND SEWER MAINS, TESTS OF UTILITIES

#### **EROSION CONTROL NOTES**

1. THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF WISCONSIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE. AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.

4. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL

FINES IMPOSED FOR DISCHARGING SEDIMENT ONTO PUBLIC AREAS SHALL BE PAID BY THE CONTRACTOR. TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.

6. THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY

CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN SHALL BE INITIATED AS SOON AS IS PRACTICABLE

13. ALL STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THESE AREAS WITH SOME PROTECTIVE MEASURE WILL BE NECESSARY.

14 CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY FROSION CONTROL DEVICE WHICH THEY DISTURB. EACH CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION, OR OTHER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUEL AND LUBRICANT OIL, PESTICIDES, AND ANY SOLID WASTE MATERIALS.

15. EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT.

16. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE VILLAGE OF ROBERTS ENGINEERING DIVISION.

17. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE

SEDIMENTATION FROM THE PROJECT. THE EROSION CONTROL PLAN WILL HAVE TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE. ANY REVISIONS TO THE EROSION CONTROL PLAN MADE BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER.

#### **PAVING AND STRIPING NOTES**

1. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR WISCONSIN/DOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.

2. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D) AND VILLAGE STANDARDS.

3. CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, ROADWAY LANES, PARKING STALLS, ACCESSIBLE PARKING SYMBOLS, ACCESS AISLES, STOP BARS AND SIGNS, AND MISCELLANEOUS STRIPING WITHIN THE PARKING LOT AS SHOWN ON THE PLANS.

4. ALL EXPANSION JOINTS SHALL EXTEND THROUGH THE CURB.

5. THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET

6. ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT

7. THE MATERIALS AND PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I. (AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE.

8. CONTRACTOR SHALL APPLY A SECOND COATING OVER ALL PAVEMENT MARKINGS PRIOR TO ACCEPTANCE BY OWNER FOLLOWED BY A COAT OF GLASS BEADS AS APPLICABLE PER THE PROJECT DOCUMENTS.

9. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER AND OWNER.

10. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY SUITABLE ACCESSIBLE ROUTES (PER A.D.A). GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. IN NO CASE SHALL ACCESSIBLE RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2%. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5%. IN NO CASE SHALL ACCESSIBLE PARKING STALLS OR AISLES EXCEED 2% (1.5% TARGET) IN ALL DIRECTIONS, SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS AND GATES SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION PRIOR TO PAVING. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A COMPLIANCE ISSUES.

11. MAXIMUM JOINT SPACING IS TWICE THE DEPTH OF THE CONCRETE PAVEMENT IN FEET.

#### GRADING AND DRAINAGE NOTES

REGRADED AND SODDED.

POSITIVE DRAINAGE FLOWS.

1. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.

2. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL ADJUST BMP'S AS NECESSARY AND REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.

3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS SO THAT SURFACE RUNOFF WILL DRAIN BY GRAVITY TO NEW OR EXISTING DRAINAGE OUTLETS. CONTRACTOR SHALL ENSURE NO PONDING OCCURS IN PAVED AREAS AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.

4. CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS. POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION. EXISTING CASTINGS AND STRUCTURES TO REMAIN SHALL BE ADJUSTED TO MATCH THE PROPOSED FINISHED GRADES.

5. BACKFILL FOR UTILITY LINES SHALL BE PLACED PER DETAILS, STANDARDS, AND SPECIFICATIONS SO THAT

THE UTILITY WILL BE STABLE. WHERE UTILITY LINES CROSS THE PARKING LOT, THE TOP 6 INCHES SHALL BE COMPACTED SIMILARLY TO THE REMAINDER OF THE LOT. UTILITY DITCHES SHALL BE VISUALLY INSPECTED DURING THE EXCAVATION PROCESS TO ENSURE THAT UNDESIRABLE FILL IS NOT USED. 6. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF 4" OF TOPSOIL AT COMPLETION

OF WORK. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE

7. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY

NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED. 8. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT FULL DEPTH FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME

TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED. 9. THE CONTRACTOR SHALL INSTALL PROTECTION OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE

10. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY

11. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO WISCONSIN/DOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL

12. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS. FERTILIZED. MULCHED. WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED

AS SHOWN ON THE LANDSCAPING PLAN. 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

14. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

15. THE CONTRACTOR SHALL ENSURE THAT LANDSCAPE ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.

16. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS AND WISCONSIN/DOT SPECIFICATION.

17. ALL CONCRETE/ASPHALT SHALL BE INSTALLED PER GEOTECH REPORT, VILLAGE OF ROBERTS AND WISCONSIN/DOT SPECIFICATIONS.

18. SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.

19. LIMITS OF CONSTRUCTION ARE TO THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED ON THE PLAN.

AND CONSTRUCTION DOCUMENTS.

20. IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS

21. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION WITHOUT

22. BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.

23. ALL PROPOSED GRADES ONSITE SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS. ANY SLOPES STEEPER THAN 4:1 REQUIRE EROSION AND SEDIMENT CONTROL BLANKET.

24. ADHERE TO ALL TERMS AND CONDITIONS AS NECESSARY IN THE GENERAL N.P.D.E.S. PERMIT AND STORMWATER POLLUTION PREVENTION PLAN FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

25. ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS

26. CONTRACTOR SHALL ENSURE MINIMUM GRADES ARE MET WITHIN PAVED AREAS, 1.2% FOR ASPHALT PAVING AND 0.6% FOR CONCRETE PAVING.

### 3RD PARTY TEST REPORTS REQ'D

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO:

- DENSITY TEST REPORTS - BACTERIOLOGICAL TESTS OF WATER SYSTEM

- PRESSURE TEST OF WATER/SEWER - LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS - ANY OTHER TESTING REQUIRED BY THE AGENCY/MUNICIPALITY WATER STORM SEWER & SANITARY SEWER NOTES

1. THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES, GRAVITY SEWER LINES, AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

2. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET.

3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.

4. DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.

5. ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE. AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

6. WATER FOR FIRE FIGHTING SHALL BE MADE AVAILABLE FOR USE BY THE CONTRACTOR PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.

7. ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

8. UNDERGROUND LINES SHALL BE SURVEYED BY A STATE OF WISCONSIN PROFESSIONAL LAND SURVEYOR PRIOR TO BACK FILLING.

9. CONTRACTOR SHALL PERFORM, AT HIS OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED.

10. CONTRACTOR SHALL PROVIDE FOR A MINIMUM HORIZONTAL CLEARANCE OF 10' AND A VERTICAL CLEARANCE OF 18" BETWEEN WATER AND SANITARY SEWER MANHOLES AND LINES. 11. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.

SPECIFICATIONS.

CONSTRUCTION.

12. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT UNLESS OTHERWISE STATED BY VILLAGE AND STATE DESIGN STANDARDS AND

13. UNLESS OTHERWISE STATED IN VILLAGE AND STATE DESIGN STANDARDS AND SPECIFICATIONS, ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". EXISTING CASTINGS AND STRUCTURES WITHIN PROJECT LIMITS SHALL BE ADJUSTED TO MEET THESE CONDITIONS AND THE PROPOSED FINISHED GRADE.

14. TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO

17. ROOF DRAINS SHALL BE CONNECTED TO STORM SEWER BY PREFABRICATED WYES OR AT STORM STRUCTURES. ROOF DRAINS AND TRUCK WELL DRAIN SHALL RUN AT A MINIMUM 1% SLOPE, UNLESS

16. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT

NOTED OTHERWISE, AND TIE IN AT THE CENTERLINE OF THE STORM MAIN. 18. ALL ROOF AND SANITARY SEWER DRAINS SHALL BE INSULATED IF 7' OF COVER CANNOT BE PROVIDED.

19. THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES AND APPURTENANCES THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION OPERATIONS.

20. THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES AND OTHER ABOVE AND BELOW-GRADE IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE AND INVERT ELEVATIONS OF EACH PRIOR TO THE START OF

21. A MINIMUM OF 5' SEPARATION IS REQUIRED BETWEEN UTILITIES AND TREES UNLESS A ROOT BARRIER IS

22. GAS, PHONE AND ELECTRIC SERVICES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY COMPANIES MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW. CONTRACTOR TO COORDINATE FINAL DESIGN AND INSTALLATION WITH UTILITY COMPANIES.

23. COORDINATE UTILITY INSTALLATION WITH IRRIGATION DESIGN AND INSTALLATION.

24. ALL DIMENSIONS ARE TO FLOW LINE OF CURB UNLESS OTHERWISE NOTED. PERIMETER WALL DIMENSIONS ARE TO INSIDE WALL FACE. REFERENCE ARCHITECTURAL PLANS FOR EXACT WALL WIDTH AND SPECIFICATIONS.

25. REFERENCE ARCHITECTURAL PLANS (BY OTHERS). FOR EXACT BUILDING DIMENSIONS, AND MATERIALS

27. CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT

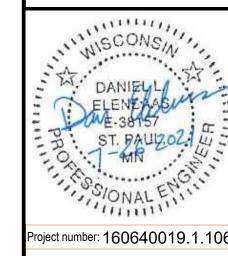
26. REFERENCE M.E.P. PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT DIMENSIONS AND SPECIFICATIONS.

28. CONTRACTOR SHALL REFERENCE M.E.P PLANS (BY OTHERS) FOR LIGHT POLE WIRING.

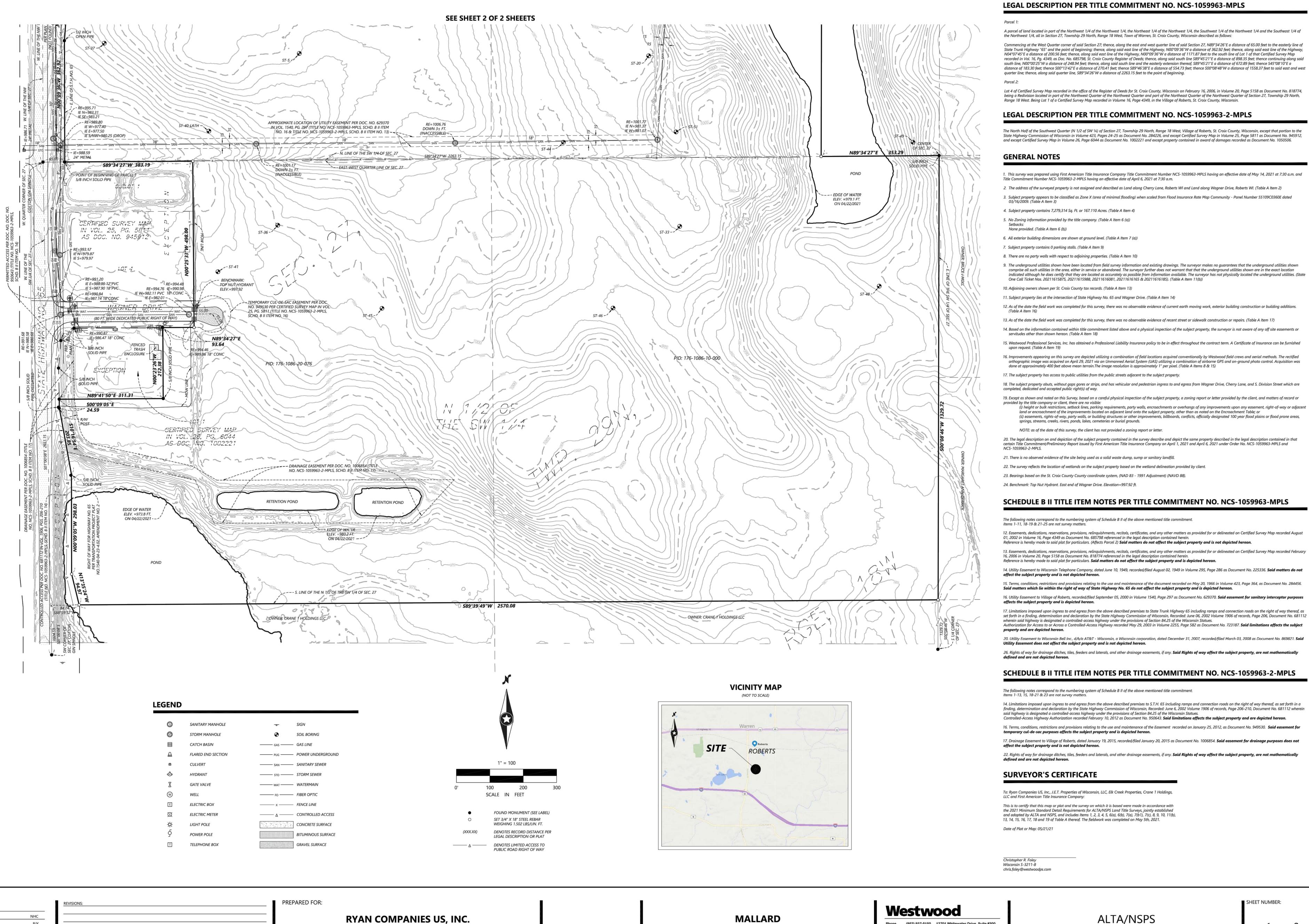
DIMENSIONS AND PAD PREPARATION SPECIFICATIONS.

REFER TO GEOTECHNICAL REPORT NO. B2102799 BRAUN INTERTEC CORPORATION 11001 HAMPSHIRE AVENUE S MINNEAPOLIS, MN 55438 DATED: JULY 1, 2021

WWW.CESOINC.COM hone: 330.665.0660 Fax: 888.208.482



GENERAL



Minneapolis, MN

FIELD CREW:

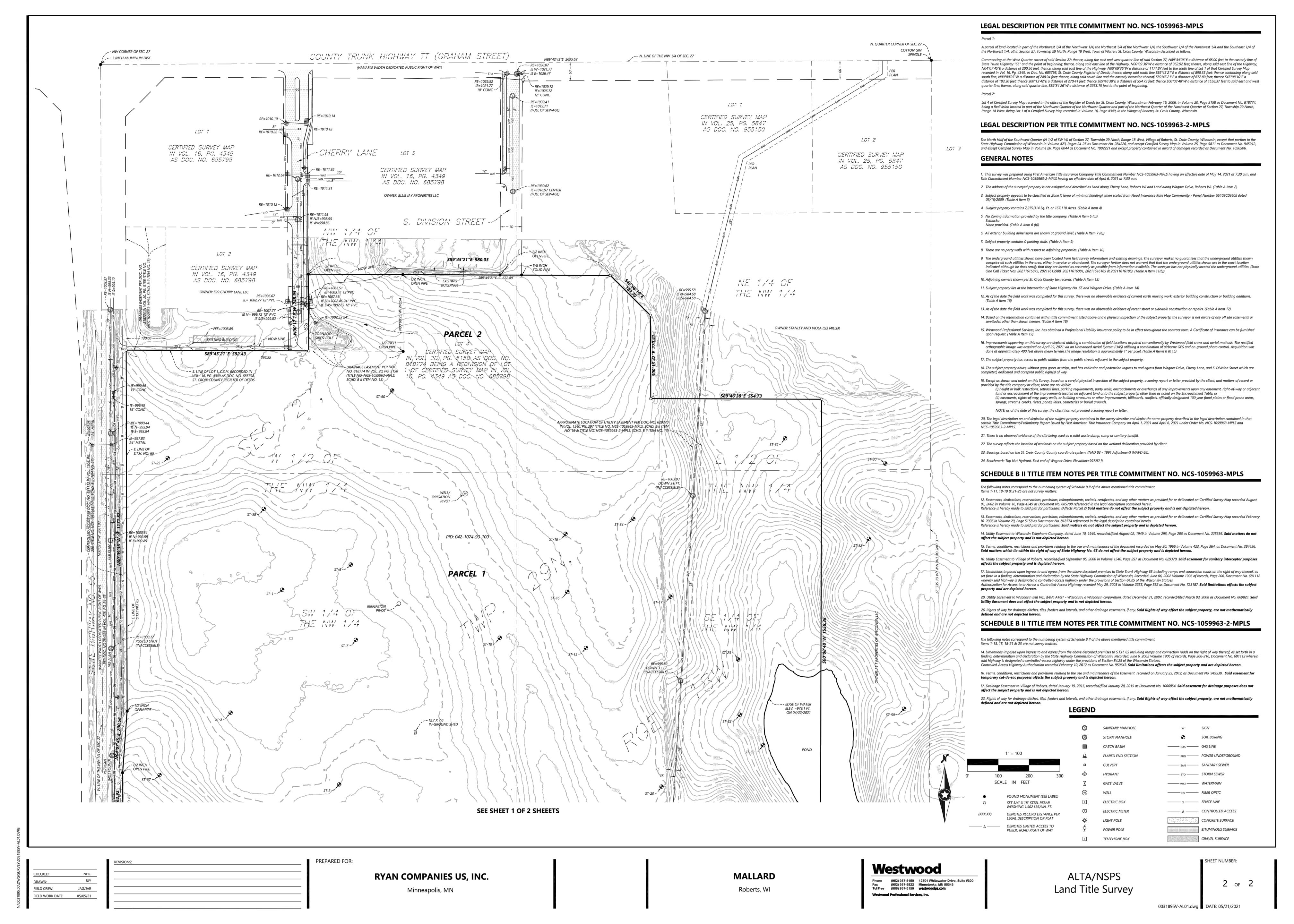
FIELD WORK DATE:

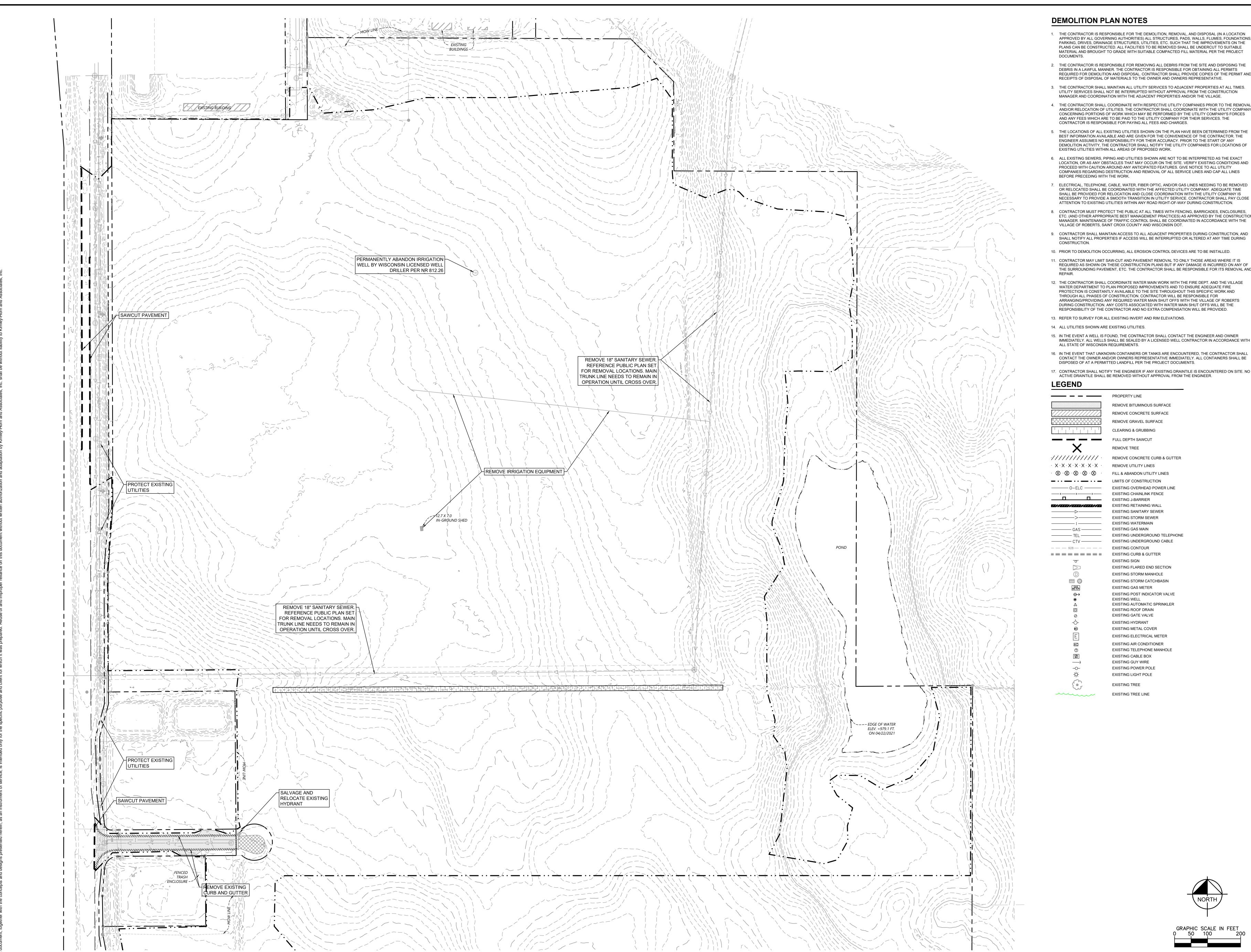
ALTA/NSPS

Land Title Survey

1 of 2

Westwood Professional Services, Inc





- 1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC. SUCH THAT THE IMPROVEMENTS ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE PROJECT
- 2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL. CONTRACTOR SHALL PROVIDE COPIES OF THE PERMIT AND
- 3. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ADJACENT PROPERTIES AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER AND COORDINATION WITH THE ADJACENT PROPERTIES AND/OR THE VILLAGE.
- 4. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE
- 5. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR LOCATIONS OF
- 6. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS ANY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES
- 7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE
- ATTENTION TO EXISTING UTILITIES WITHIN ANY ROAD RIGHT-OF-WAY DURING CONSTRUCTION. 8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES. ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION
- VILLAGE OF ROBERTS, SAINT CROIX COUNTY AND WISCONSIN DOT. 9. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES DURING CONSTRUCTION, AND
- SHALL NOTIFY ALL PROPERTIES IF ACCESS WILL BE INTERRUPTED OR ALTERED AT ANY TIME DURING
- 10. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED. 11. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS
- REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND
- WATER DEPARTMENT TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE VILLAGE OF ROBERTS DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE
- 13. REFER TO SURVEY FOR ALL EXISTING INVERT AND RIM ELEVATIONS.
- 15. IN THE EVENT A WELL IS FOUND, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND OWNER IMMEDIATELY. ALL WELLS SHALL BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH
- 16. IN THE EVENT THAT UNKNOWN CONTAINERS OR TANKS ARE ENCOUNTERED, THE CONTRACTOR SHALL
- CONTACT THE OWNER AND/OR OWNERS REPRESENTATIVE IMMEDIATELY. ALL CONTAINERS SHALL BE DISPOSED OF AT A PERMITTED LANDFILL PER THE PROJECT DOCUMENTS.
- 17. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY EXISTING DRAINTILE IS ENCOUNTERED ON SITE. NO

#### ACTIVE DRAINTILE SHALL BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.

EXISTING RETAINING WALL

EXISTING STORM SEWER

EXISTING FLARED END SECTION EXISTING STORM MANHOLE

EXISTING STORM CATCHBASIN EXISTING GAS METER

EXISTING POST INDICATOR VALVE

EXISTING AUTOMATIC SPRINKLER EXISTING ROOF DRAIN EXISTING GATE VALVE

EXISTING HYDRANT EXISTING METAL COVER EXISTING ELECTRICAL METER

EXISTING AIR CONDITIONER EXISTING TELEPHONE MANHOLE EXISTING CABLE BOX

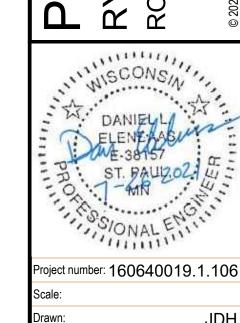
EXISTING GUY WIRE EXISTING POWER POLE

EXISTING LIGHT POLE

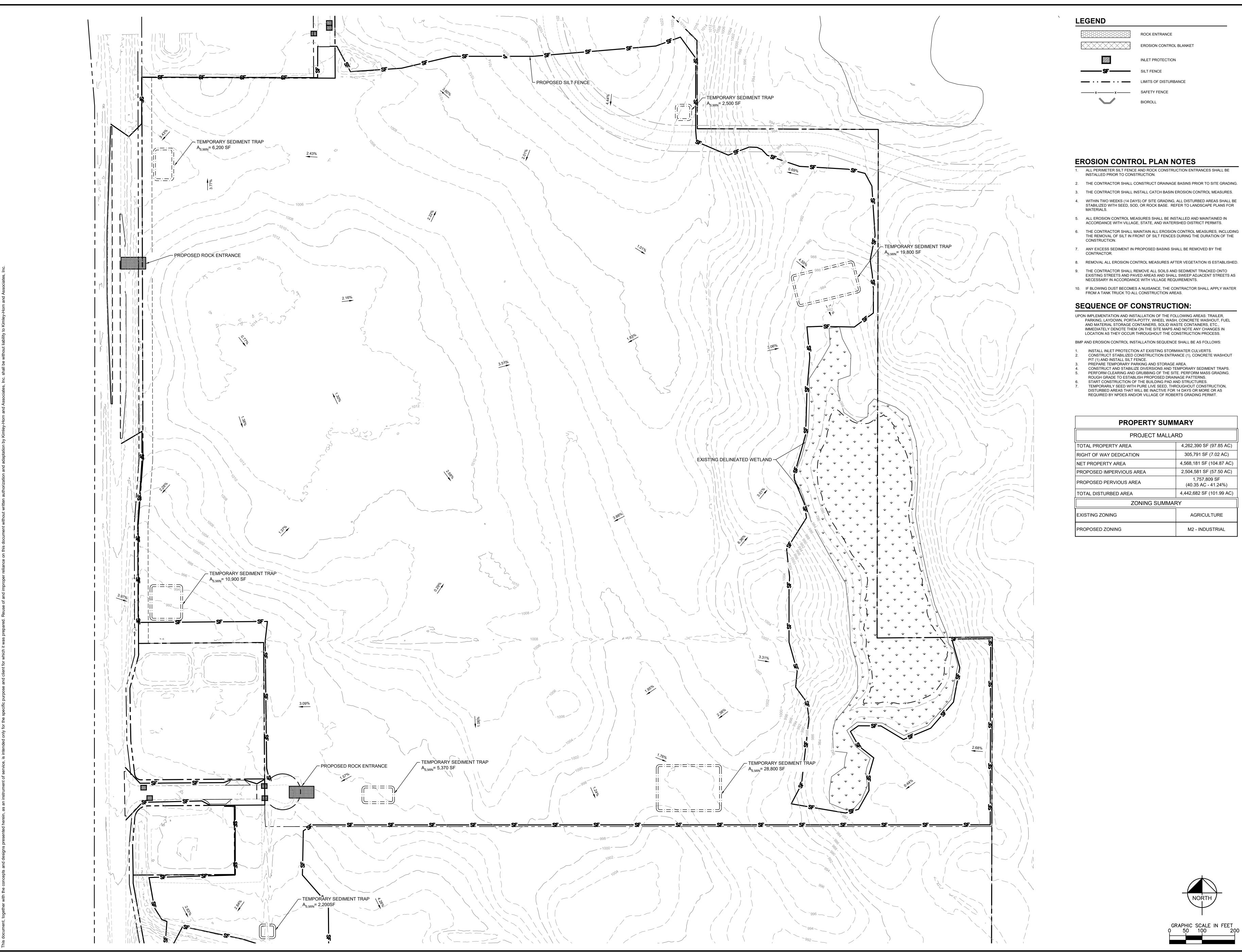
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hone: 330.665.0660 Fax: 888.208.4826



DEMO PLAN

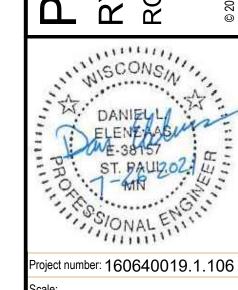


ZONING SUMMARY	
EXISTING ZONING	AGRICULTURE
PROPOSED ZONING	M2 - INDUSTRIAL

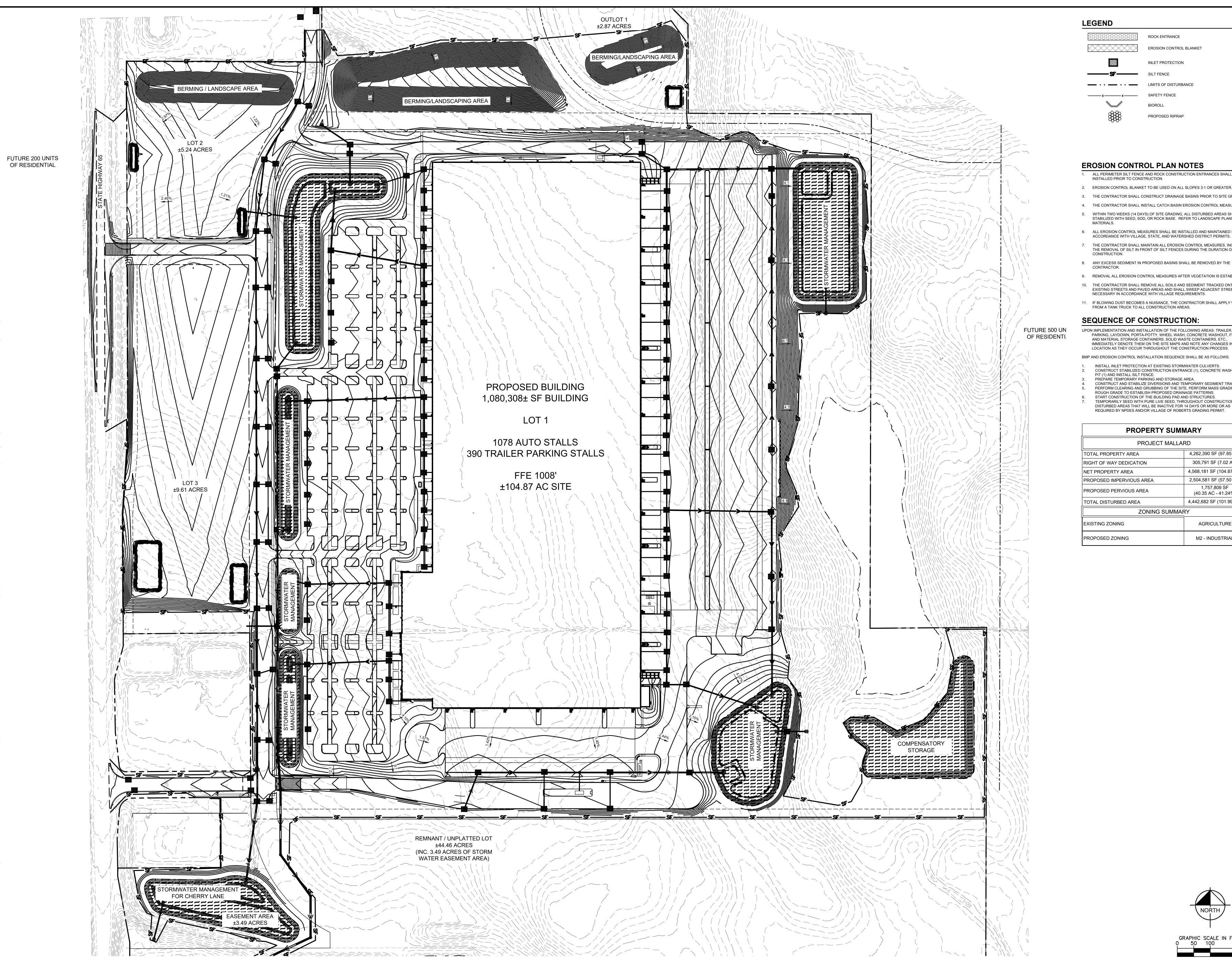
WWW.CESOINC.COM 175 Montrose West Ave., Suite 400

Akron, OH 44321

Phone: 330.665.0660 Fax: 888.208.4826



OVERALL EROSION CONTROL PH1 PLAN

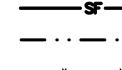




ROCK ENTRANCE EROSION CONTROL BLANKET

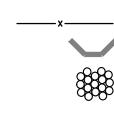


INLET PROTECTION SILT FENCE



• LIMITS OF DISTURBANCE SAFETY FENCE BIOROLL

PROPOSED RIPRAP



#### **EROSION CONTROL PLAN NOTES**

- . ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
- 2. EROSION CONTROL BLANKET TO BE USED ON ALL SLOPES 3:1 OR GREATER.
- 3. THE CONTRACTOR SHALL CONSTRUCT DRAINAGE BASINS PRIOR TO SITE GRADING. 4. THE CONTRACTOR SHALL INSTALL CATCH BASIN EROSION CONTROL MEASURES.

WITHIN TWO WEEKS (14 DAYS) OF SITE GRADING, ALL DISTURBED AREAS SHALL BE

- STABILIZED WITH SEED, SOD, OR ROCK BASE. REFER TO LANDSCAPE PLANS FOR
- 6. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH VILLAGE, STATE, AND WATERSHED DISTRICT PERMITS.
- 7. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES, INCLUDING THE REMOVAL OF SILT IN FRONT OF SILT FENCES DURING THE DURATION OF THE
- CONSTRUCTION. 8. ANY EXCESS SEDIMENT IN PROPOSED BASINS SHALL BE REMOVED BY THE
- CONTRACTOR. 9. REMOVAL ALL EROSION CONTROL MEASURES AFTER VEGETATION IS ESTABLISHED.
- 10. THE CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS AND SHALL SWEEP ADJACENT STREETS AS NECESSARY IN ACCORDANCE WITH VILLAGE REQUIREMENTS.
- 11. IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.

#### **SEQUENCE OF CONSTRUCTION:**

- UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAYDOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
- INSTALL INLET PROTECTION AT EXISTING STORMWATER CULVERTS. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1), CONCRETE WASHOUT
- PIT (1) AND INSTALL SILT FENCE. PREPARE TEMPORARY PARKING AND STORAGE AREA.
- CONSTRUCT AND STABILIZE DIVERSIONS AND TEMPORARY SEDIMENT TRAPS. PERFORM CLEARING AND GRUBBING OF THE SITE. PERFORM MASS GRADING.
- ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
- TEMPORARILY SEED WITH PURE LIVE SEED. THROUGHOUT CONSTRUCTION.

#### PROPERTY SUMMARY

PROJECT MALLARD			
TOTAL PROPERTY AREA	4,262,390 SF (97.85 AC)		
RIGHT OF WAY DEDICATION	305,791 SF (7.02 AC)		
NET PROPERTY AREA	4,568,181 SF (104.87 AC)		
PROPOSED IMPERVIOUS AREA 2,504,581 SF (57.50 A			
PROPOSED PERVIOUS AREA	1,757,809 SF (40.35 AC - 41.24%)		
TOTAL DISTURBED AREA 4,442,682 SF (101.99 A			
ZONING SUMMARY			

ı	20111140 0011111111111111111111111111111		
	EXISTING ZONING	AGRICULTURE	
	PROPOSED ZONING	M2 - INDUSTRIAL	

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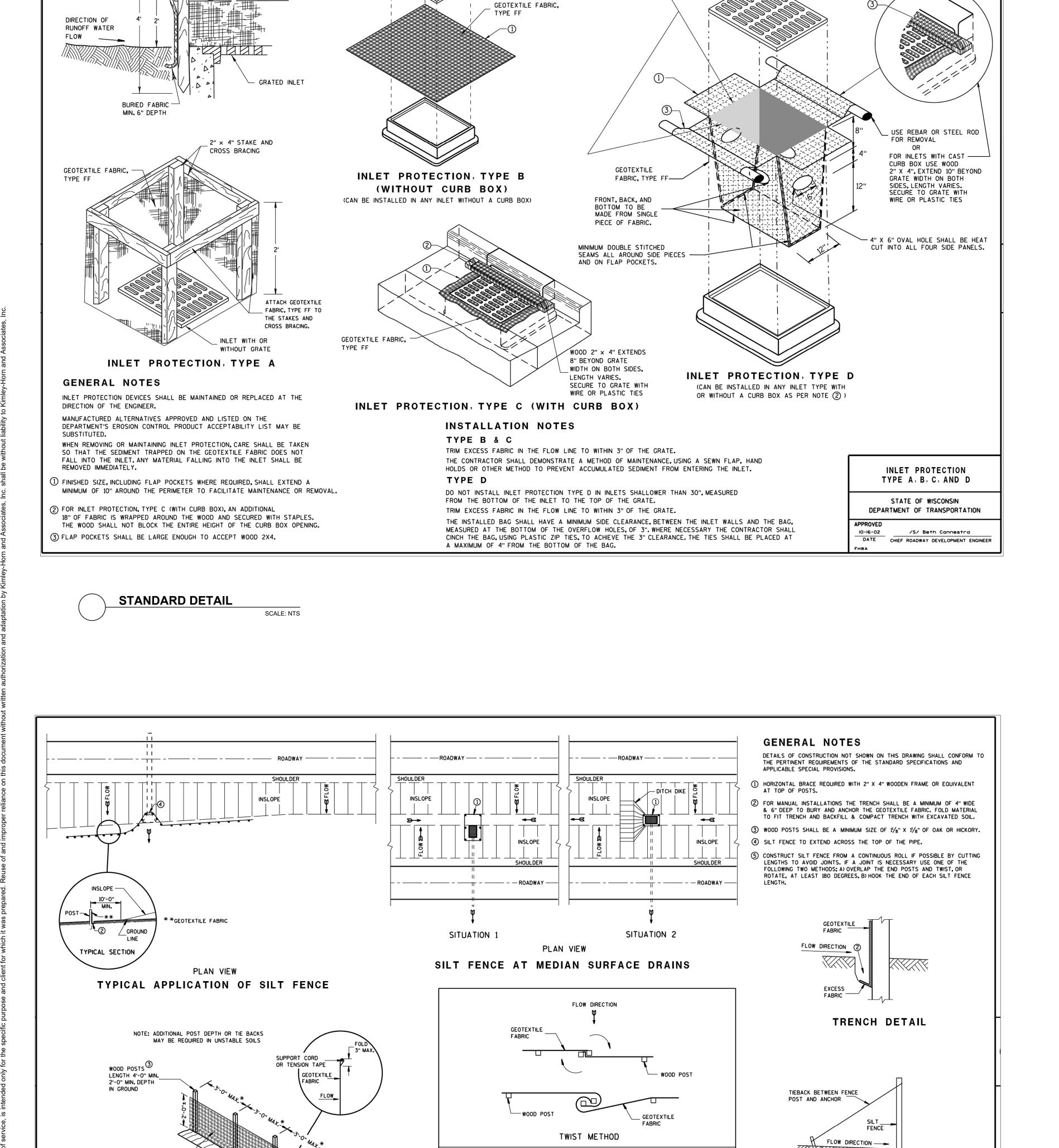
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07/26/2021

OVERALL EROSION CONTROL PH2 PLAN



FLOW DIRECTION

2'-0" MIN. -

HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE (5)

1'-0" MIN.

\_ GEOTEXTILE FABRIC

WOOD POST —

GEOTEXTILE

WOOD POST

ANCHOR STAKE MIN. 18" LONG

SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

INLET SPECIFICATIONS AS PER THE PLAN

DIMENSION LENGTH AND WIDTH TO MATCH

2" × 4" STAKE AND

CROSS BRACING

GEOTEXTILE FABRIC,

BACKFILL & COMPACT

ATTACH THE FABRIC TO THE POSTS WITH WIRE STAPLES OR WOODEN LATH

SILT FENCE

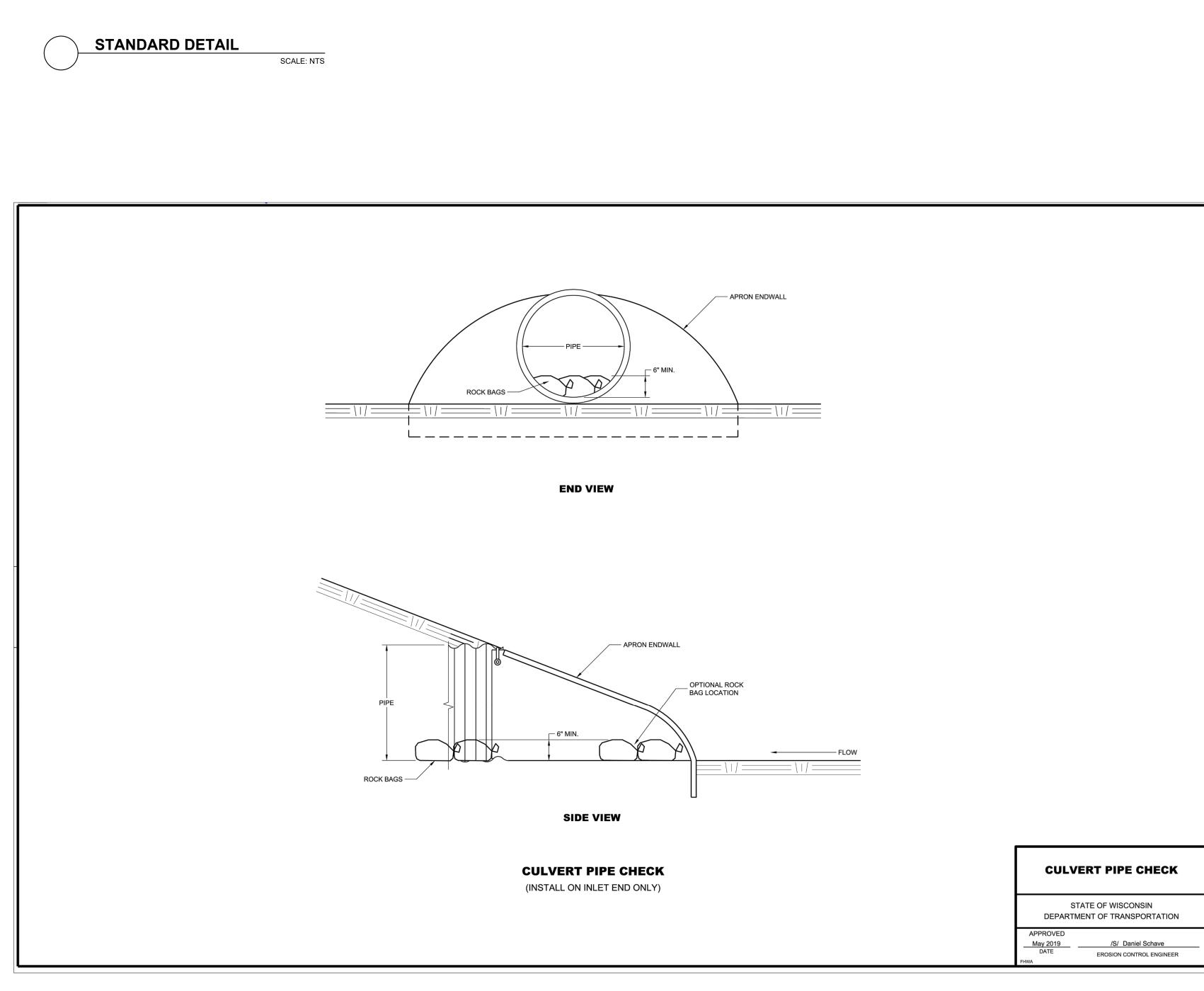
SCALE: NTS

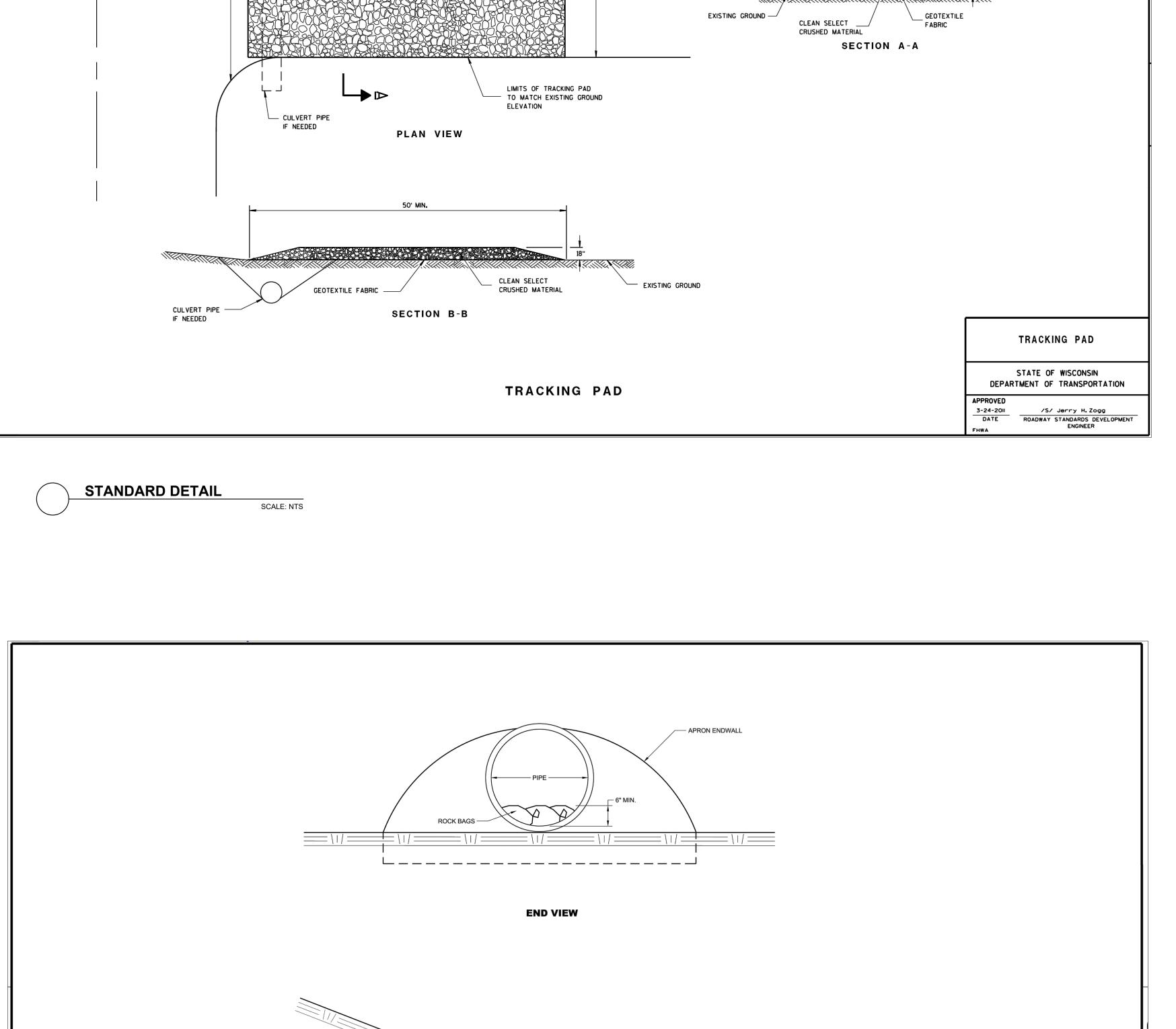
\*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

TRENCH WITH

EXCAVATED SOIL

STANDARD DETAIL





CLEAN SELECT

EXISTING & ---

EXISTING FIELD

ENTRANCE

STANDARD DETAIL

SCALE: NTS

CRUSHED MATERIAL

GENERAL NOTES

REPLACED IMMEDIATELY.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD

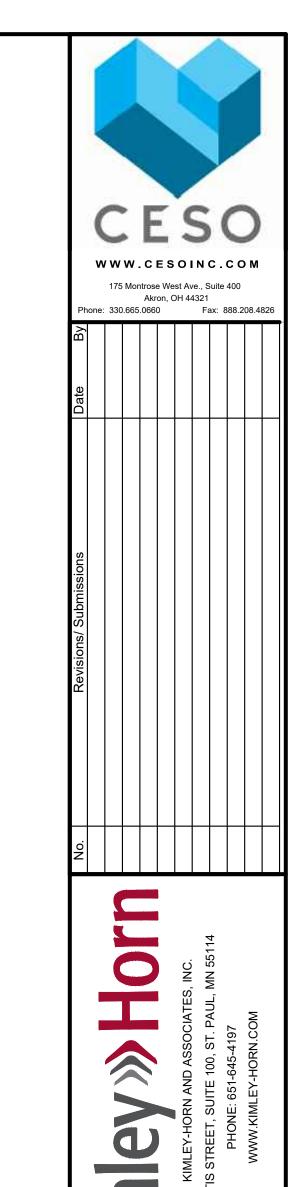
CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING

TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

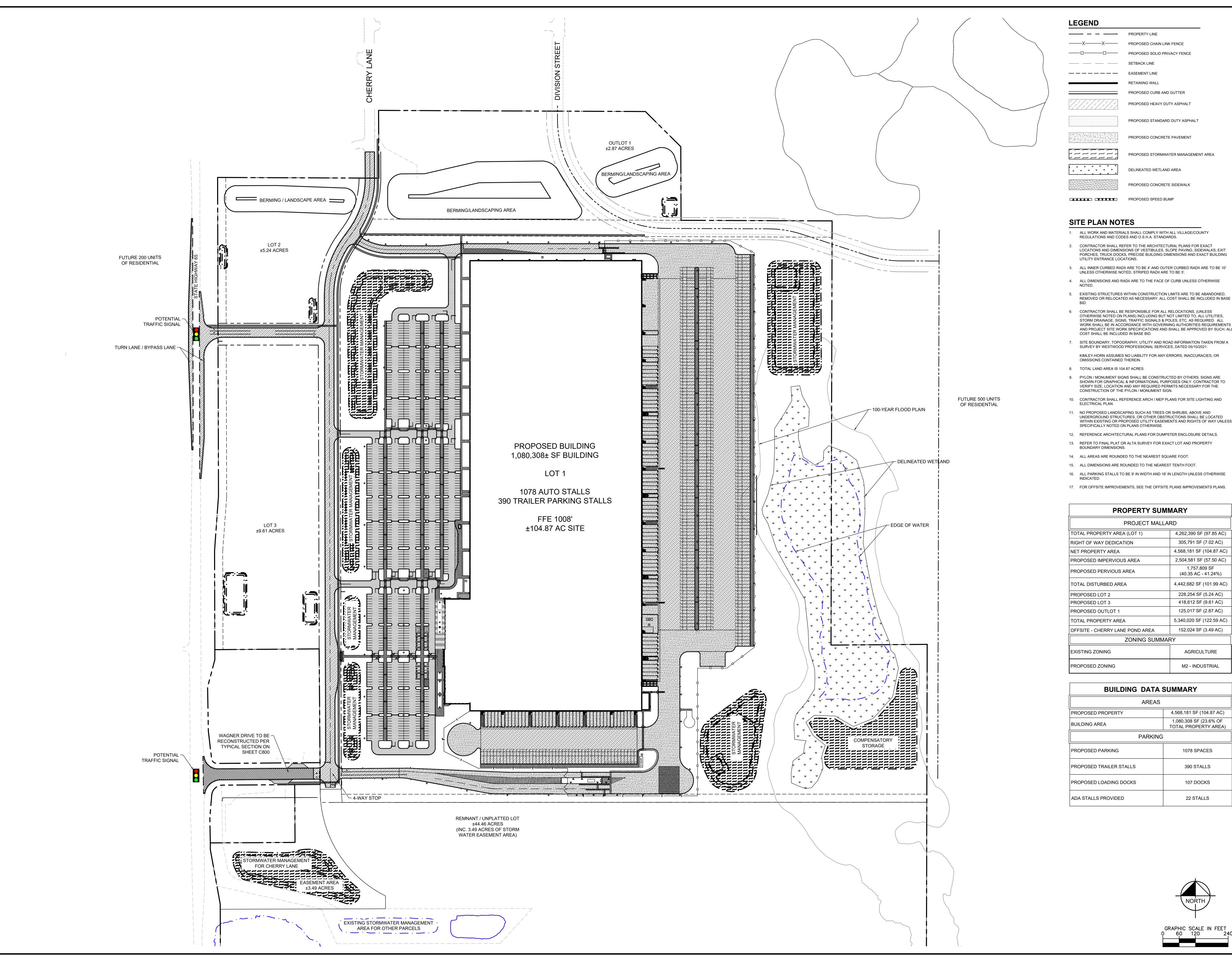
SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.



SIONALENG Project number: 160640019.1.106

07/26/2021 Drawing Title: EROSION AND SEDIMENT CONTROL DETAILS



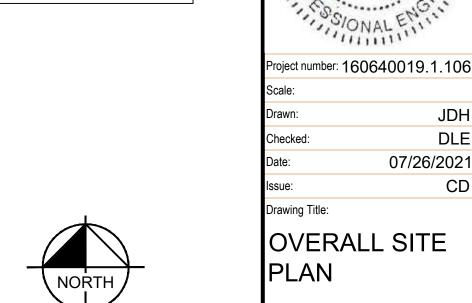
LEGEND	
	PROPERTY LINE
XX	PROPOSED CHAIN LINK FENCE
	PROPOSED SOLID PRIVACY FENCE
	SETBACK LINE
	EASEMENT LINE
	RETAINING WALL
	PROPOSED CURB AND GUTTER
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED STANDARD DUTY ASPHALT
	PROPOSED CONCRETE PAVEMENT
[=====]	PROPOSED STORMWATER MANAGEMENT A
, , , , , , , , , , , , , , , , , , ,	DELINEATED WETLAND AREA
	PROPOSED CONCRETE SIDEWALK

- 1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL VILLAGE/COUNTY
- 2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING
- 3. ALL INNER CURBED RADII ARE TO BE 4' AND OUTER CURBED RADII ARE TO BE 10' UNLESS OTHERWISE NOTED. STRIPED RADII ARE TO BE 5'.
- 4. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE
- 5. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL
- SURVEY BY WESTWOOD PROFESSIONAL SERVICES, DATED 05/10/2021. KIMLEY-HORN ASSUMES NO LIABILITY FOR ANY ERRORS, INACCURACIES, OR
- 9. PYLON / MONUMENT SIGNS SHALL BE CONSTRUCTED BY OTHERS. SIGNS ARE SHOWN FOR GRAPHICAL & INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO VERIFY SIZE, LOCATION AND ANY REQUIRED PERMITS NECESSARY FOR THE
- 10. CONTRACTOR SHALL REFERENCE ARCH / MEP PLANS FOR SITE LIGHTING AND
- 11. NO PROPOSED LANDSCAPING SUCH AS TREES OR SHRUBS, ABOVE AND UNDERGROUND STRUCTURES, OR OTHER OBSTRUCTIONS SHALL BE LOCATED WITHIN EXISTING OR PROPOSED UTILITY EASEMENTS AND RIGHTS OF WAY UNLESS
- 12. REFERENCE ARCHITECTURAL PLANS FOR DUMPSTER ENCLOSURE DETAILS.
- 14. ALL AREAS ARE ROUNDED TO THE NEAREST SQUARE FOOT.
- 15. ALL DIMENSIONS ARE ROUNDED TO THE NEAREST TENTH FOOT.
- 16. ALL PARKING STALLS TO BE 9' IN WIDTH AND 18' IN LENGTH UNLESS OTHERWISE
- 17. FOR OFFSITE IMPROVEMENTS, SEE THE OFFSITE PLANS IMPROVEMENTS PLANS.

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PROPOSED IMPERVIOUS AREA	2,504,581 SF (57.50 AC)		
PROPOSED PERVIOUS AREA	1,757,809 SF (40.35 AC - 41.24%)		
TOTAL DISTURBED AREA	4,442,682 SF (101.99 AC)		
PROPOSED LOT 2	228,254 SF (5.24 AC)		
PROPOSED LOT 3	418,612 SF (9.61 AC)		
PROPOSED OUTLOT 1	125,017 SF (2.87 AC)		
TOTAL PROPERTY AREA	5,340,020 SF (122.59 AC)		
OFFRITE CHEDRY I AND DOND AREA	152 024 SE (3.49 AC)		

	<del></del>
EXISTING ZONING	AGRICULTURE
PROPOSED ZONING	M2 - INDUSTRIAL

DOILDING DATA COMMAN		
AREAS		
PROPOSED PROPERTY	4,568,181 SF (104.87 AC	
BUILDING AREA	1,080,308 SF (23.6% OF TOTAL PROPERTY ARE	
PARKIN	IG	
PROPOSED PARKING	1078 SPACES	
PROPOSED TRAILER STALLS	390 STALLS	



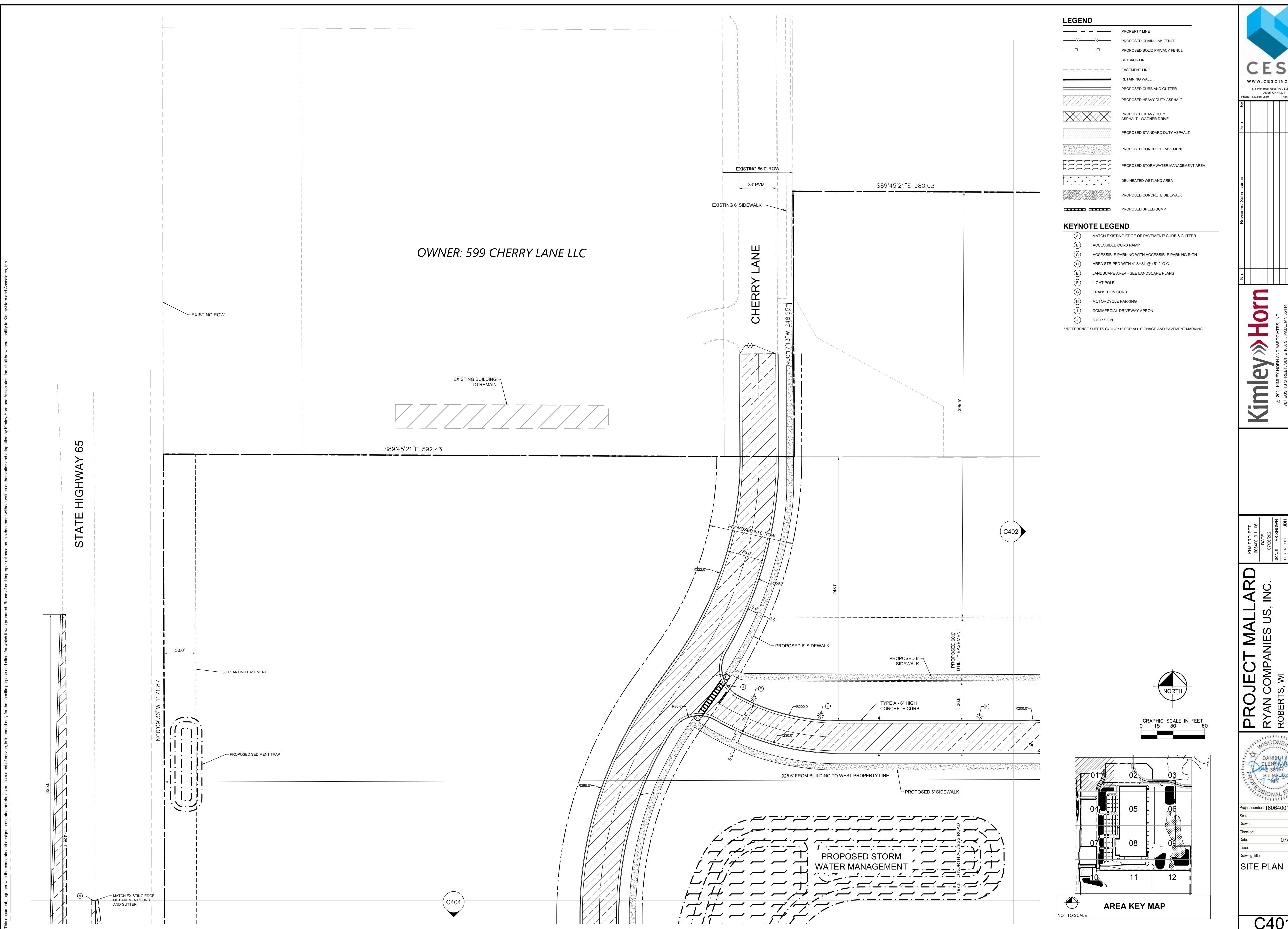
GRAPHIC SCALE IN FEET 0 60 120 24

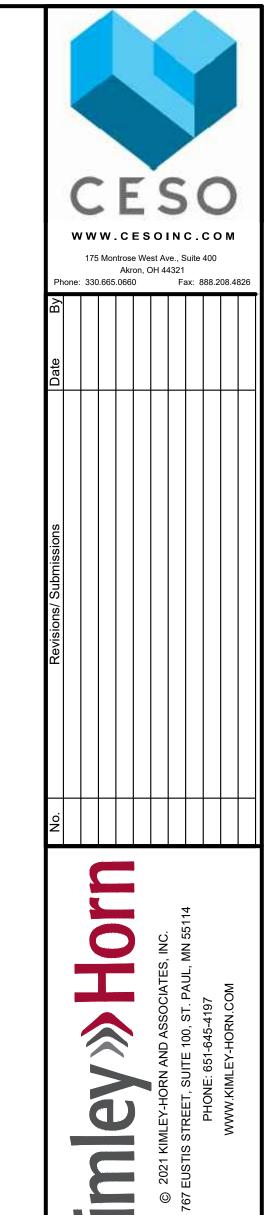
107 DOCKS

22 STALLS

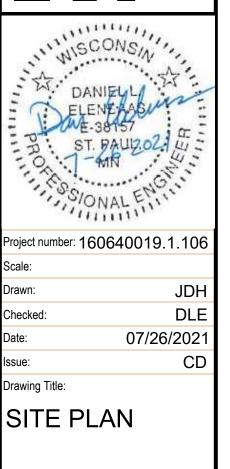
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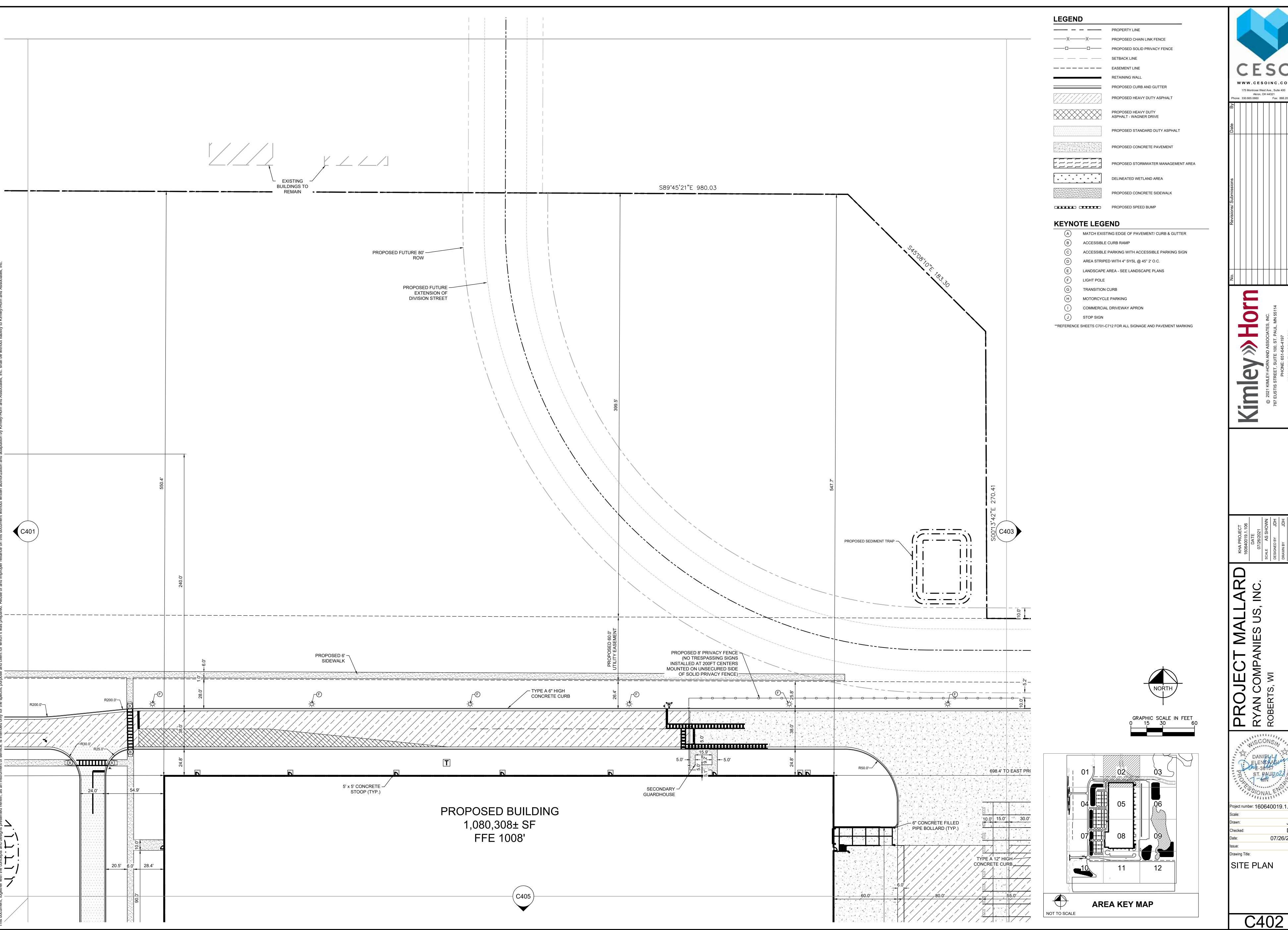
WWW.CESOINC.COM 175 Montrose West Ave., Suite 400 Akron, OH 44321 Phone: 330.665.0660 Fax: 888.208.4826

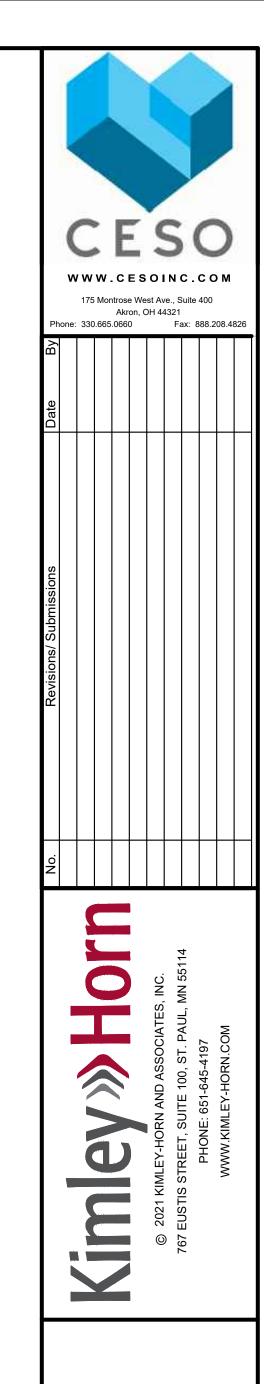


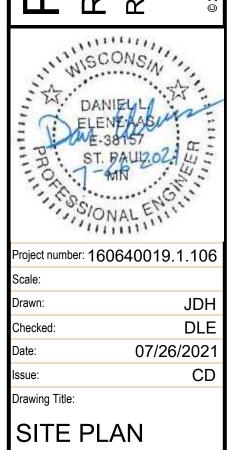


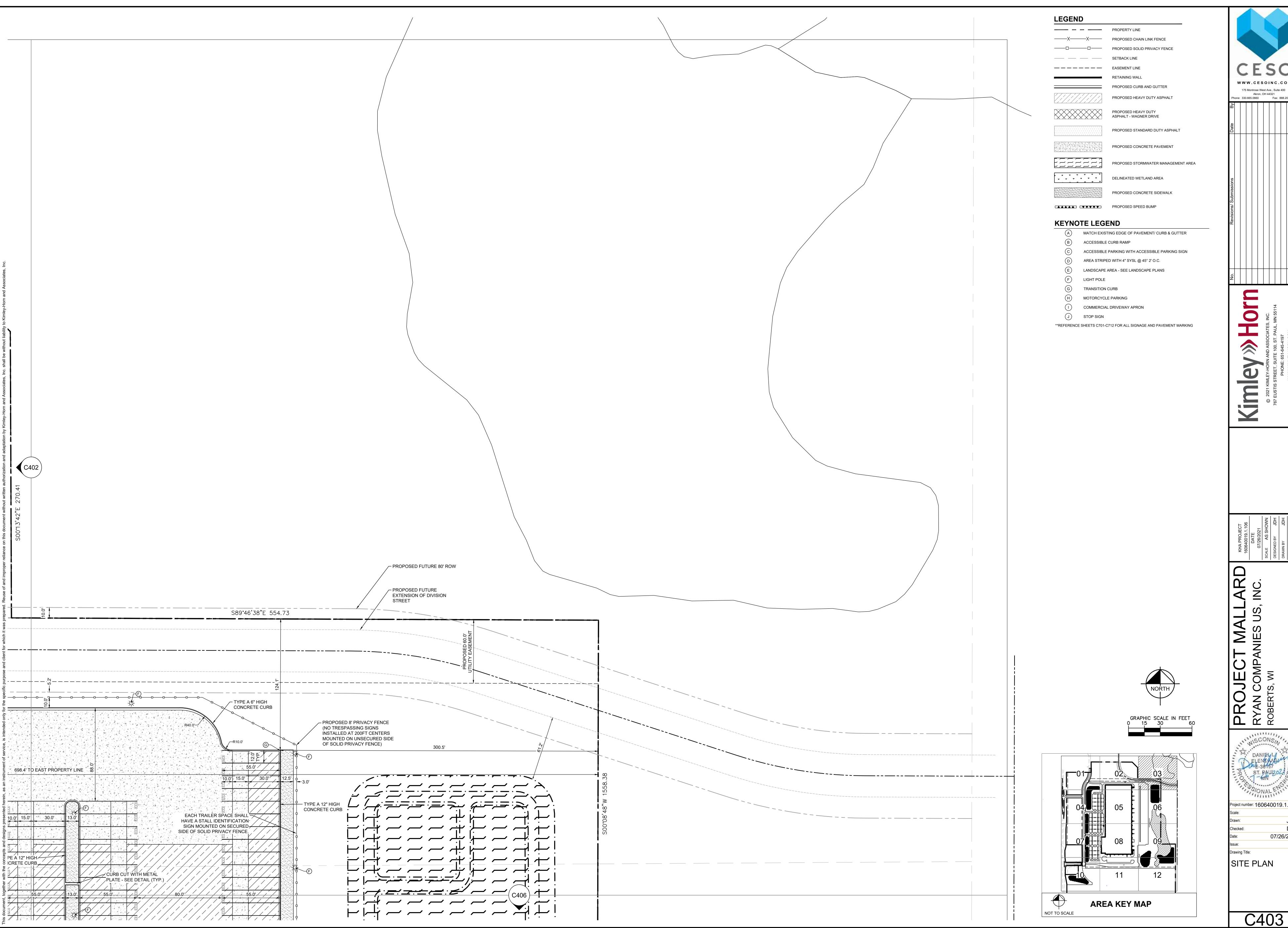


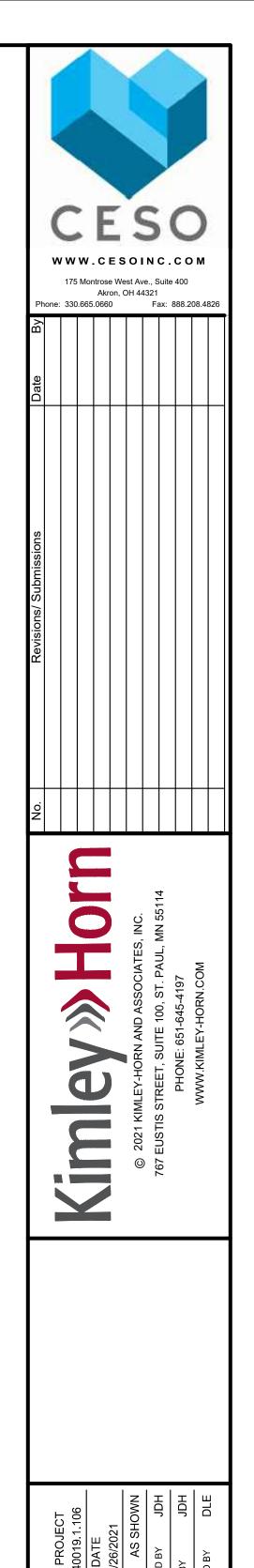


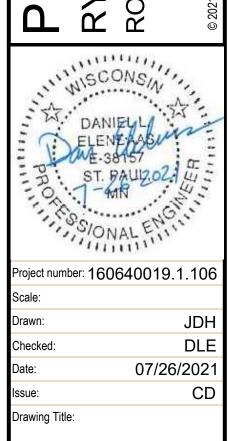


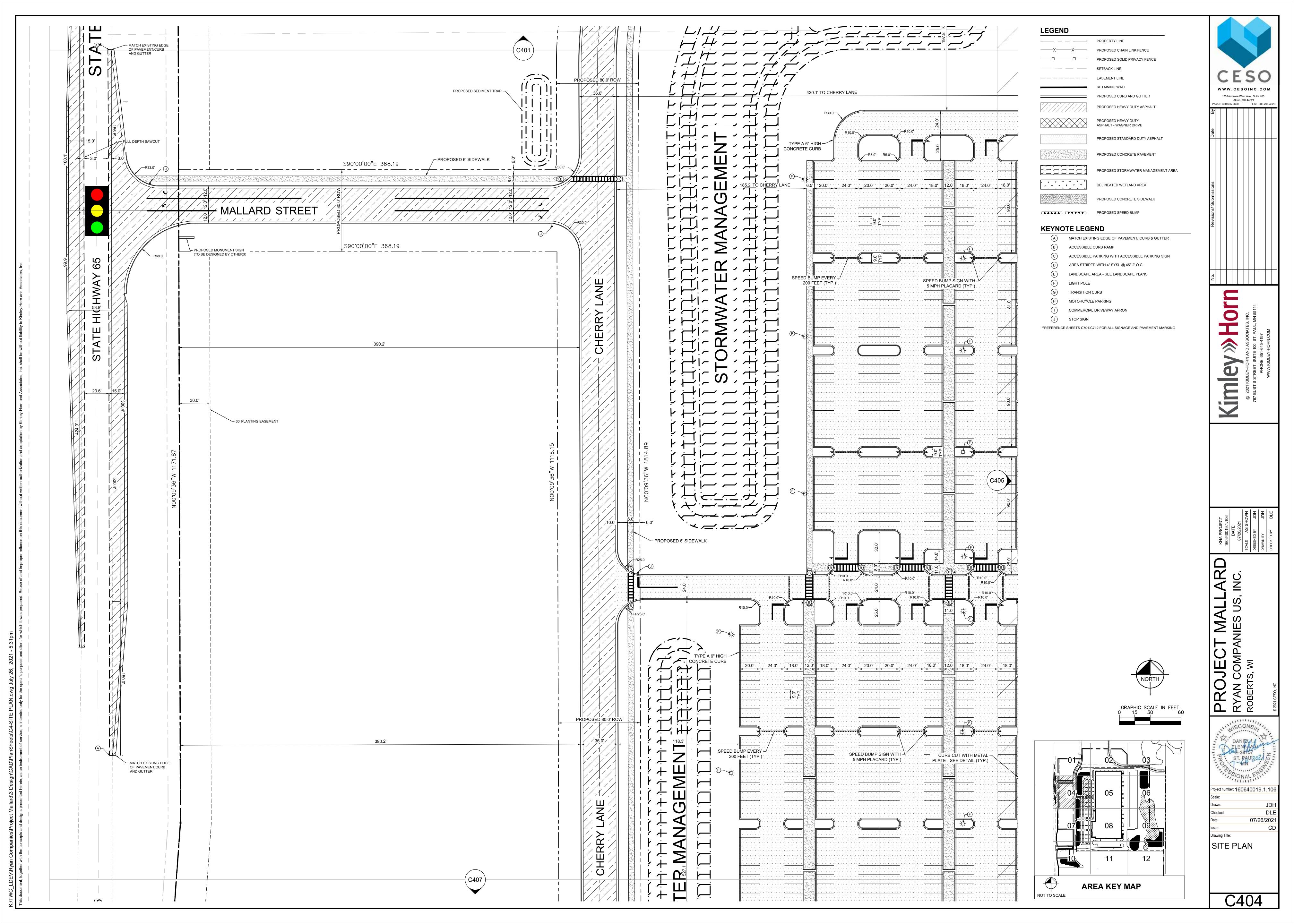


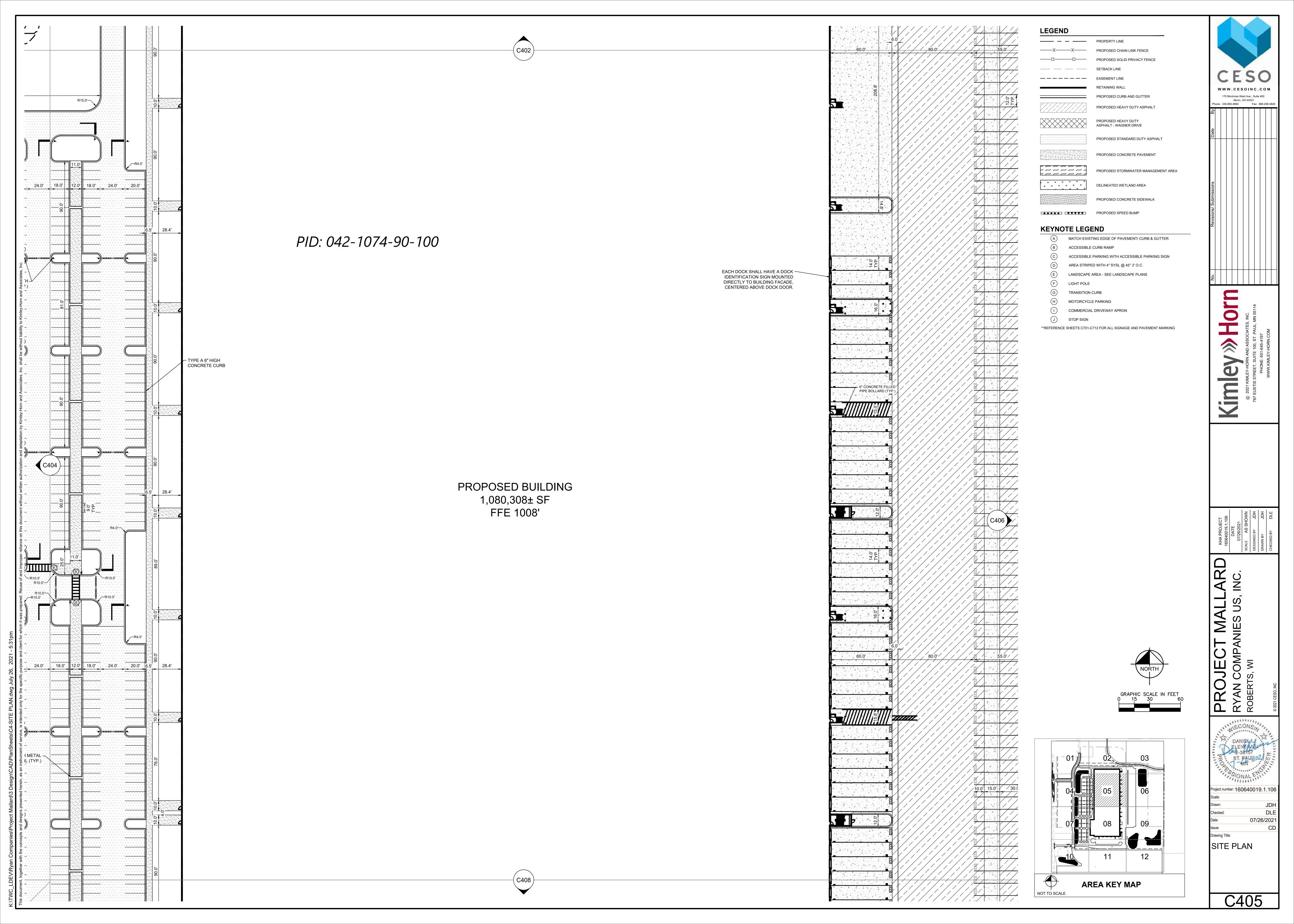


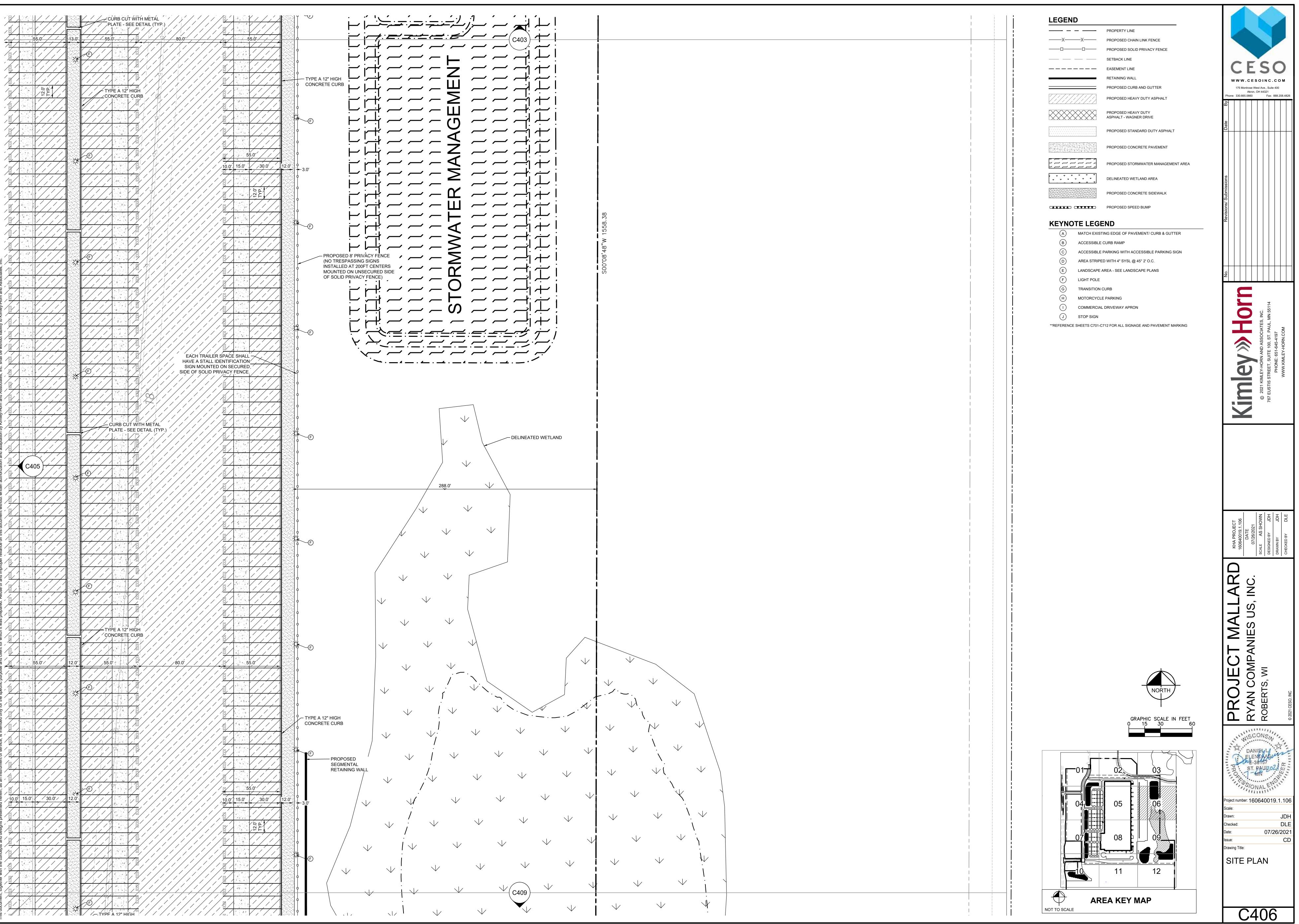




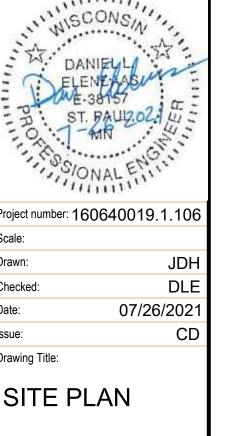


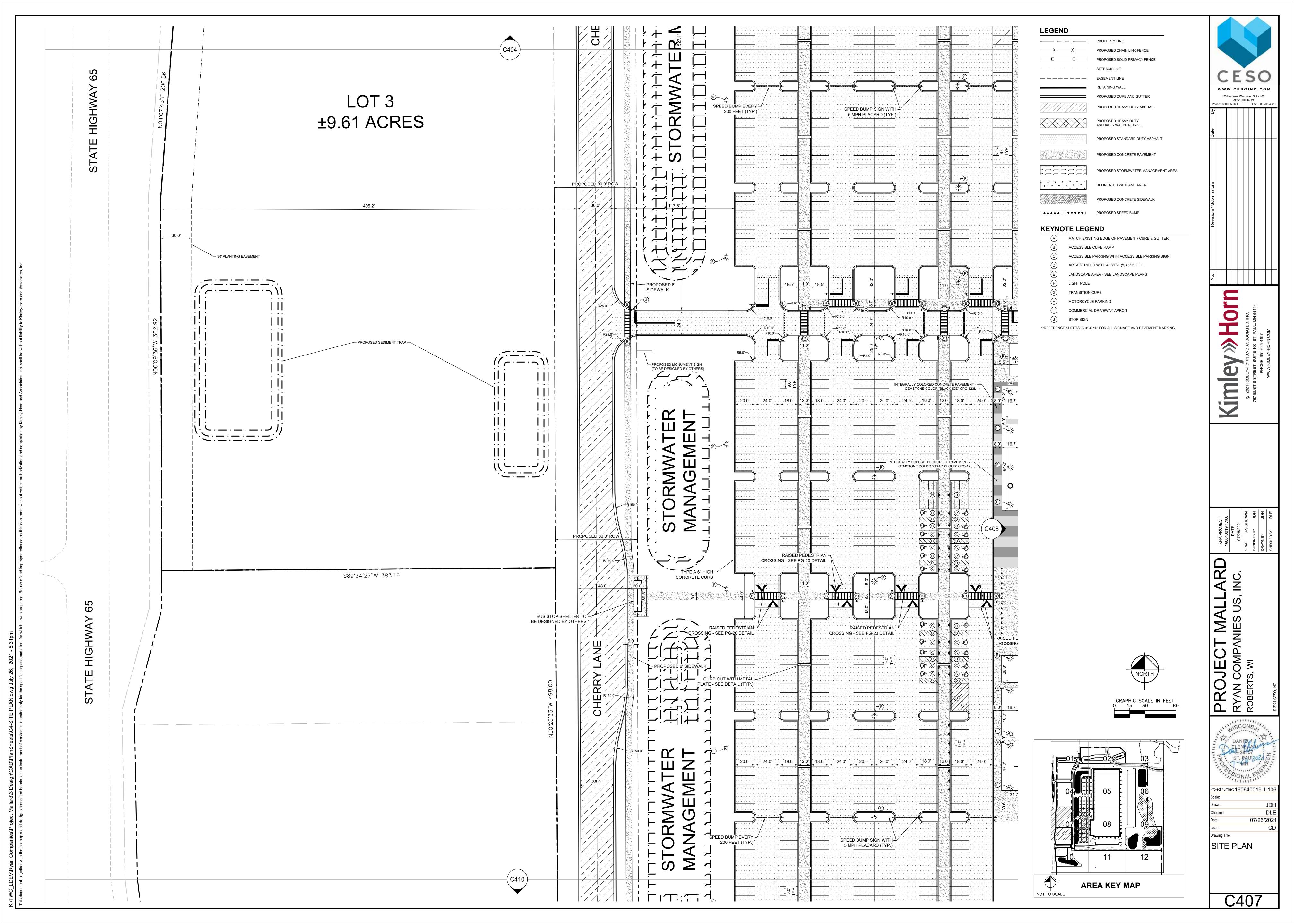


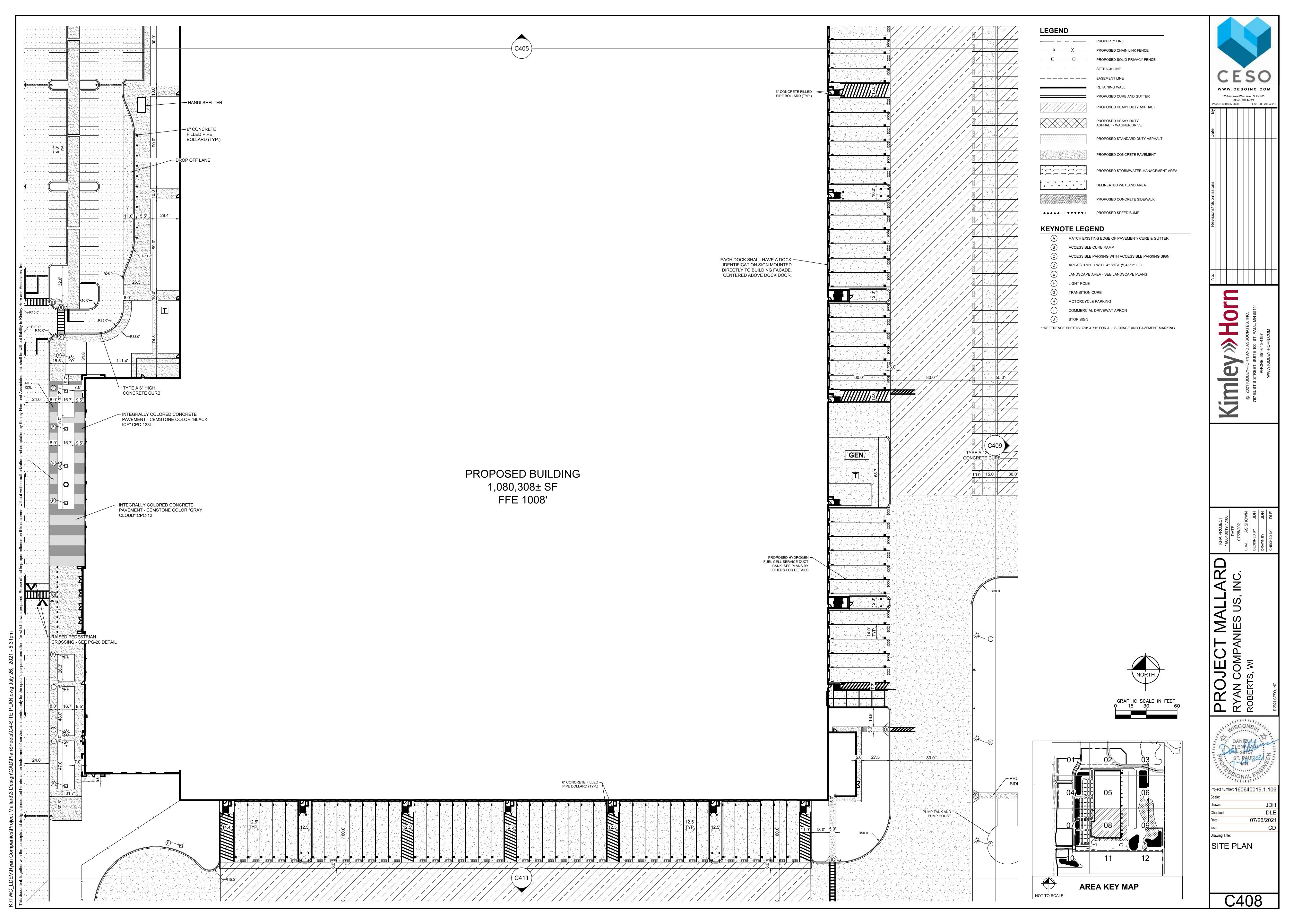


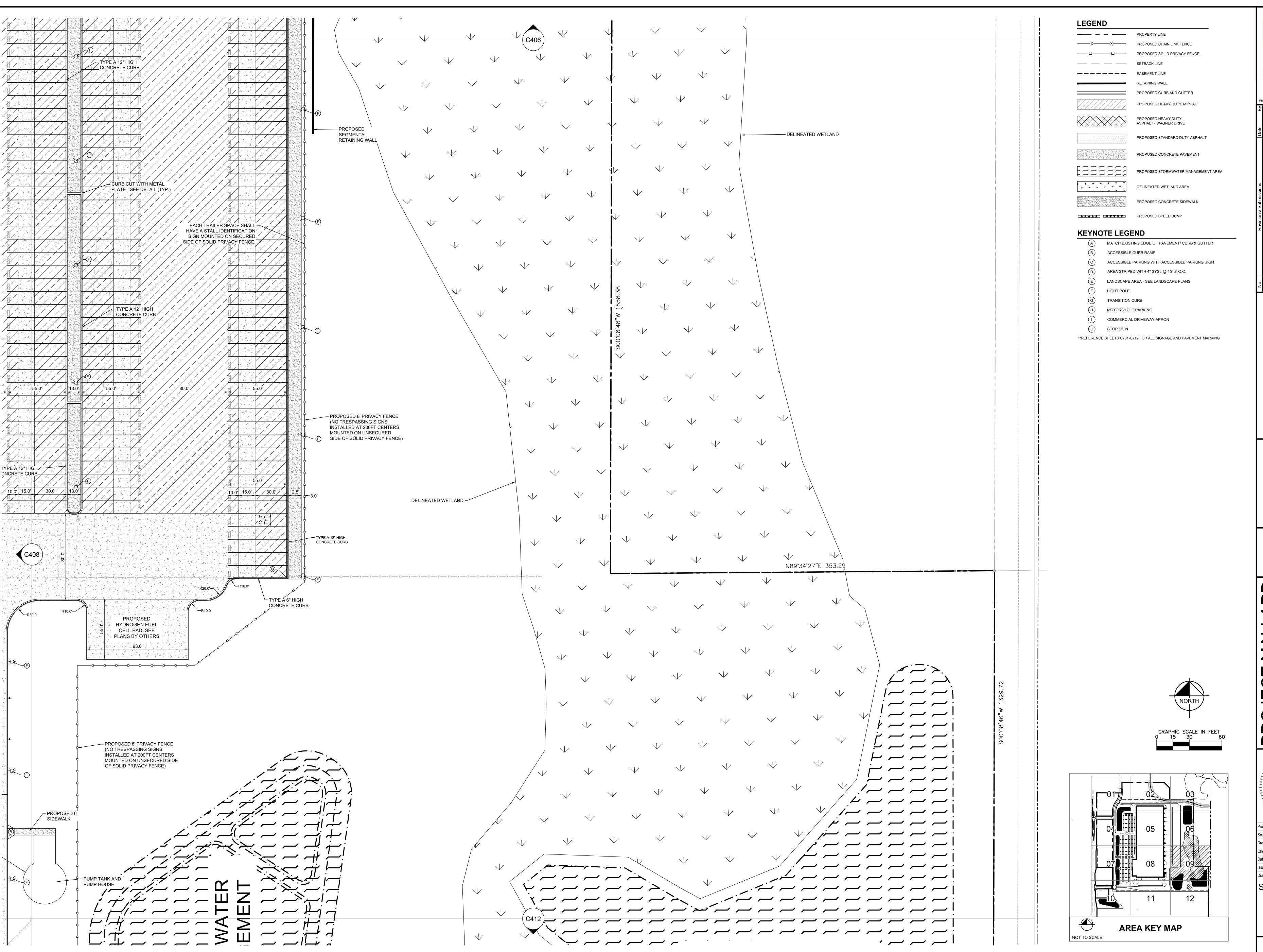


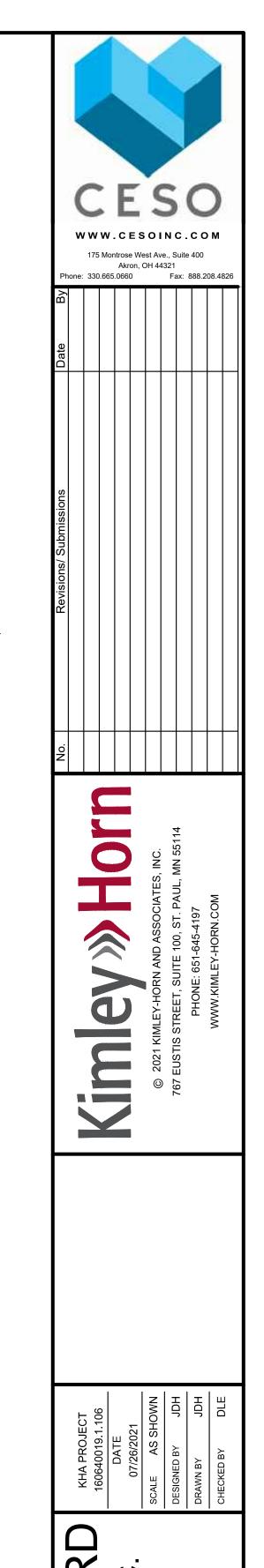


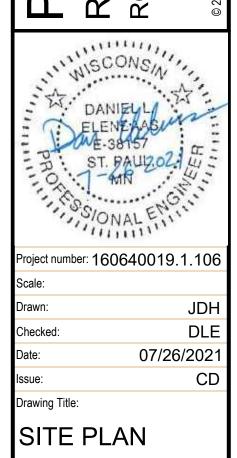


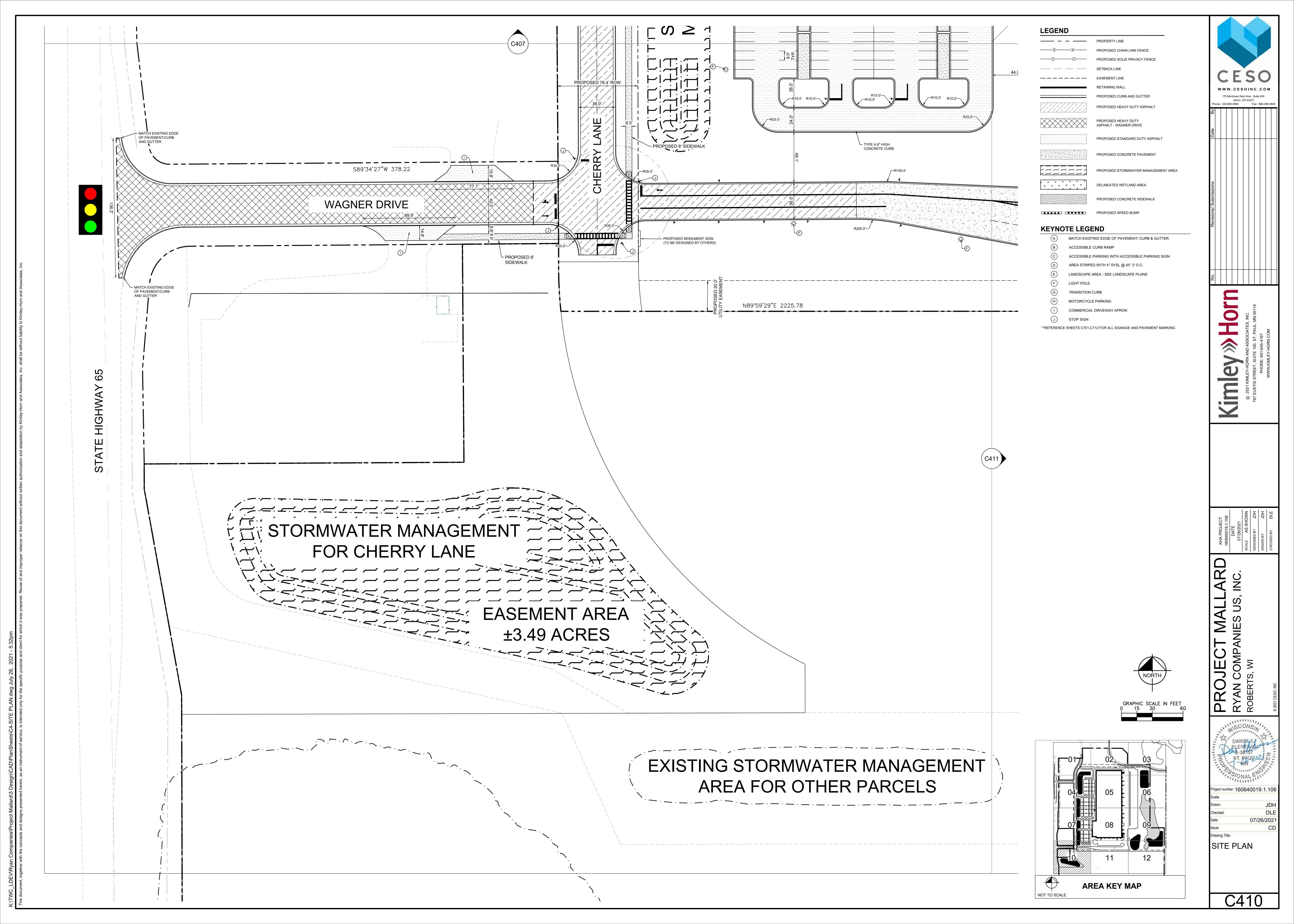


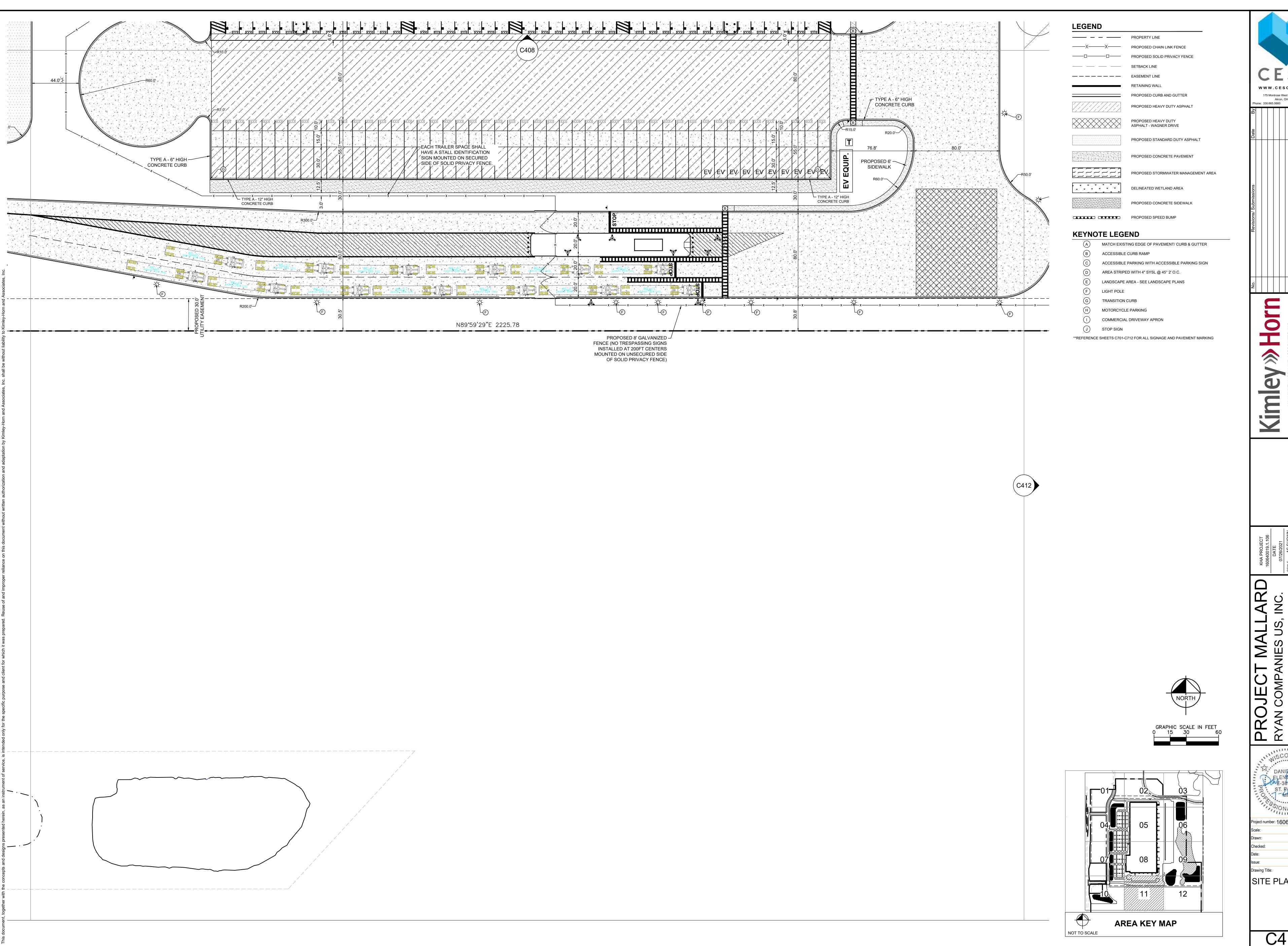


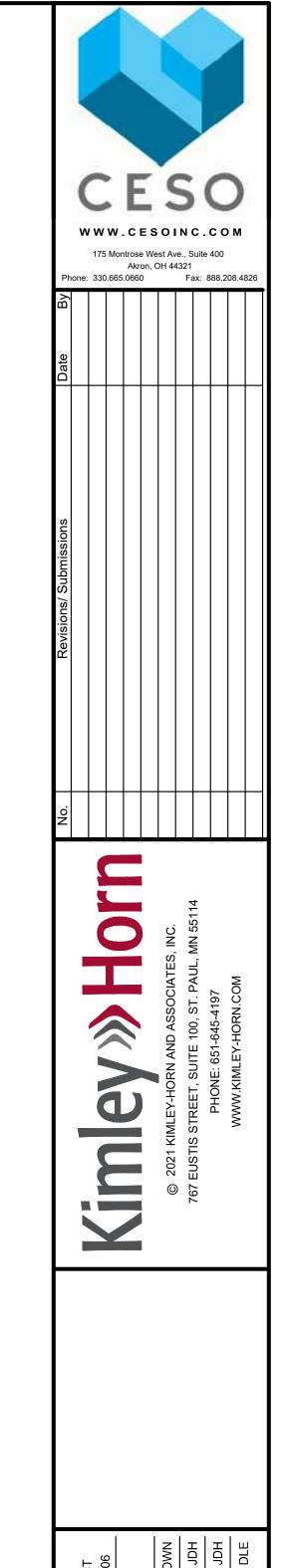




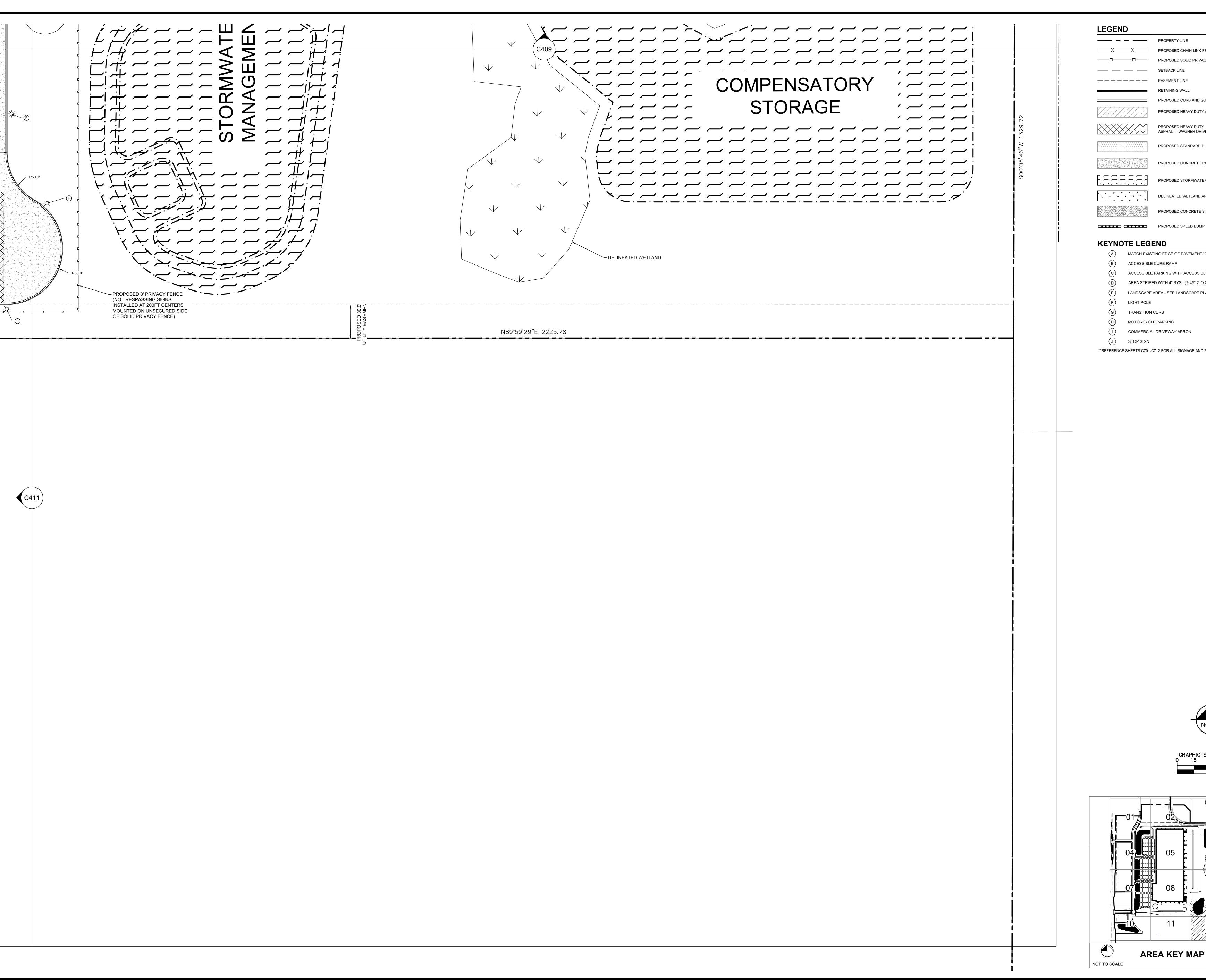








SITE PLAN



**LEGEND** ——— — PROPERTY LINE PROPOSED SOLID PRIVACY FENCE SETBACK LINE — — — — — EASEMENT LINE PROPOSED CURB AND GUTTER PROPOSED HEAVY DUTY ASPHALT PROPOSED STANDARD DUTY ASPHALT PROPOSED CONCRETE PAVEMENT PROPOSED STORMWATER MANAGEMENT AREA - *-- -- -- --*DELINEATED WETLAND AREA PROPOSED CONCRETE SIDEWALK

#### **KEYNOTE LEGEND**

MATCH EXISTING EDGE OF PAVEMENT/ CURB & GUTTER

ACCESSIBLE CURB RAMP

ACCESSIBLE PARKING WITH ACCESSIBLE PARKING SIGN AREA STRIPED WITH 4" SYSL @ 45° 2' O.C.

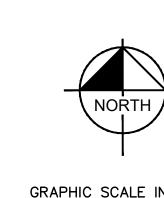
LANDSCAPE AREA - SEE LANDSCAPE PLANS LIGHT POLE

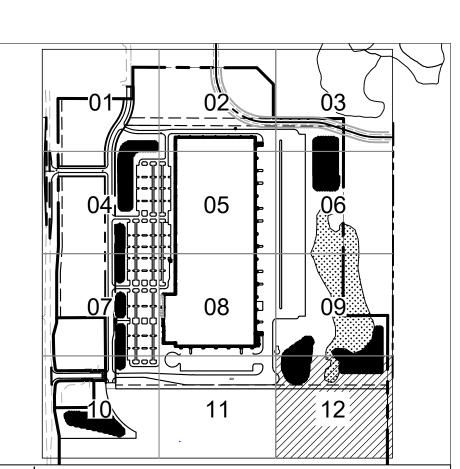
TRANSITION CURB

MOTORCYCLE PARKING

COMMERCIAL DRIVEWAY APRON

\*\*REFERENCE SHEETS C701-C712 FOR ALL SIGNAGE AND PAVEMENT MARKING





AREA KEY MAP

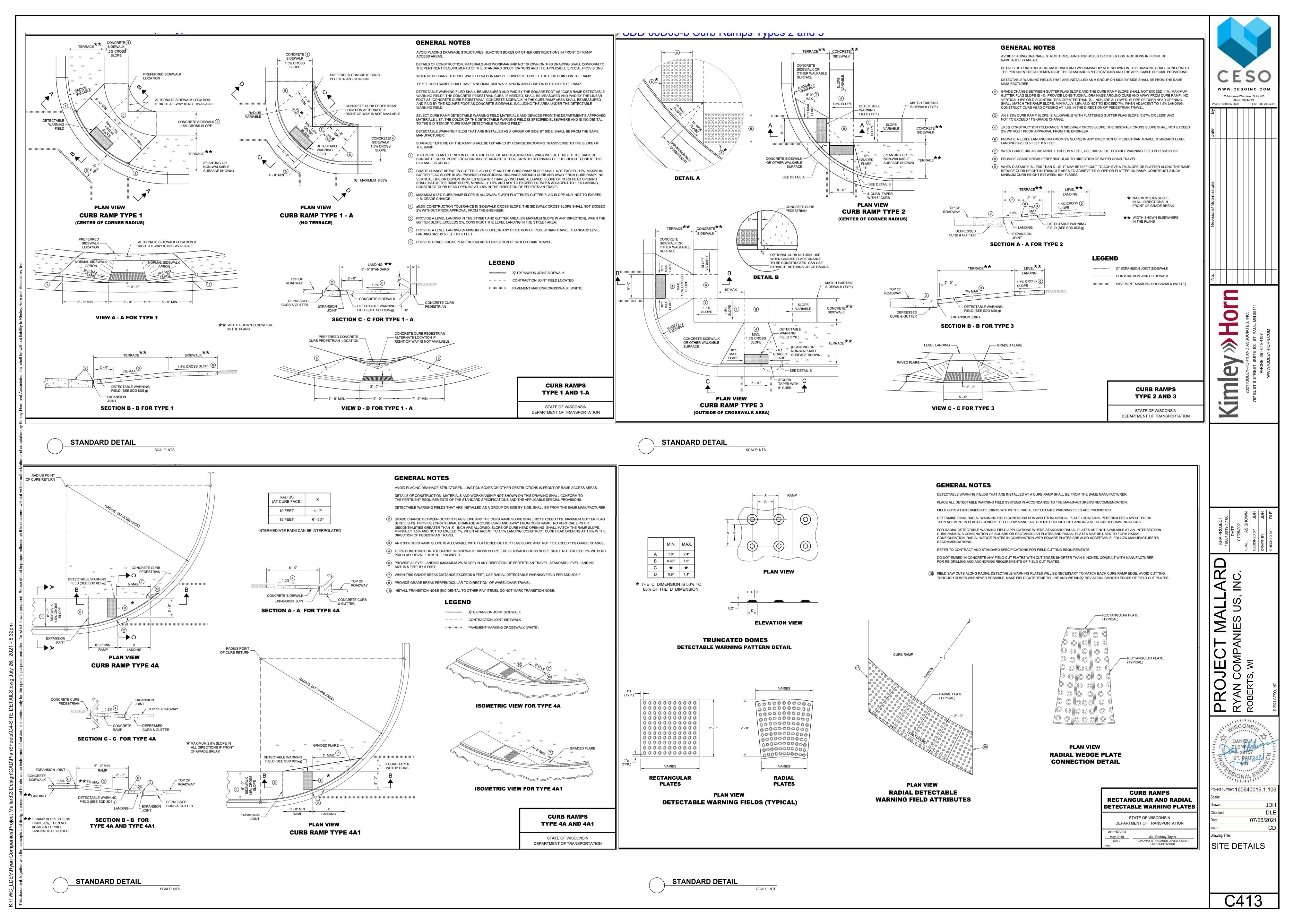
Project number: 160640019.1.106 SITE PLAN

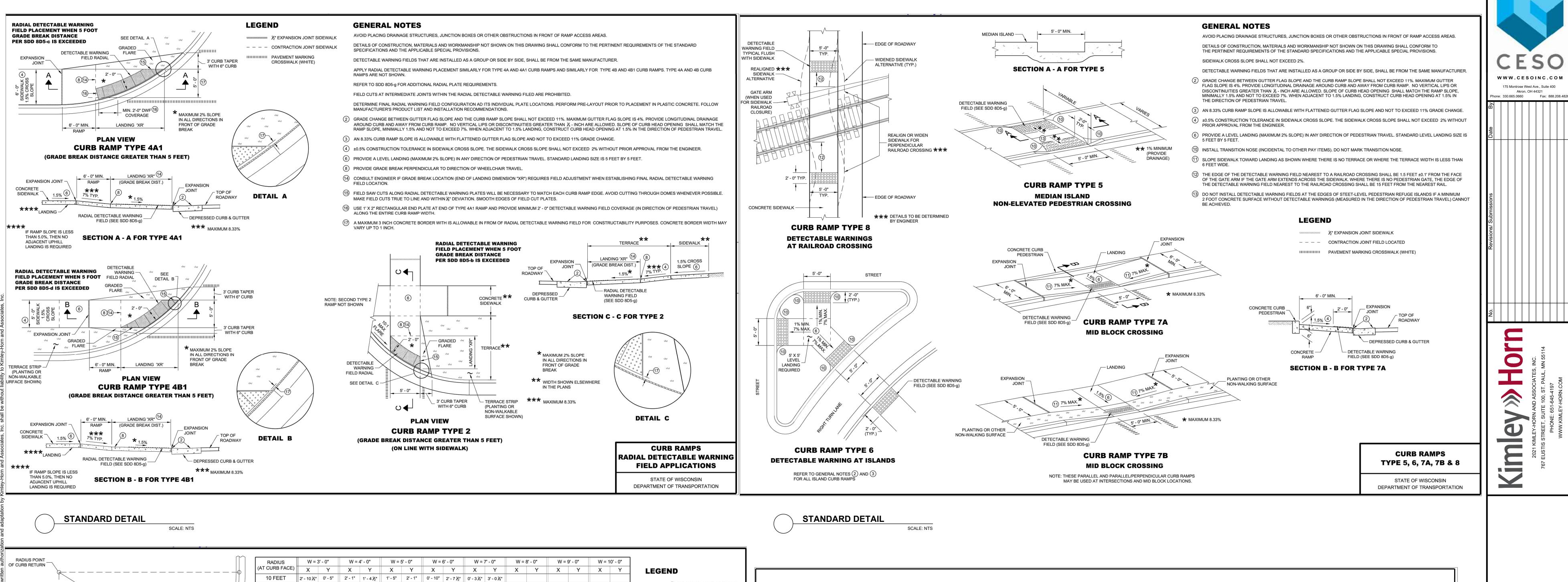
C412

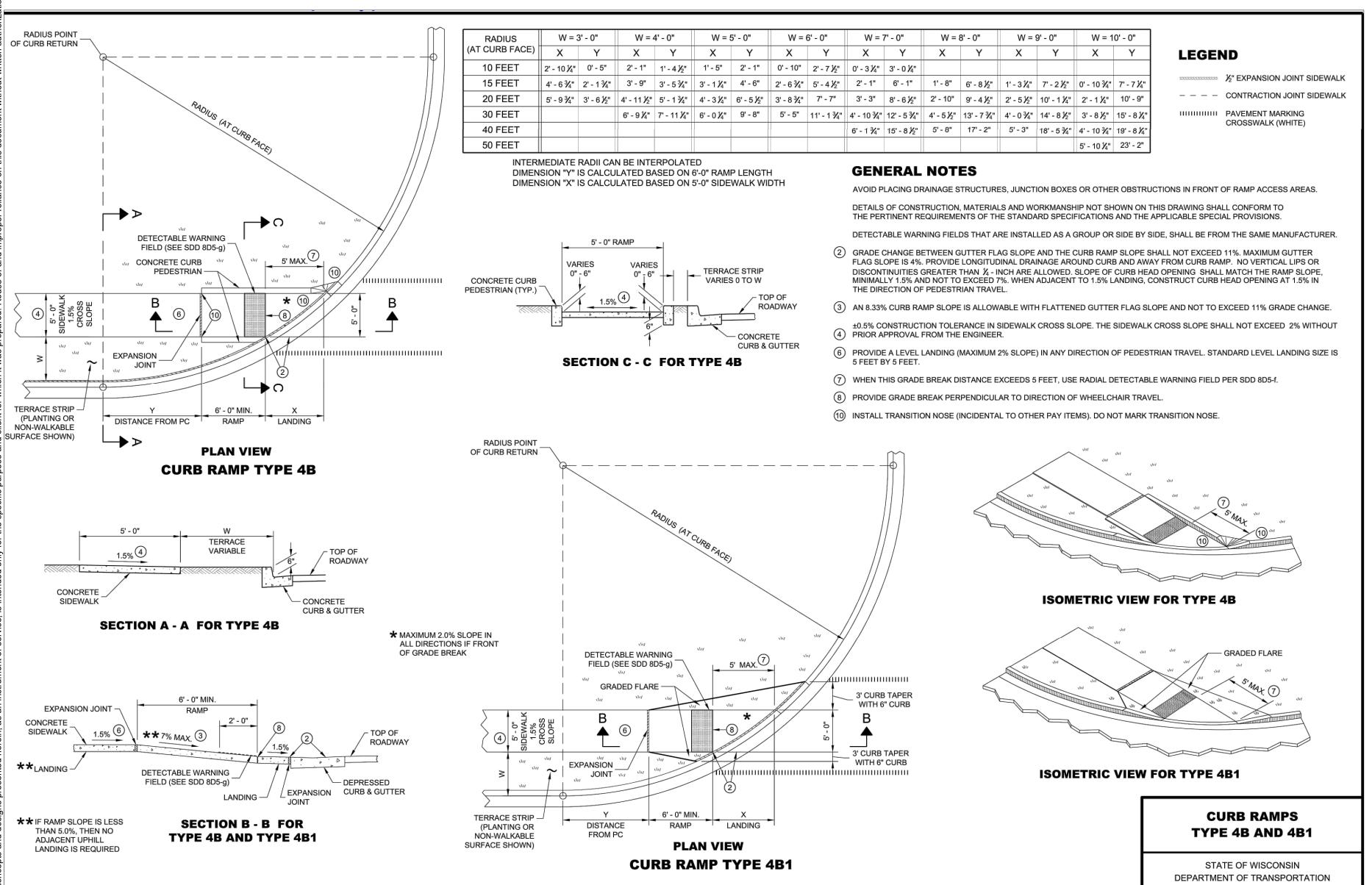
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0

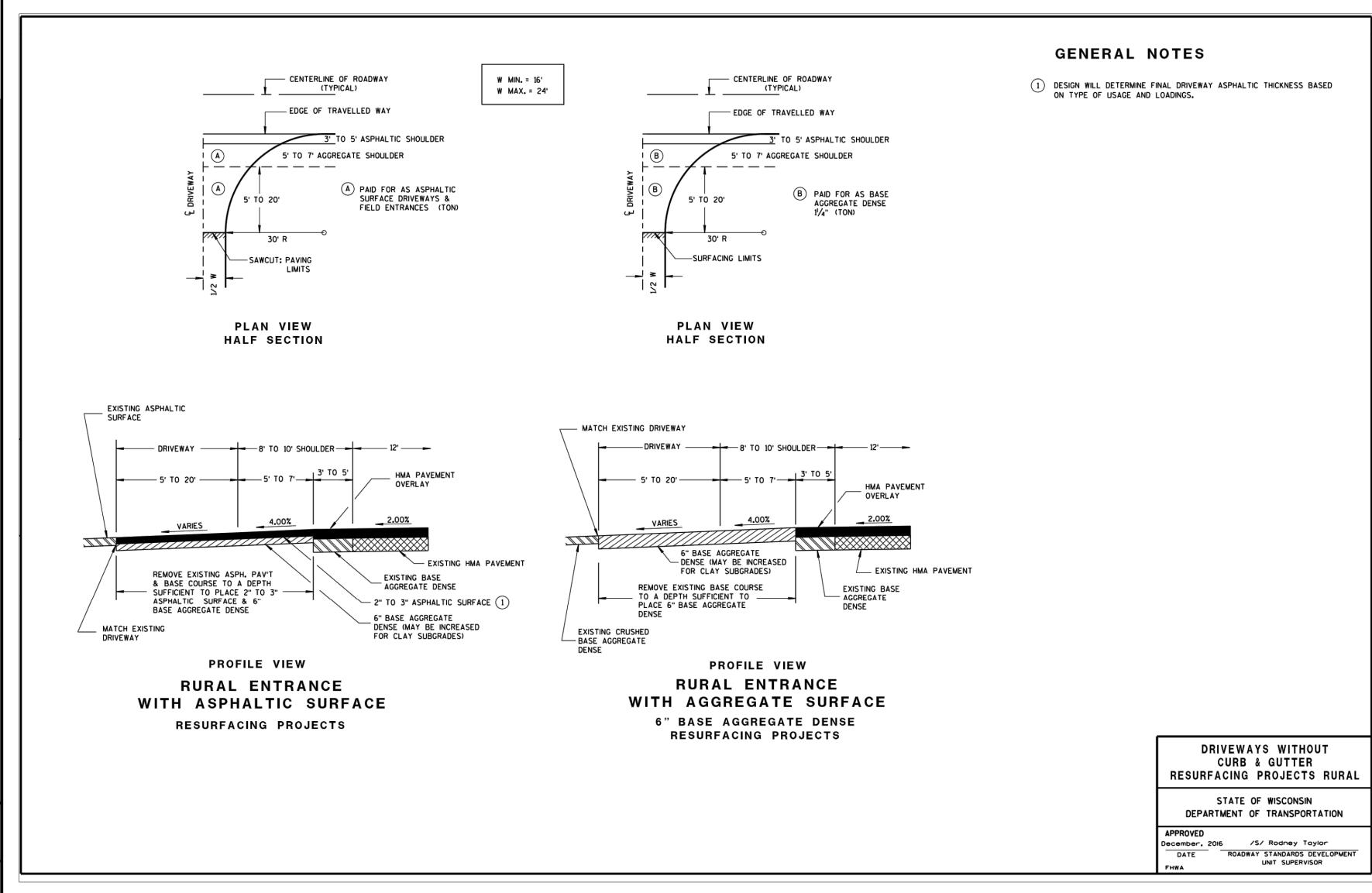






STANDARD DETAIL

SCALE: NTS



SONAL ENGL oject number: 160640019.1.106 07/26/2021 SITE DETAILS

175 Montrose West Ave., Suite 400

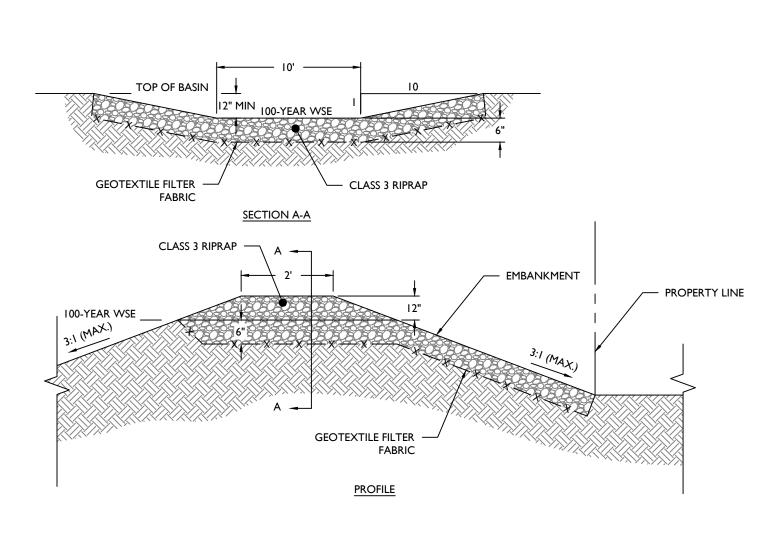
Akron, OH 44321

STANDARD DETAIL

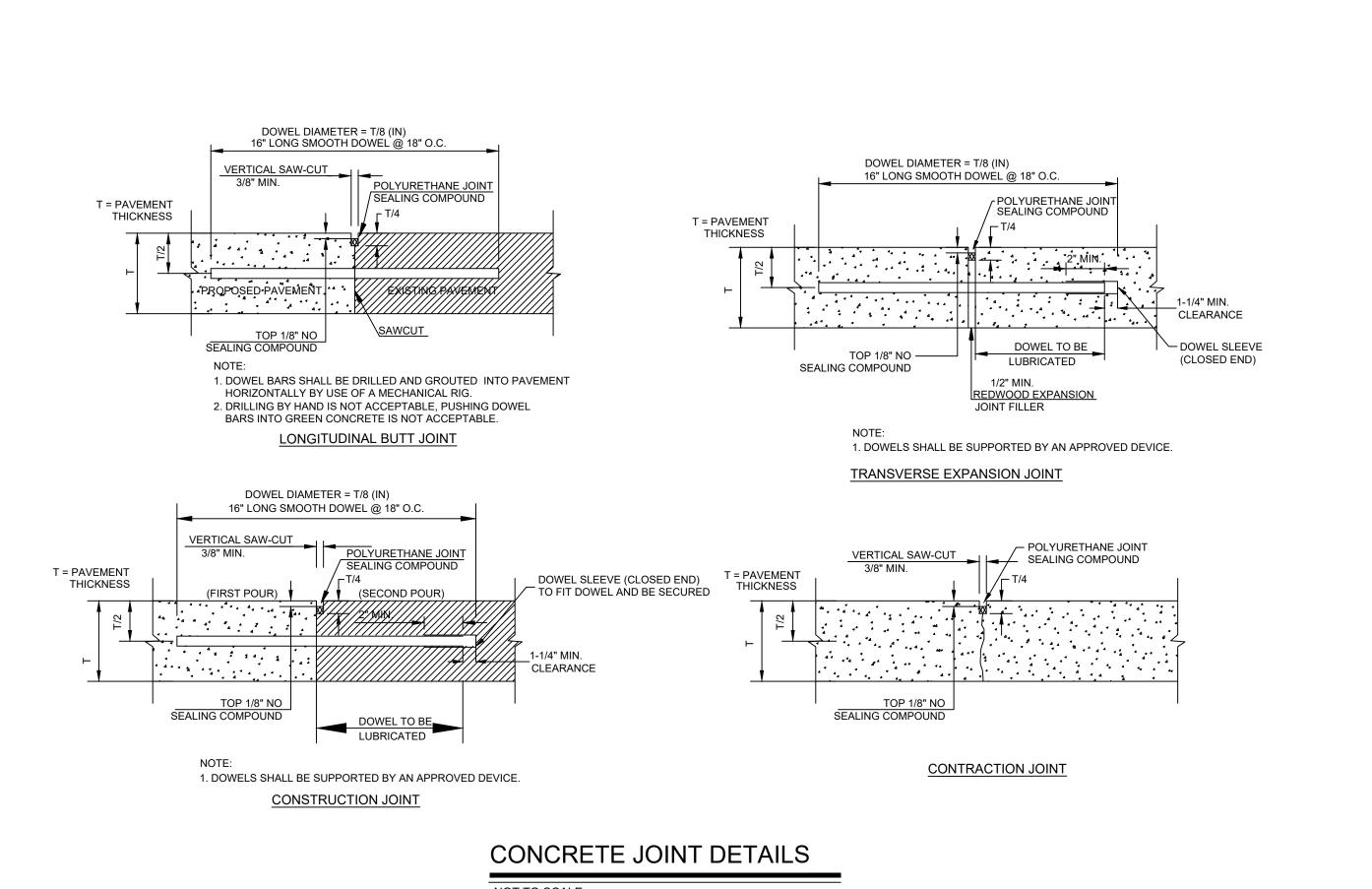
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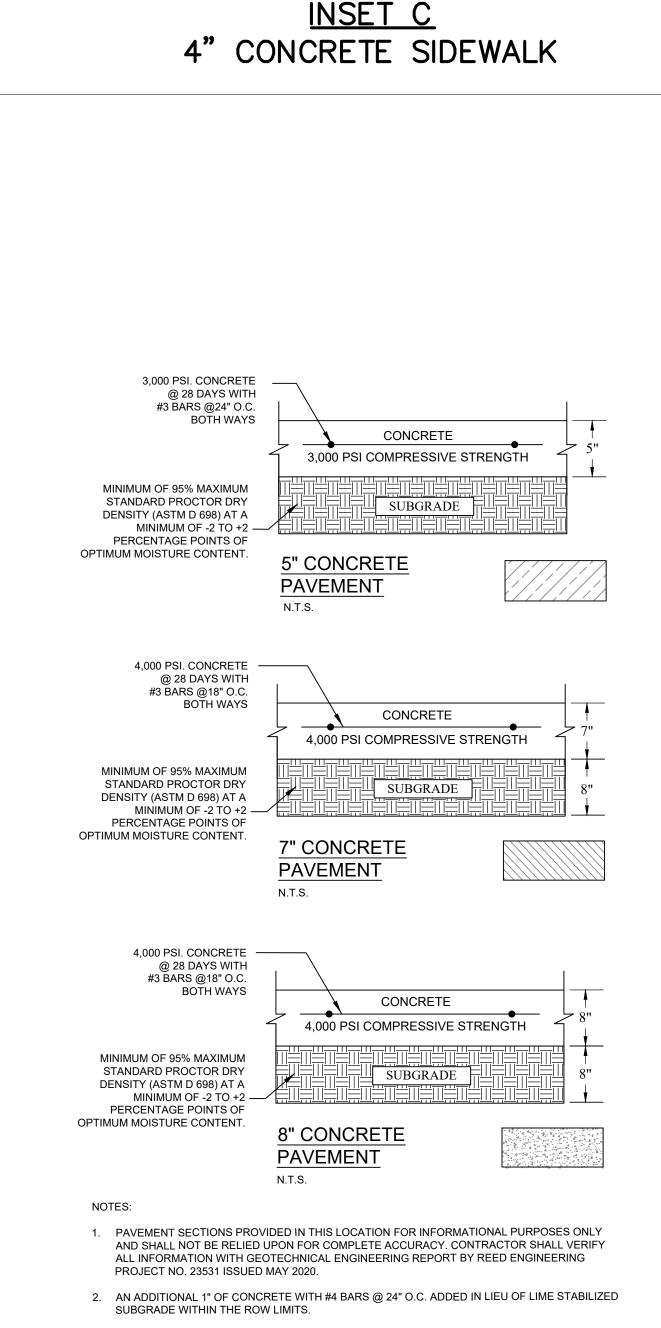
	LOWER ORIFICE		UPPER ORIFICE		100-YEAR WSE	TOP OF BASIN
BASIN ID	INVERT ELEVATION	DIAMETER	INVERT ELEVATION	DIMENSIONS	ELEVATION	ELEVATION
1	996.00	6"	N/A	N/A	998.70	1000.00
2	997.00	15"	998.00	12" (W) x 4" (H)	999.82	1000.82
3.1	995.00	16"	996.80	18" (W) x 3" (H)	998.31	999.31
3.2	995.00	12"	996.11	12" (W) x 4" (H)	998.05	999.05
4	985.00	4"	N/A	N/A	988.37	989.37
5	990.00	6"	990.43	12" (W) x 12" (H)	994.74	995.74
6	980.00	6"	N/A	N/A	980.46	984.00

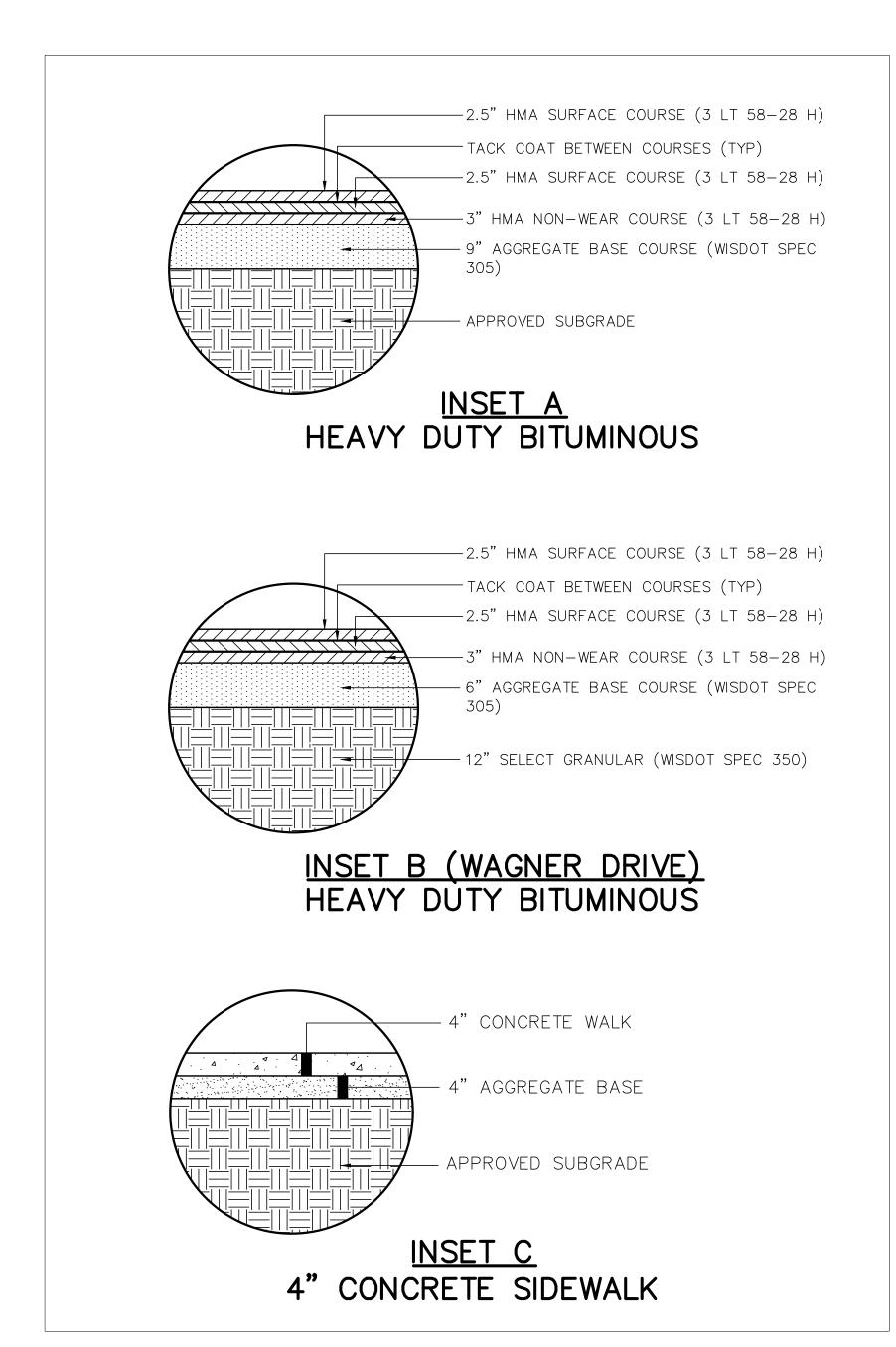
TYPICAL OUTLET CONTROL STRUCTURE

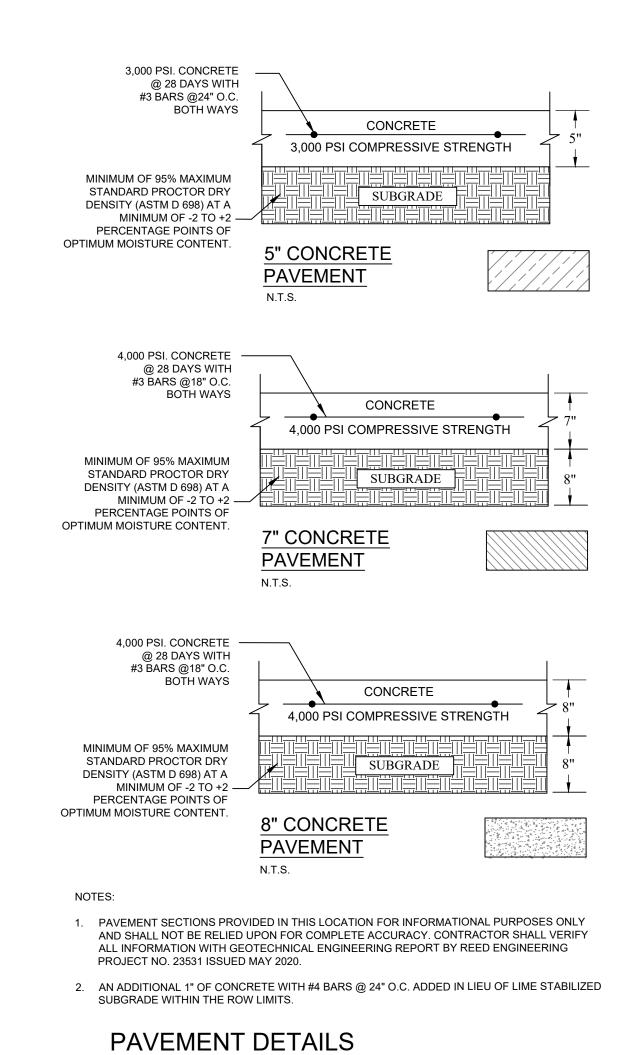


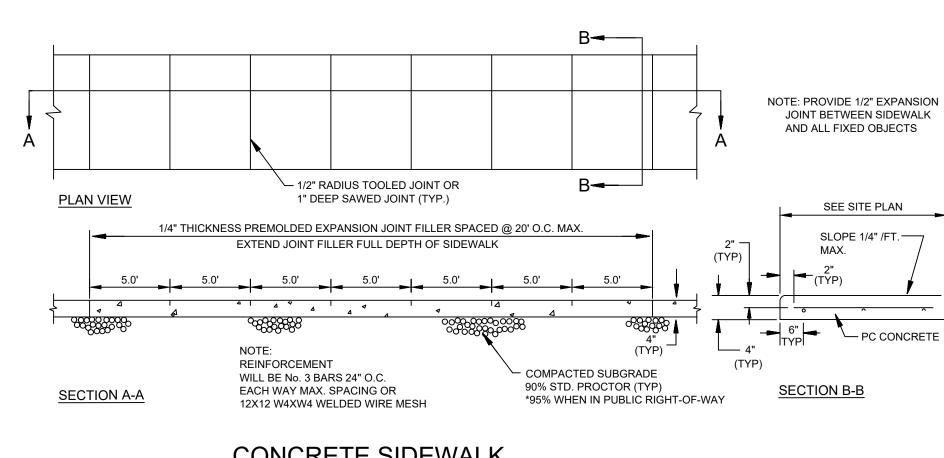
**TYPICAL EMERGENCY SPILLWAY** 











CONCRETE SIDEWALK

SITE DETAILS

S/ONAL ENG.

Project number: 160640019.1.106

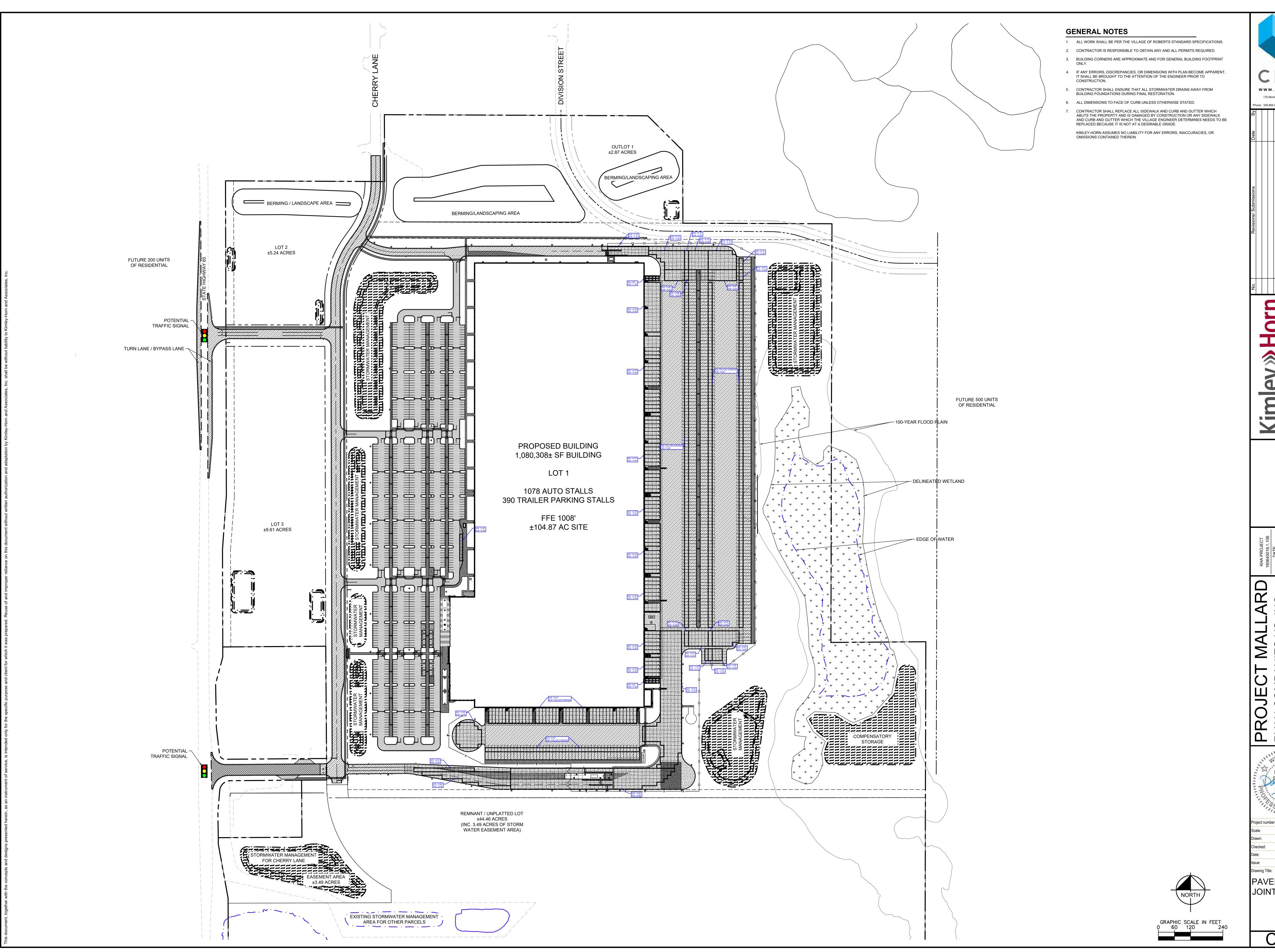
07/26/2021

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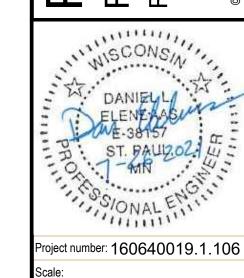
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hone: 330.665.0660 Fax: 888.208.4826

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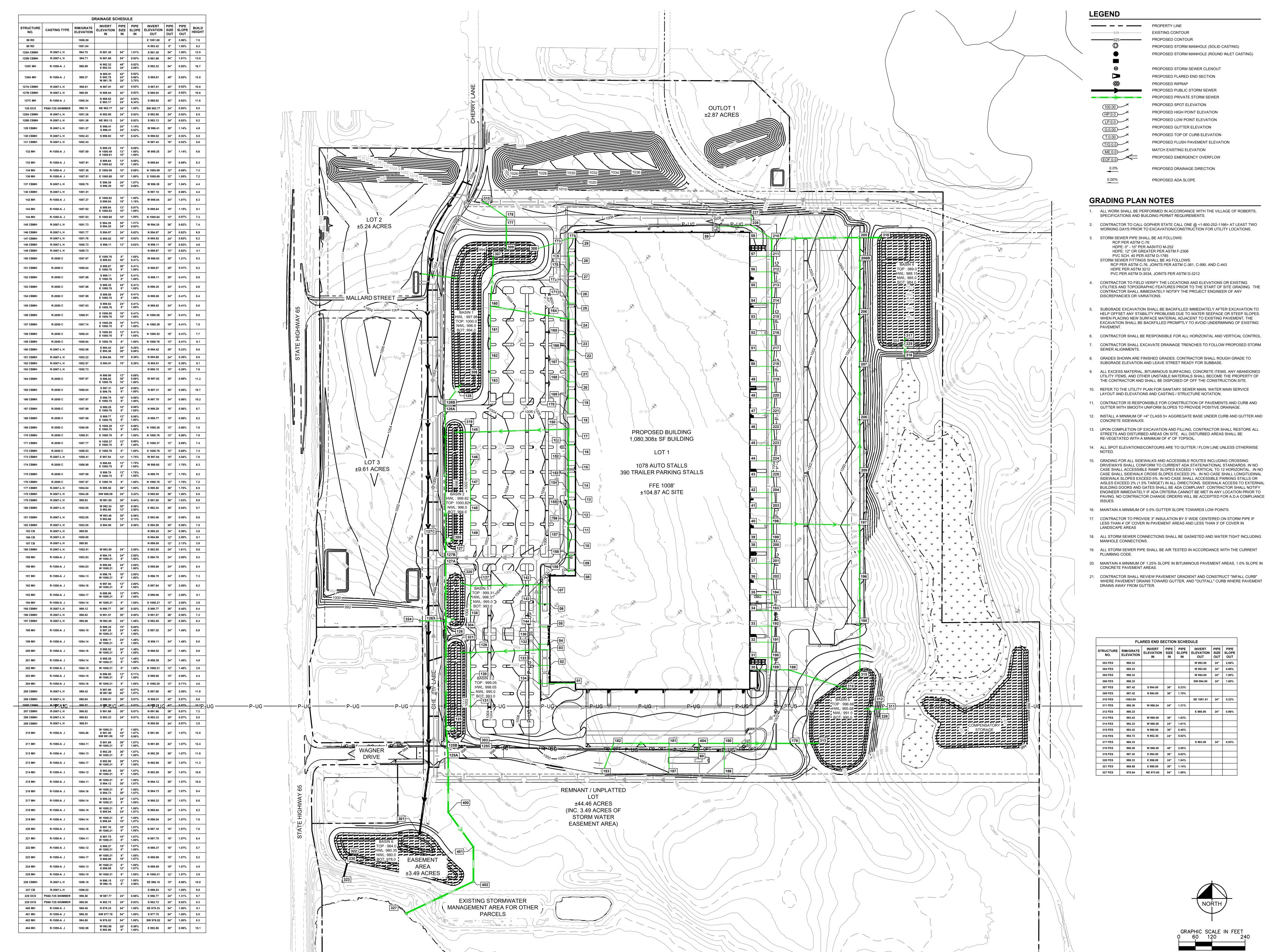


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07/26/2021

PAVEMENT JOINTING PLAN



SUSTING)

CESO

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Akron, OH 44321

Phone: 330,665,0660

Fax: 888,208,4826

A

B

ROBERTS,

LEAST TWO
ATIONS.

ASSOCIATES, INC.

00, ST. PAUL, MN 55114

45-4197

© 2021 KIN 767 EUSTIS (

DATE

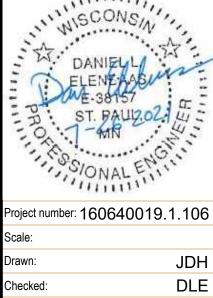
07/26/2021

SCALE AS SHOWN

DESIGNED BY JDH

DRAWN BY JDH

YAN COMPANIES US, INDEBERTS, WI



 Project number: 160640019.1.106

 Scale:

 Drawn:
 JDH

 Checked:
 DLE

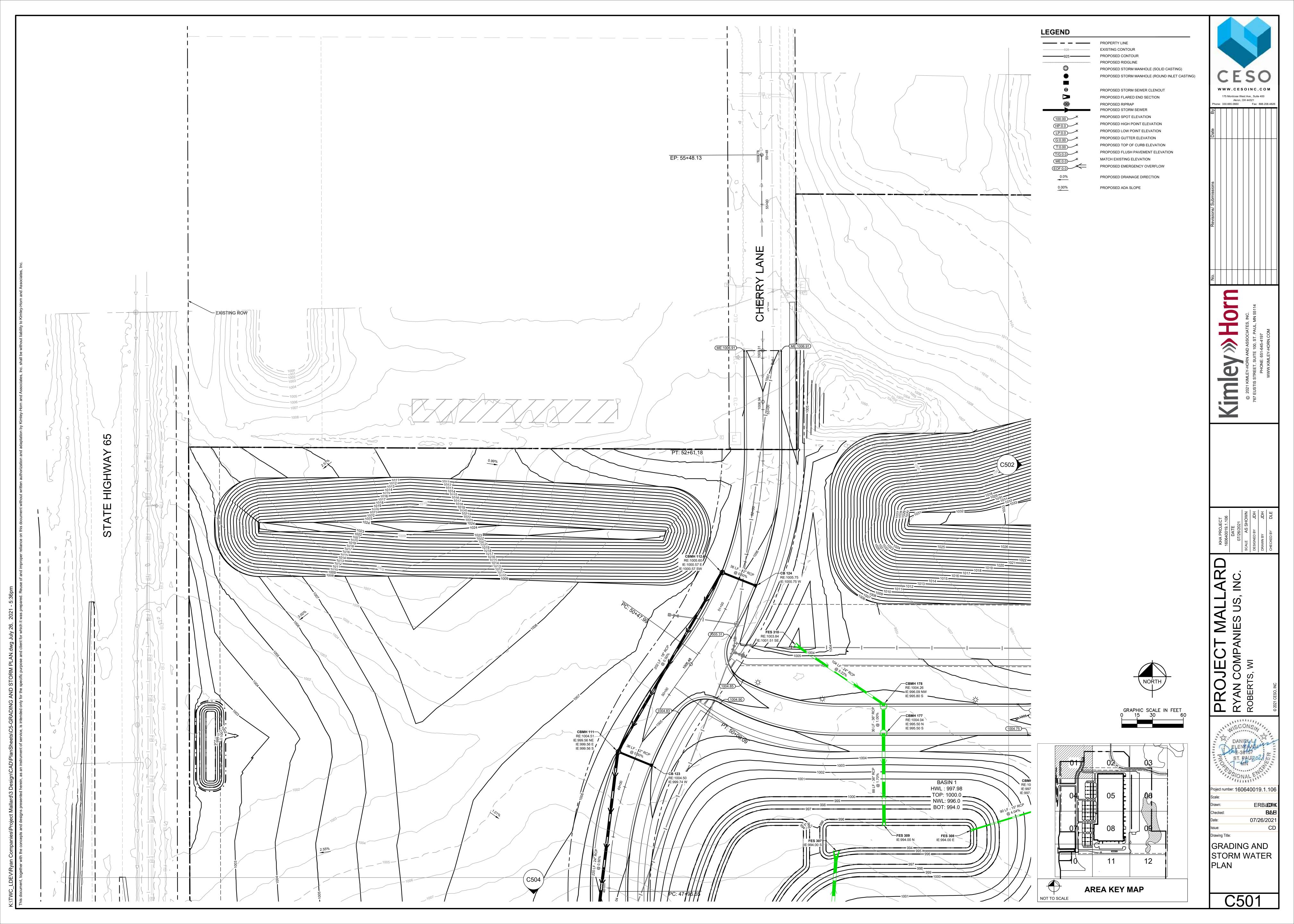
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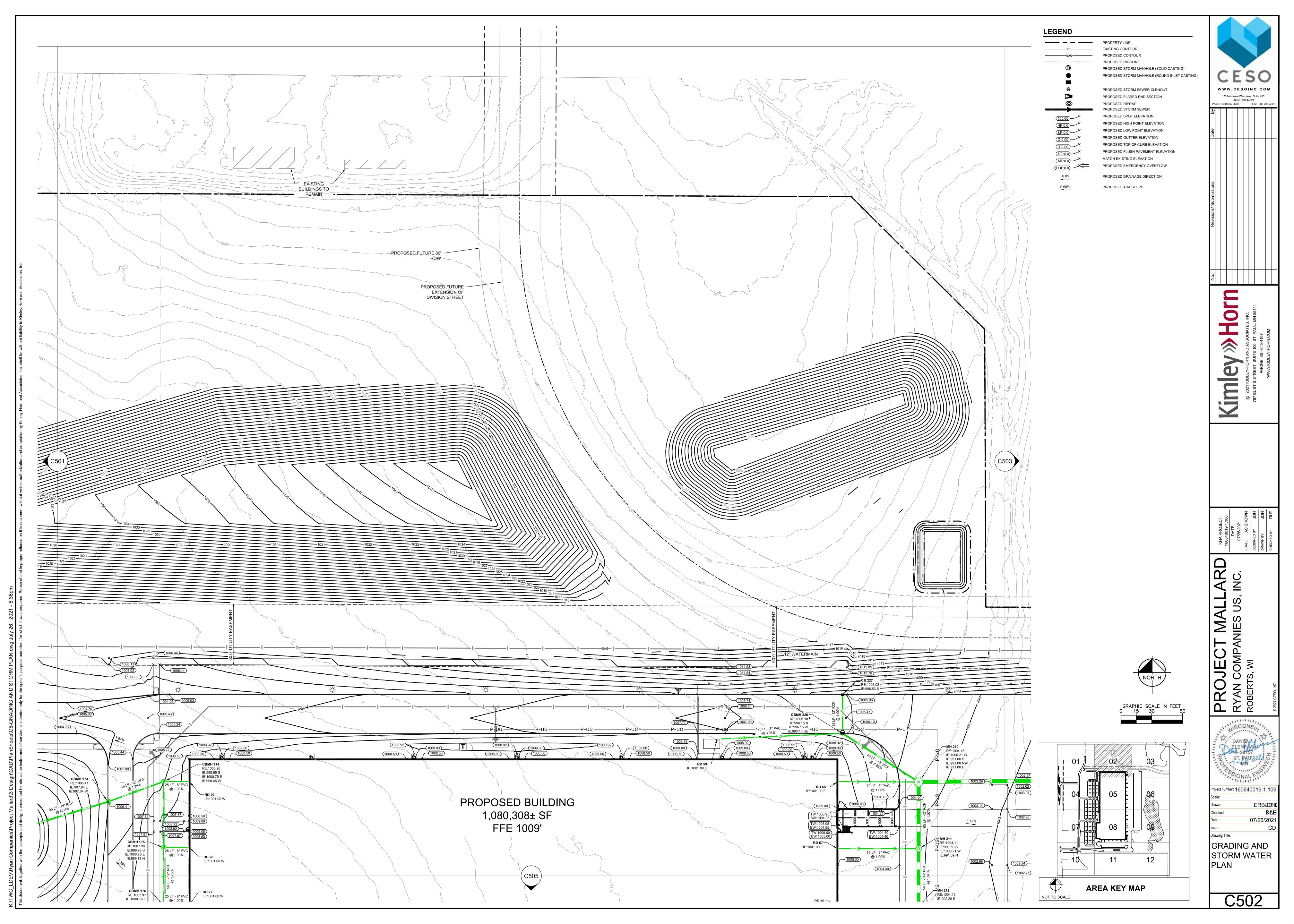
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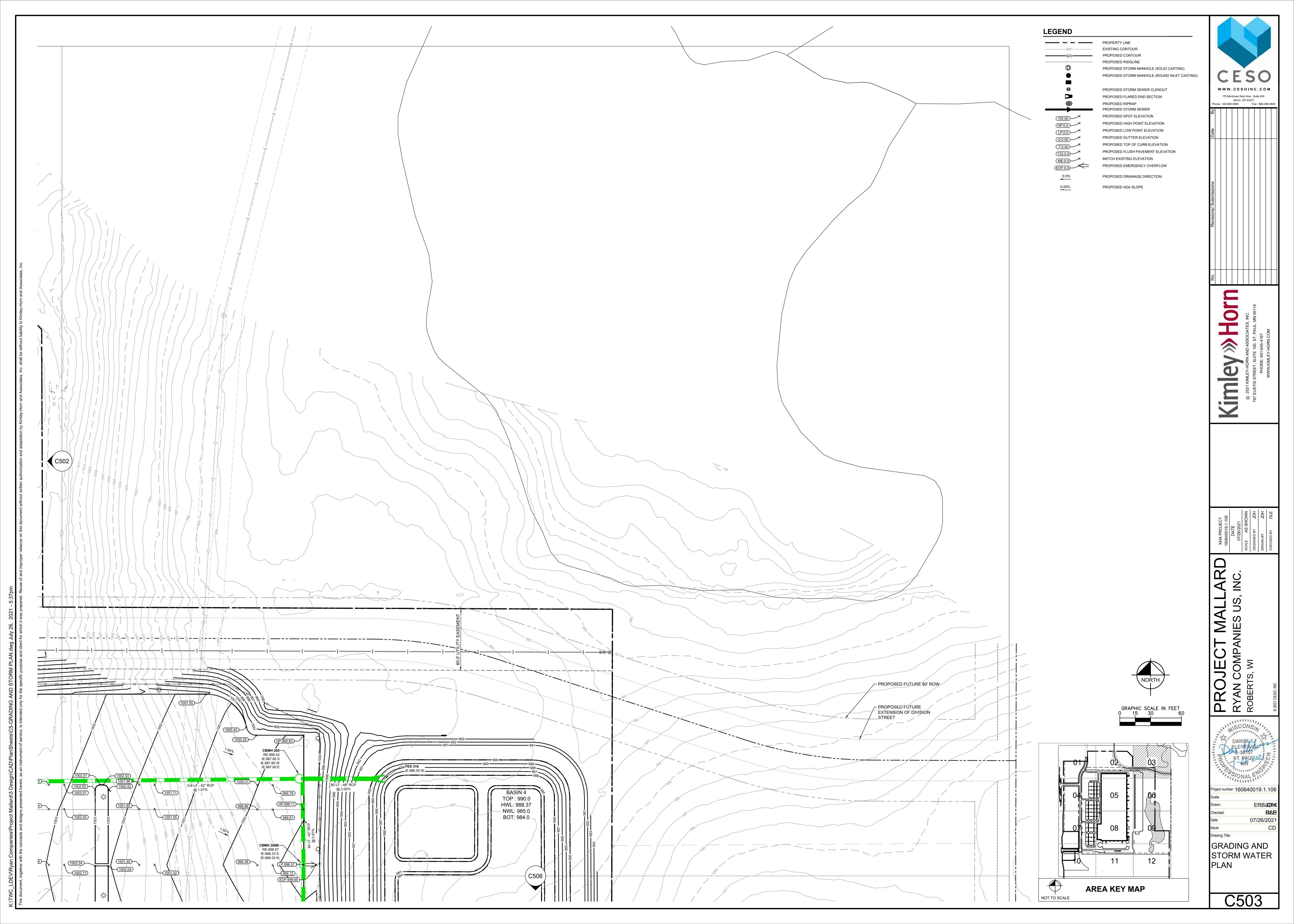
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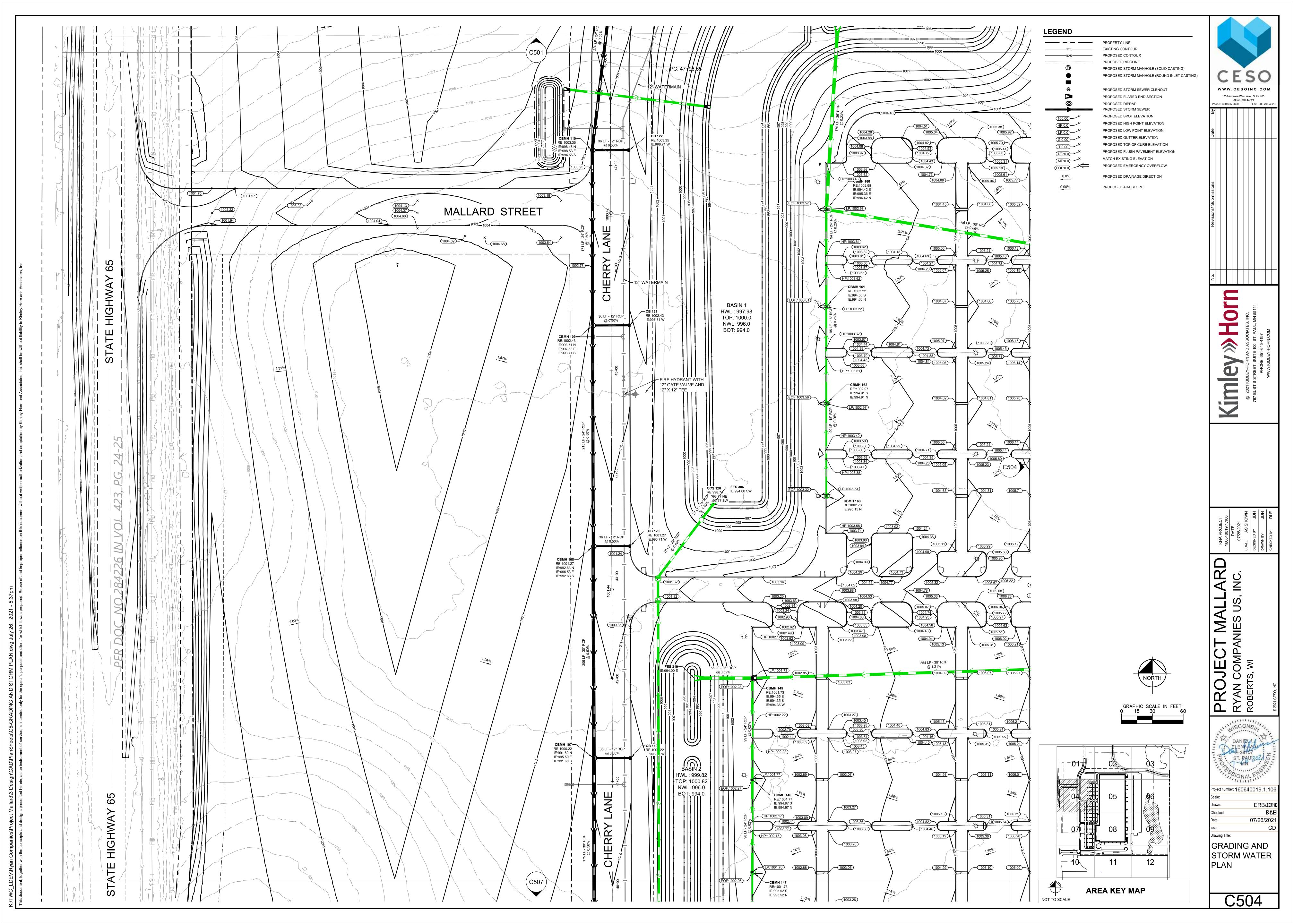
 OVERALL

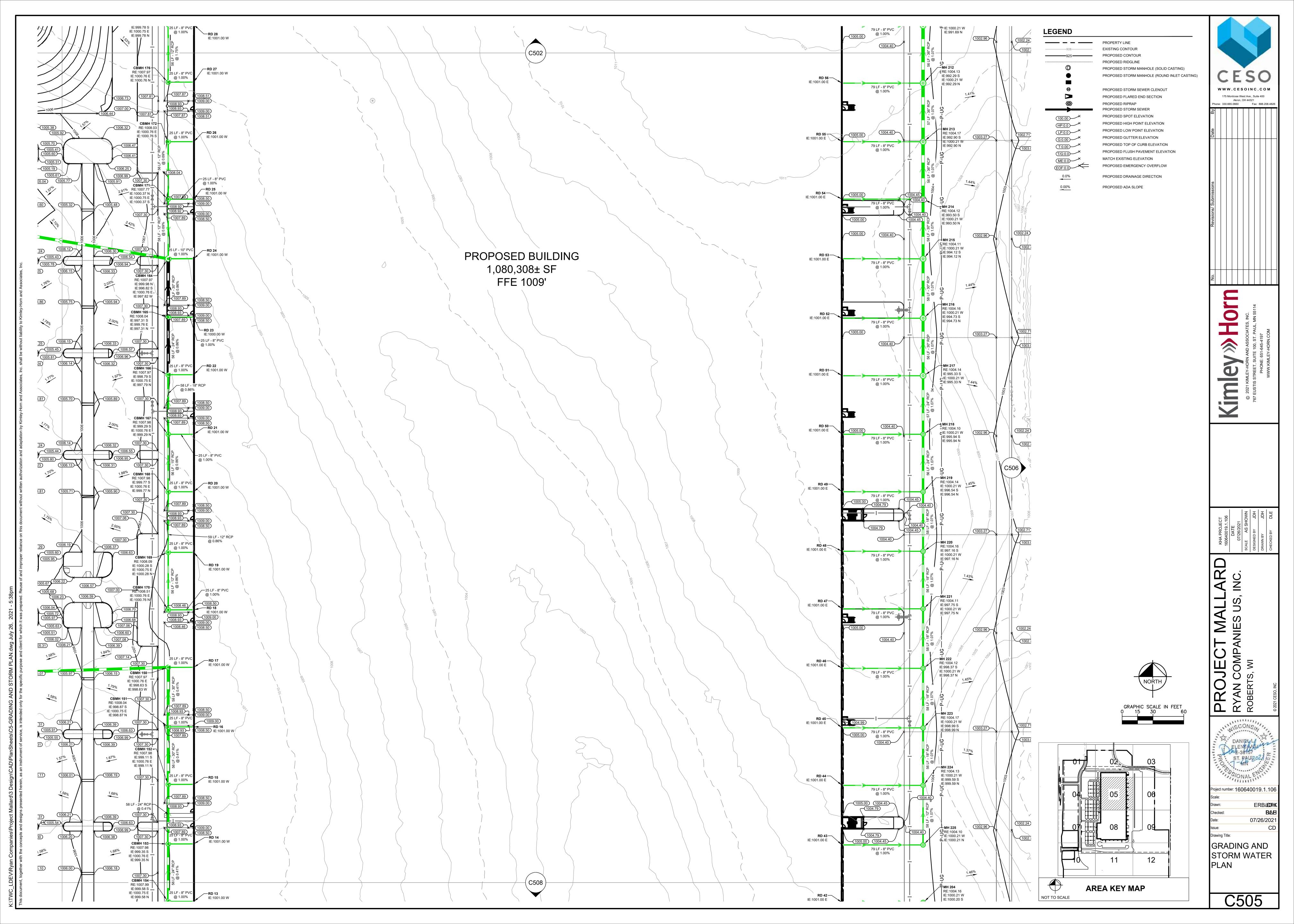
GRADING AND STORM PLAN

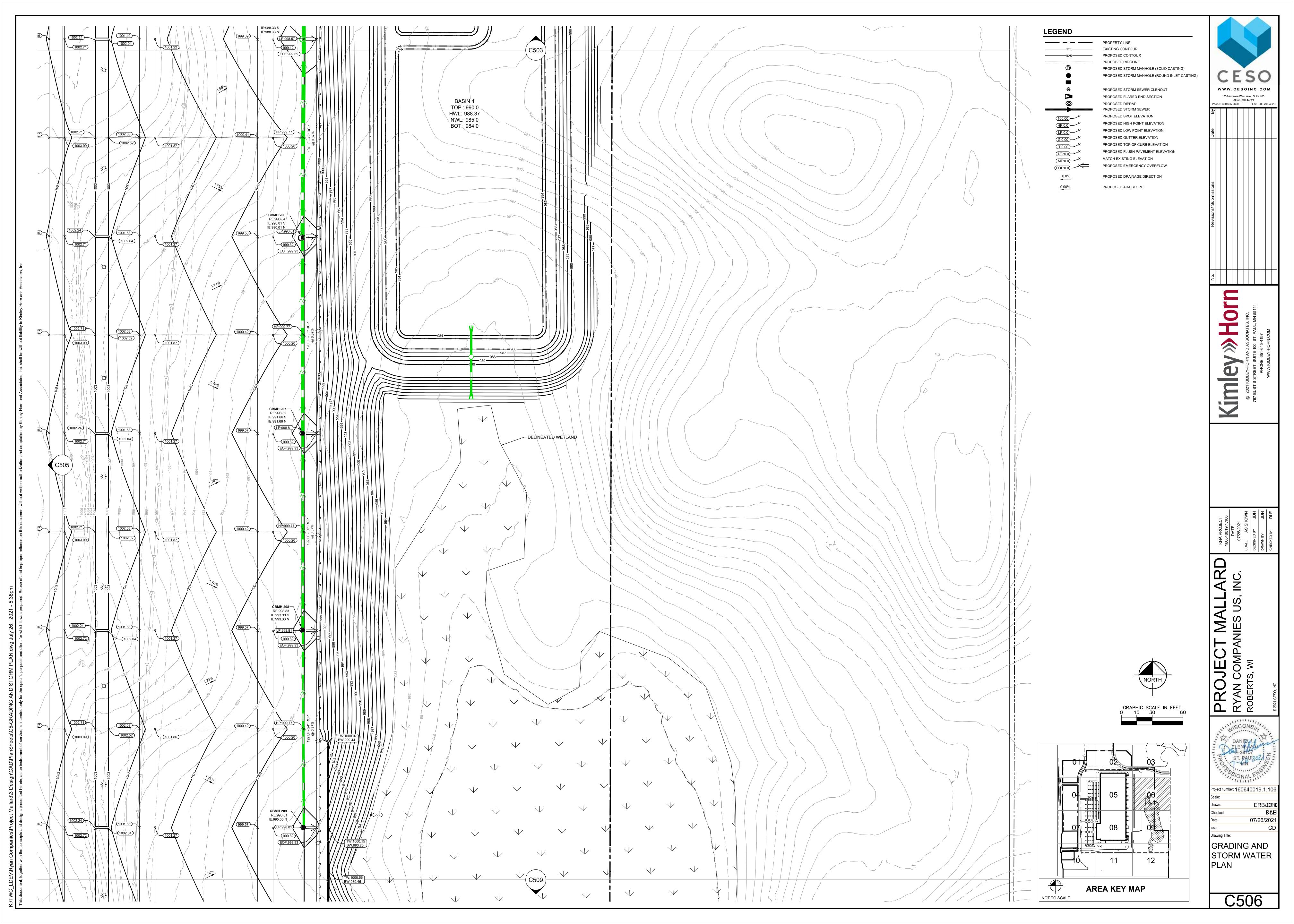


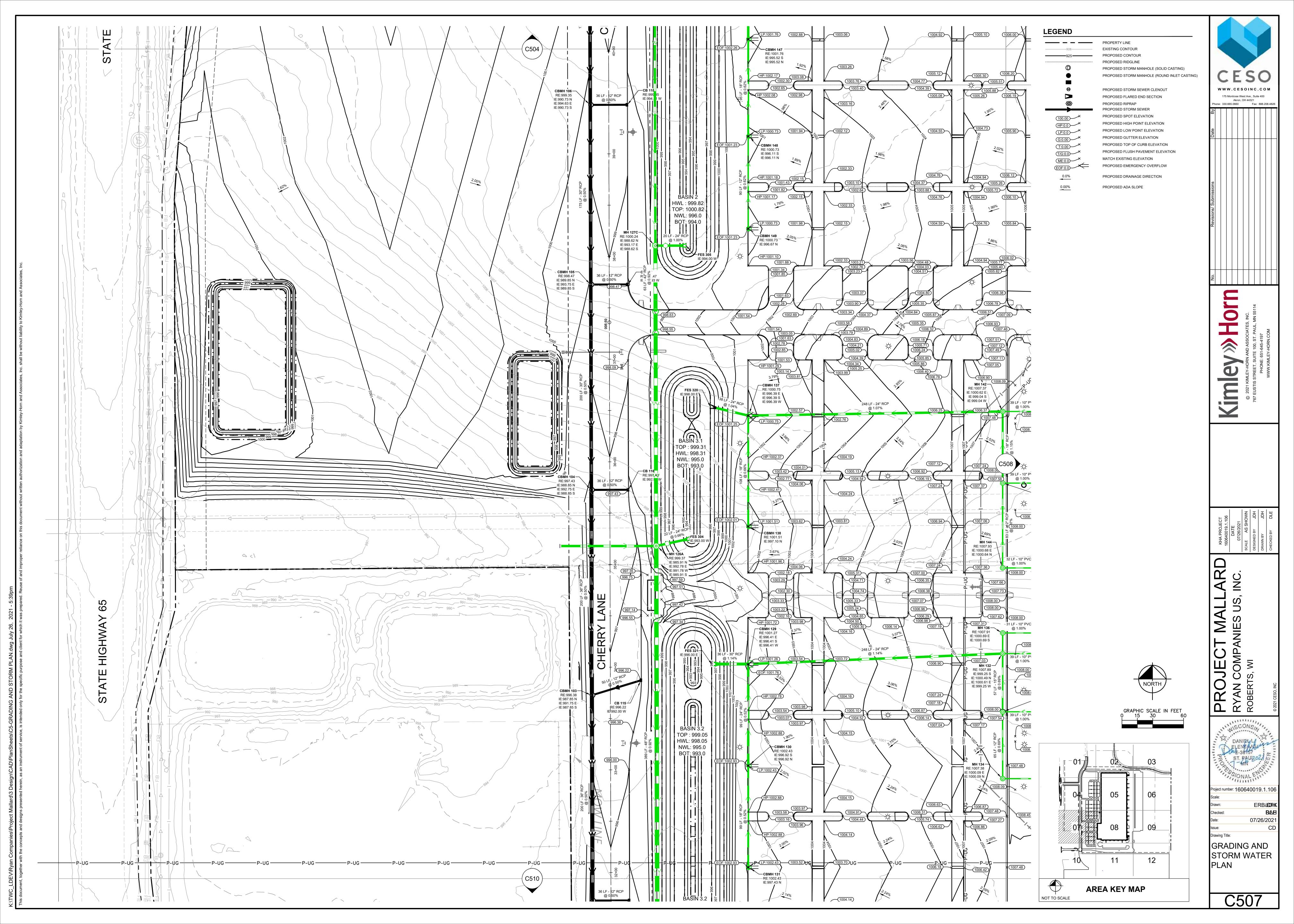


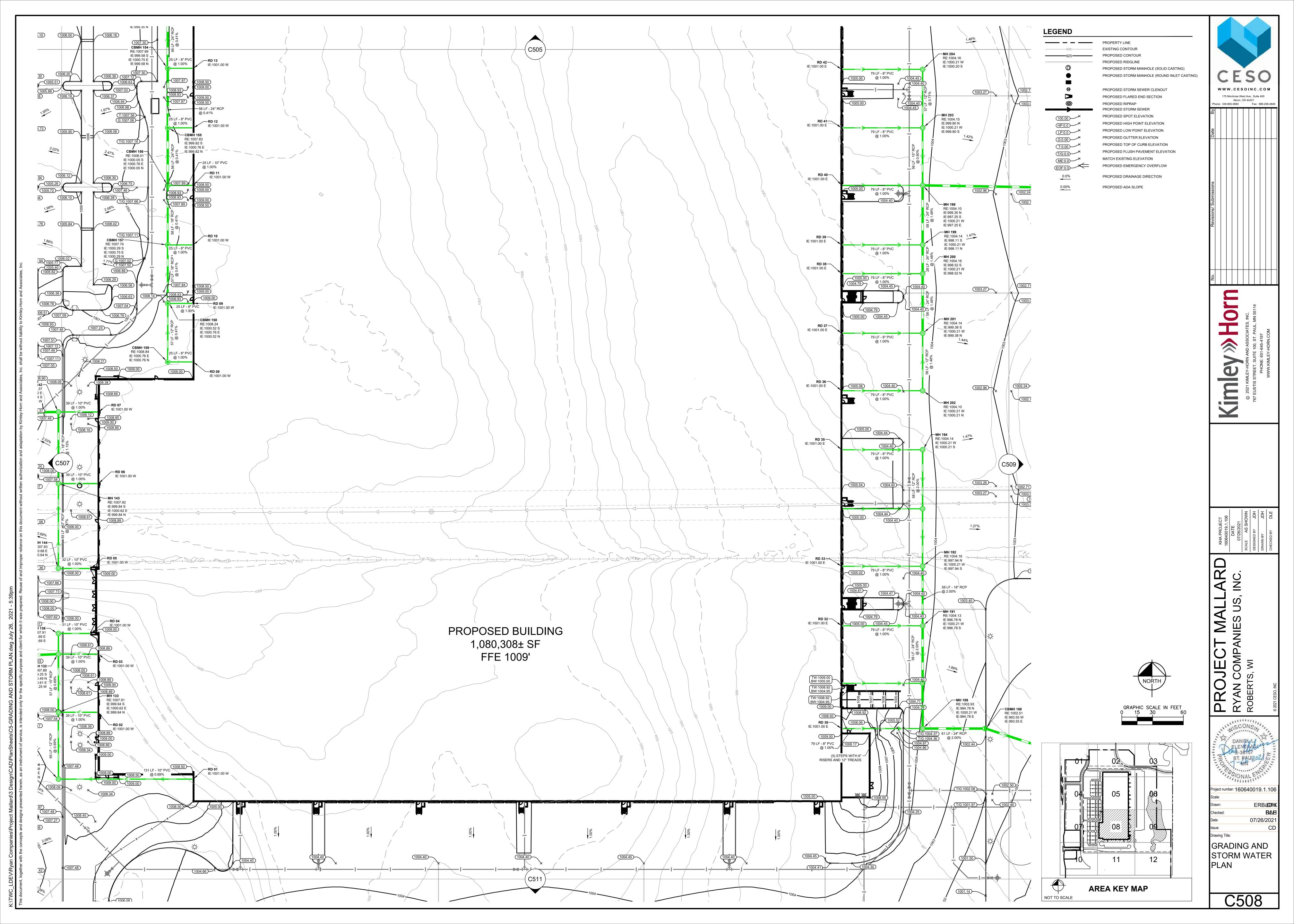


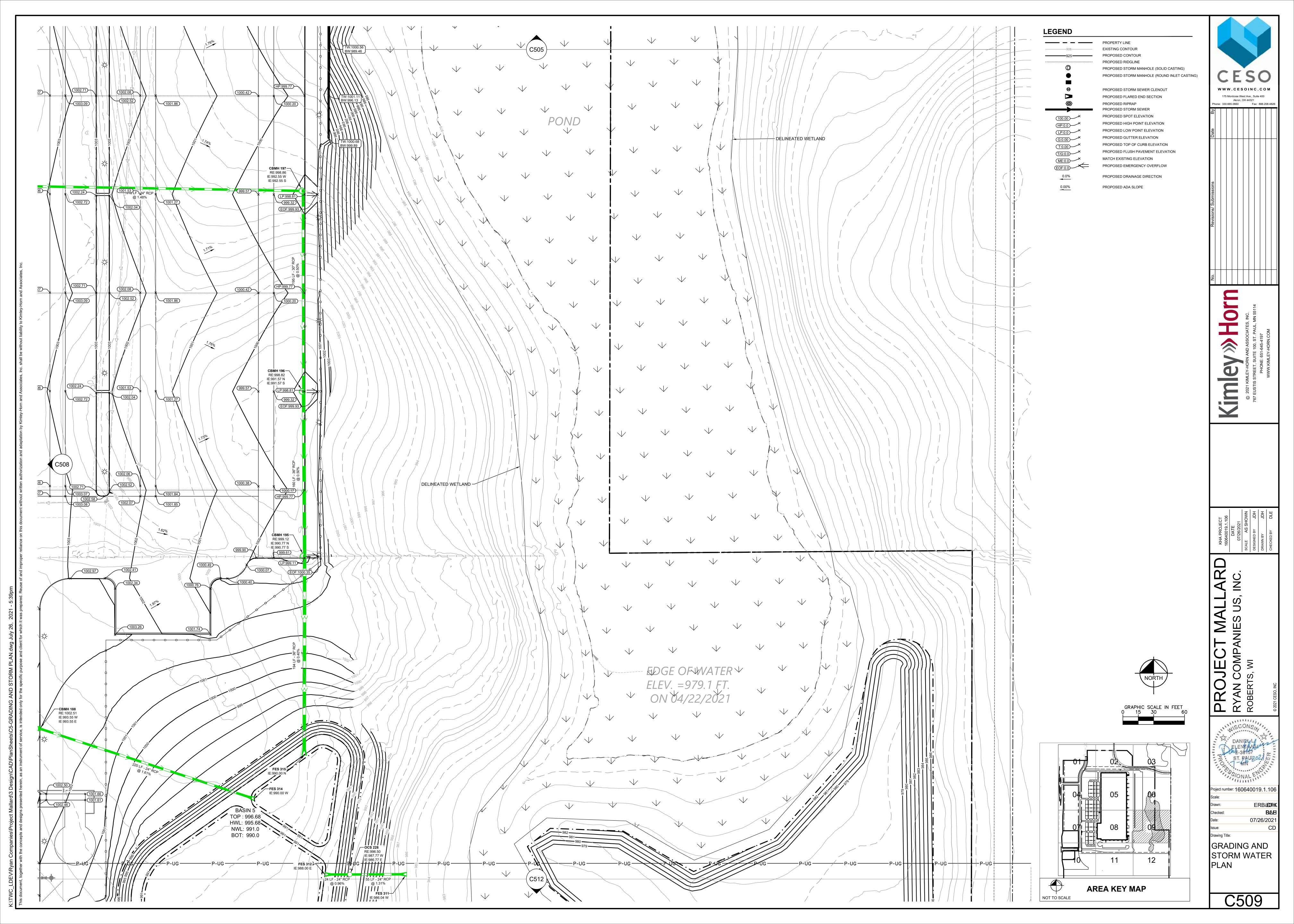


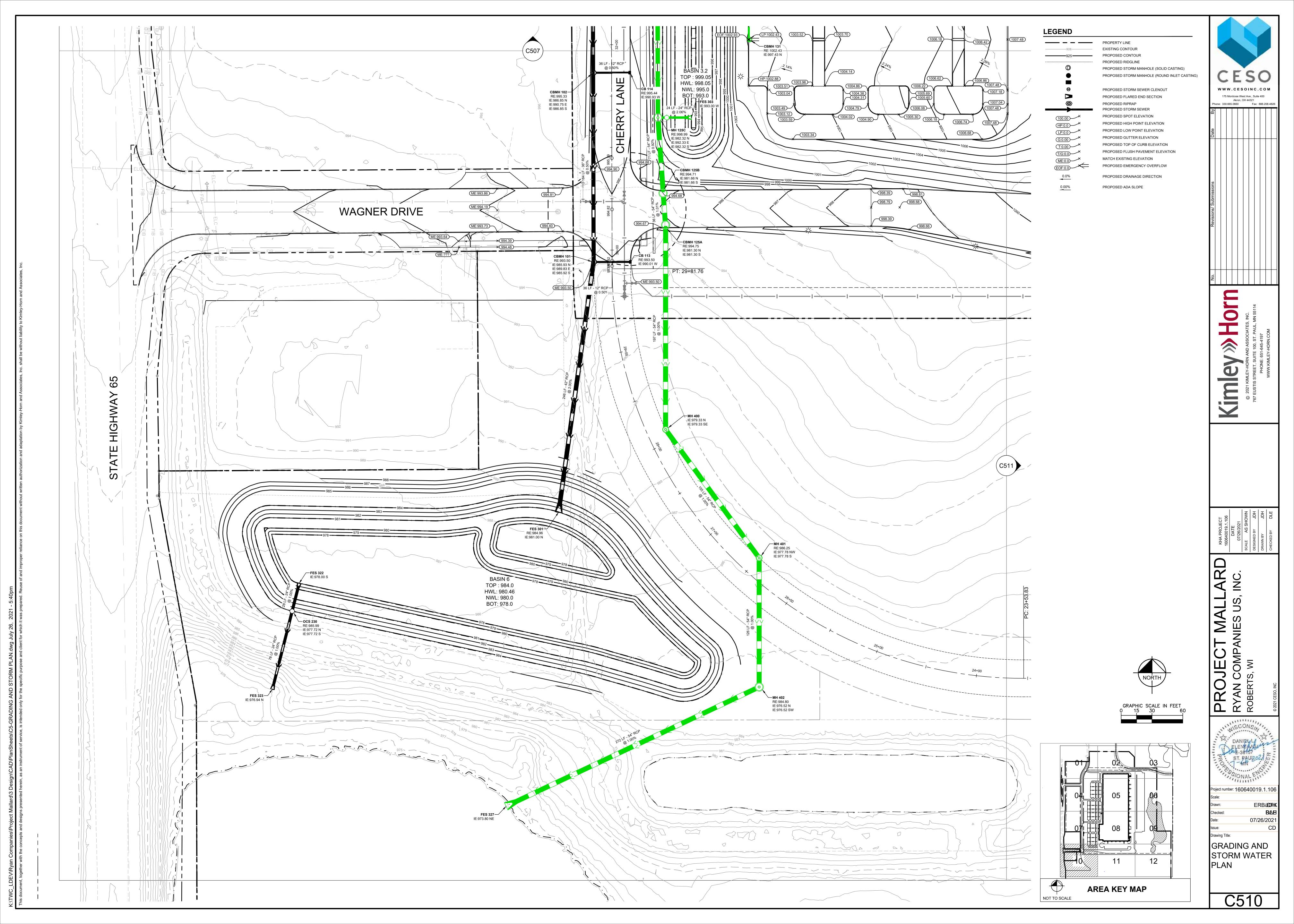


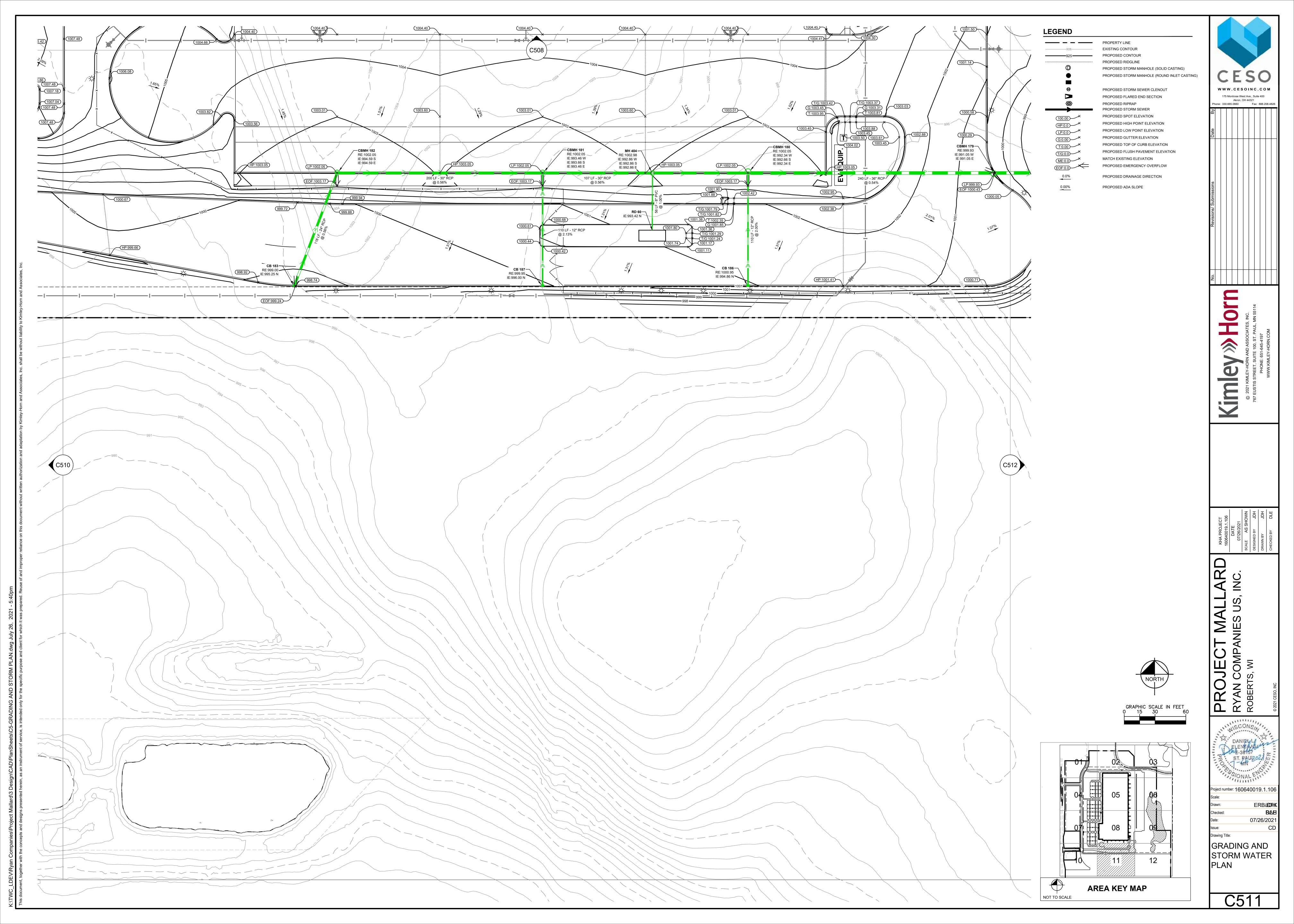


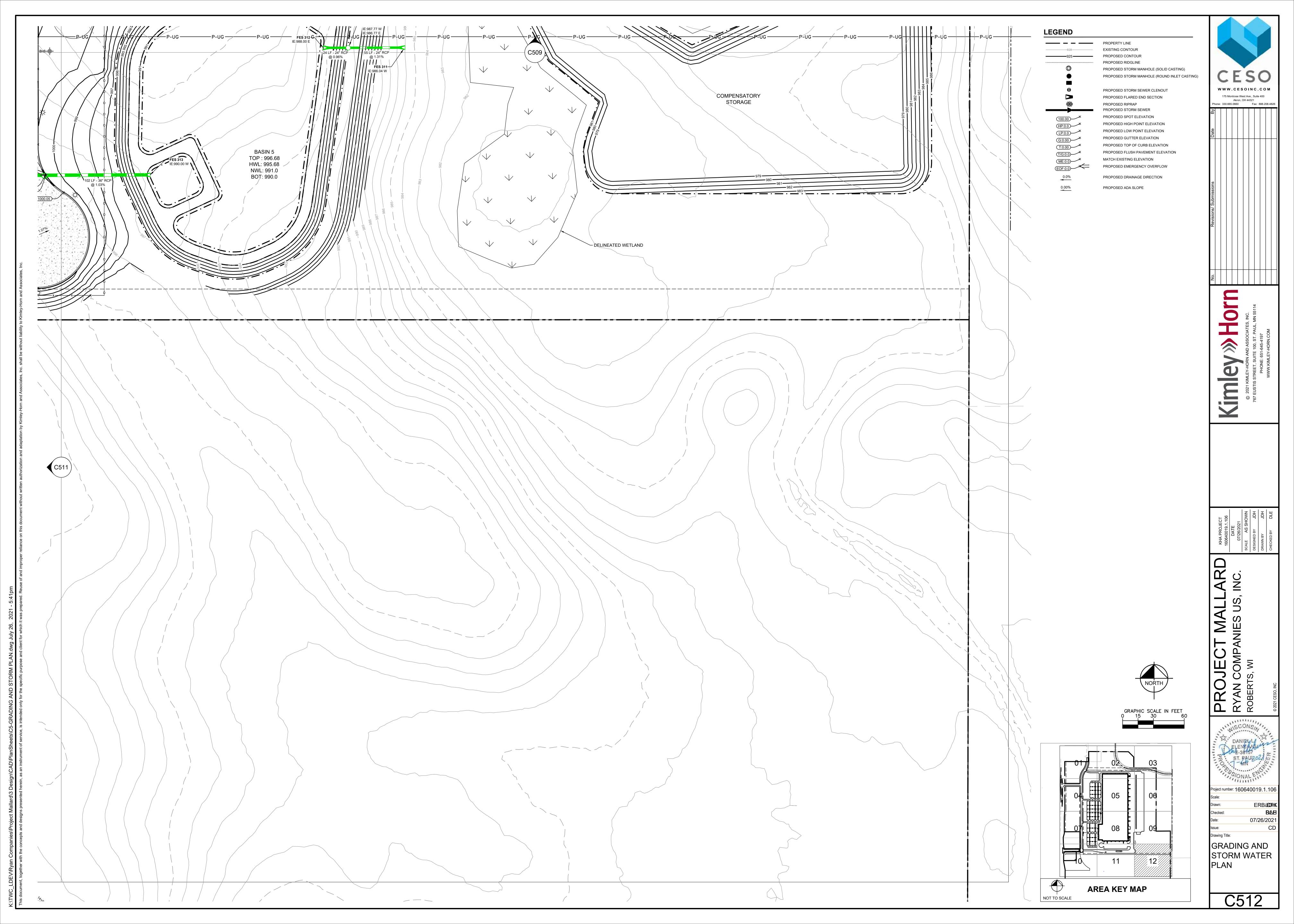


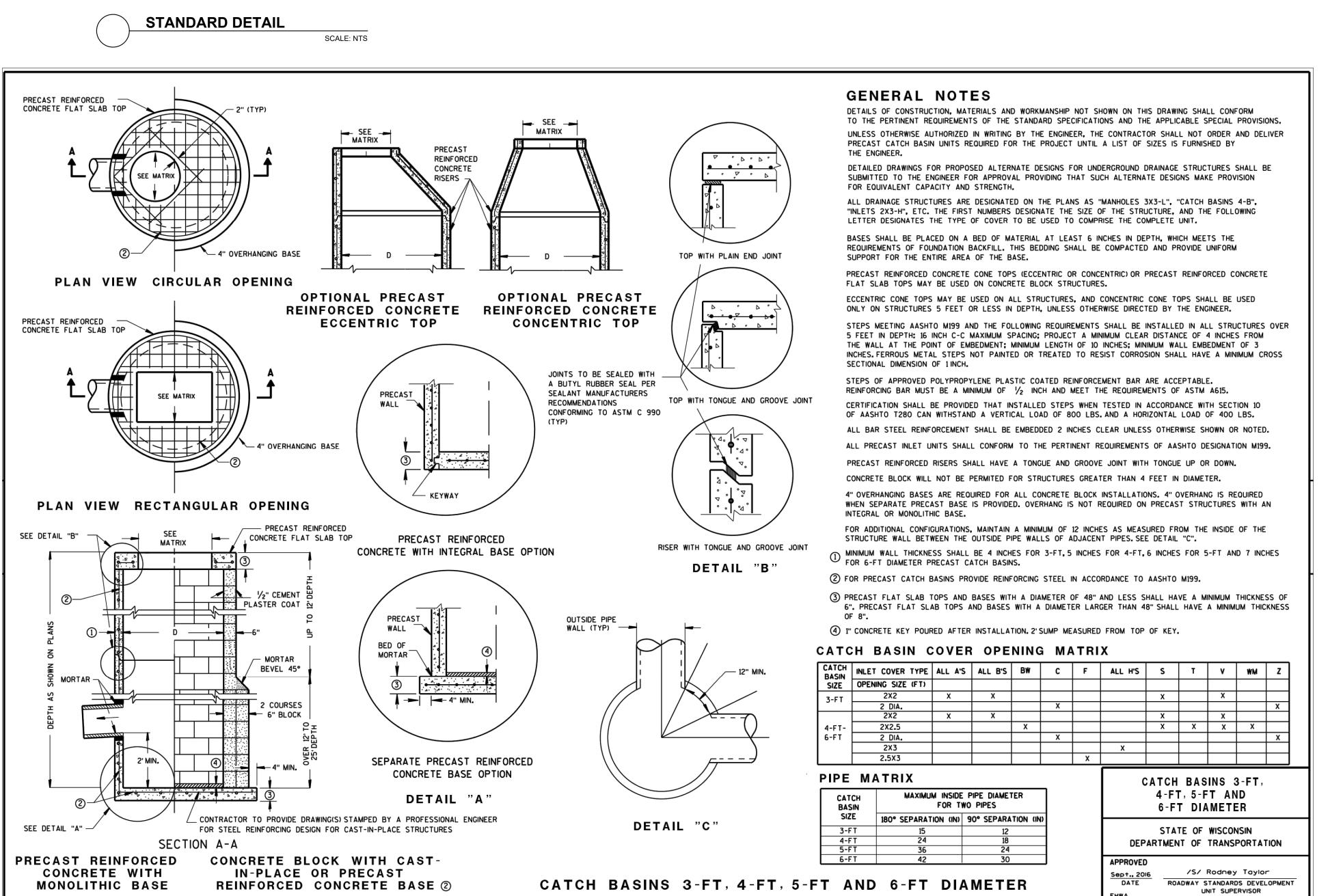






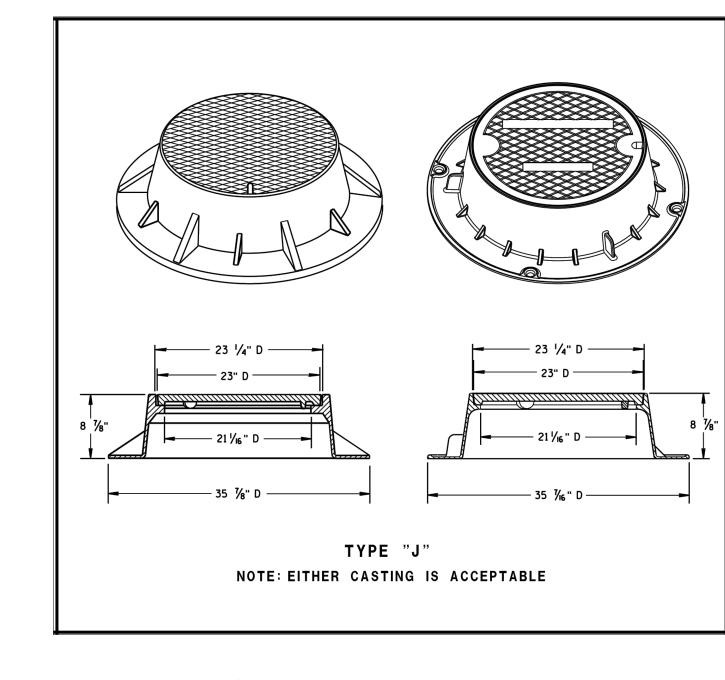




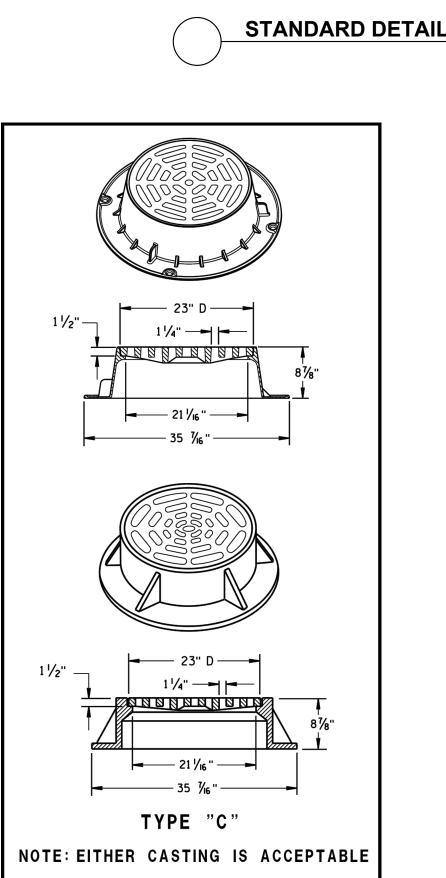


STANDARD DETAIL

SCALE: NTS



SCALE: NTS



STANDARD DETAIL

SAME SLOPE AS

ADJACENT PAVEMENT

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

STANDARD DETAIL

6" SLOPED CURB TYPES A & D

+ 2" - 3" R.

4" SLOPED CURB TYPES A & D

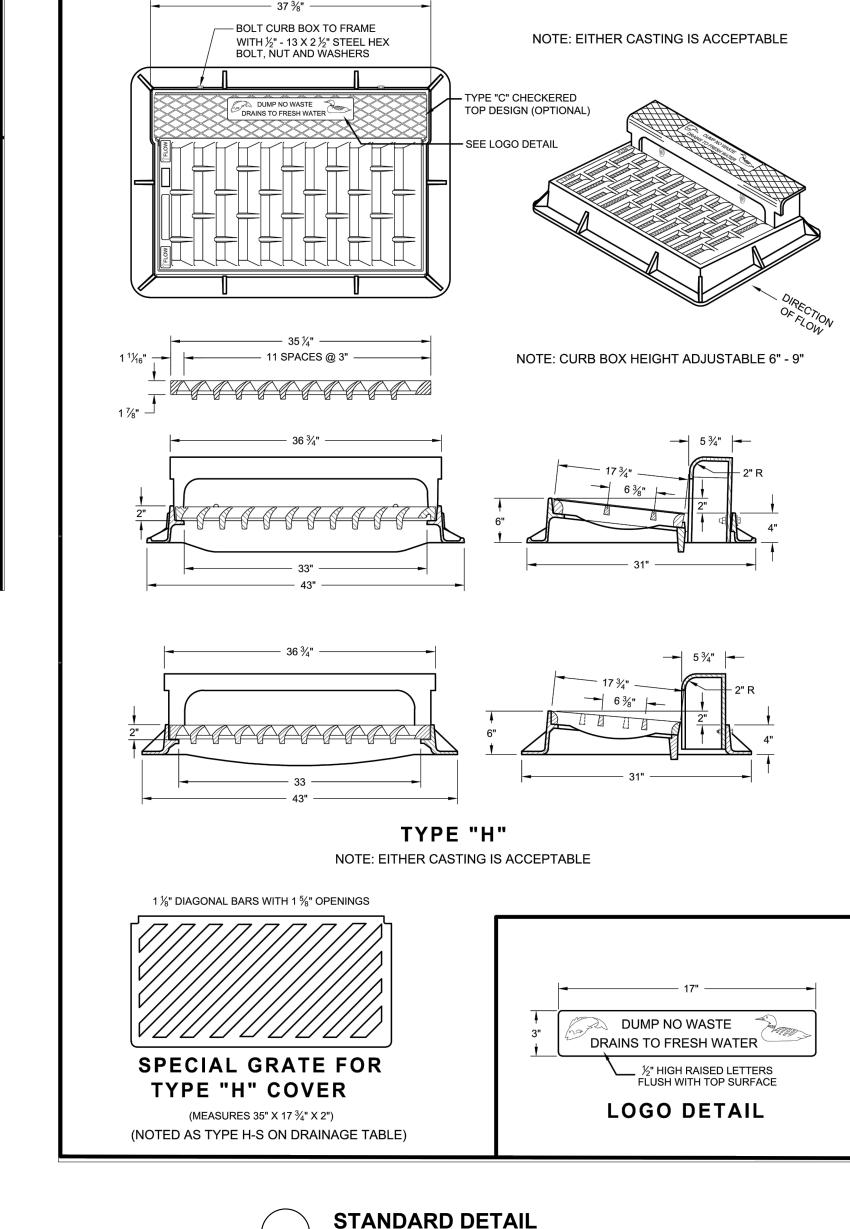
STANDARD DETAIL

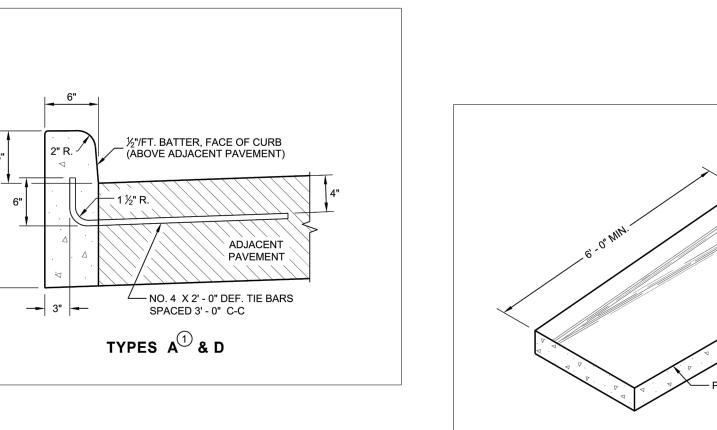
**CONCRETE CURB AND GUTTER 36"** 

SCALE: NTS

SCALE: NTS

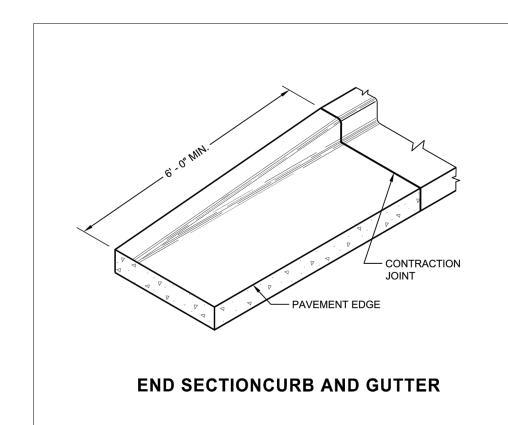
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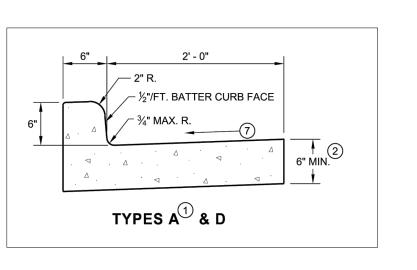


SCALE: NTS

SCALE: NTS



SCALE: NTS



STANDARD DETAIL

STANDARD DETAIL

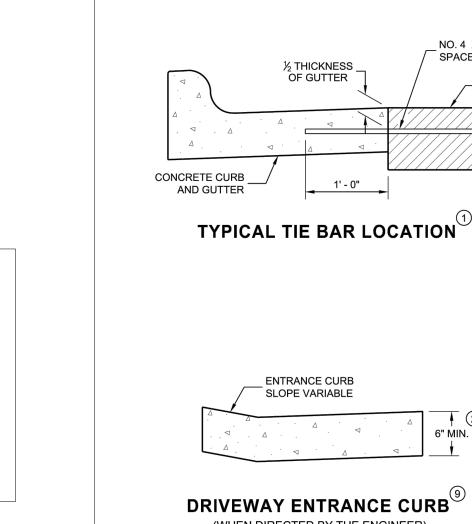
∠— 2" R.

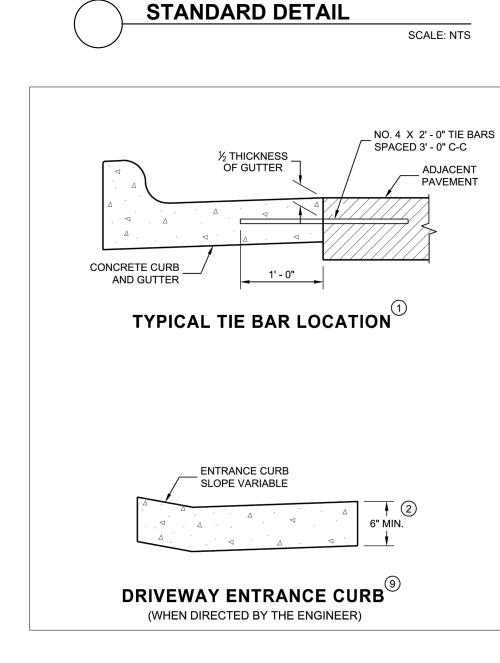
TYPES A & D

STANDARD DETAIL

**CONCRETE CURB AND GUTTER 18"** 

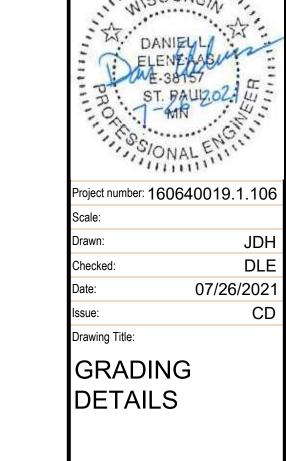
/<sup>−</sup> ¾" MAX. R.





STANDARD DETAIL

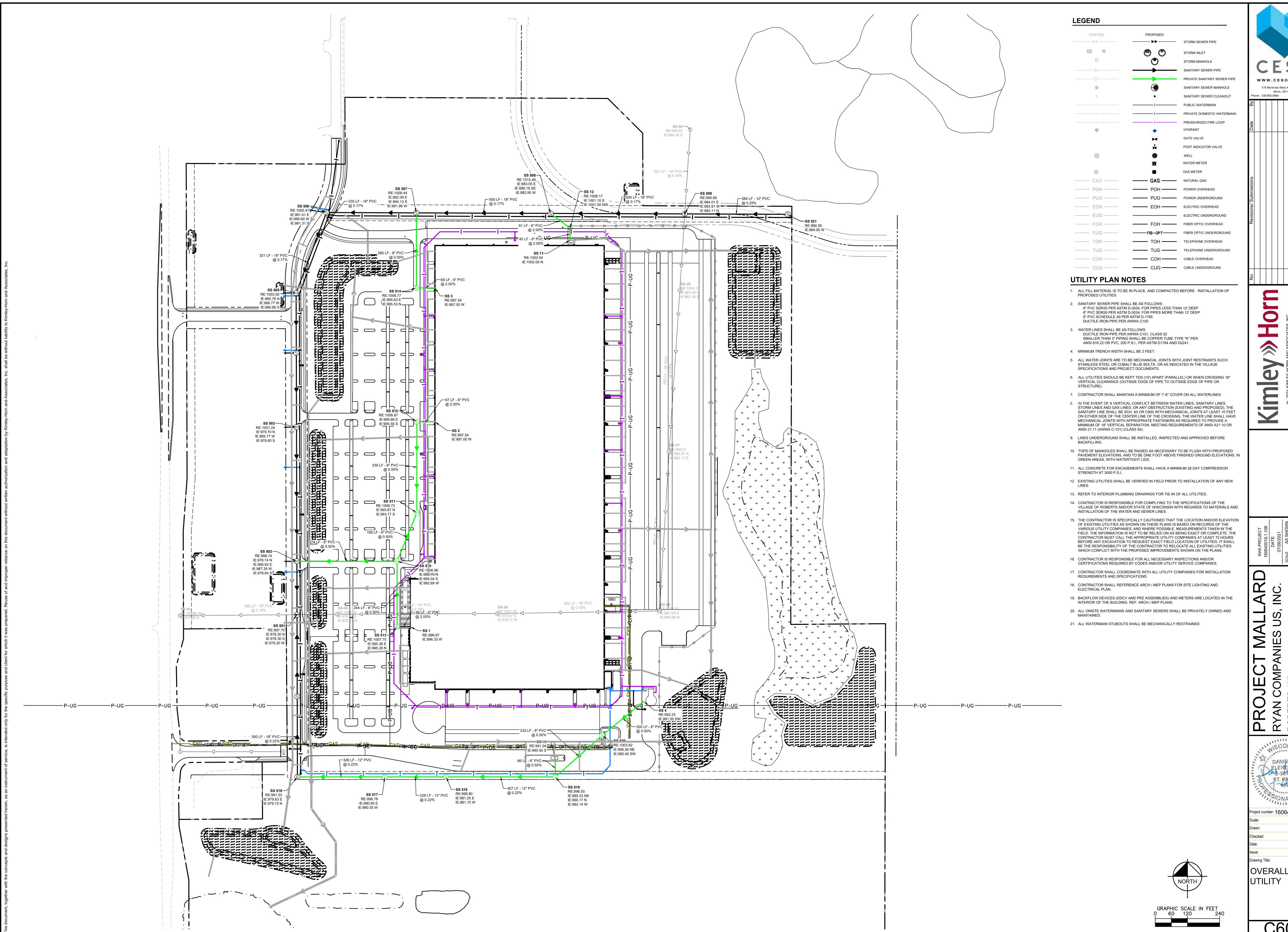
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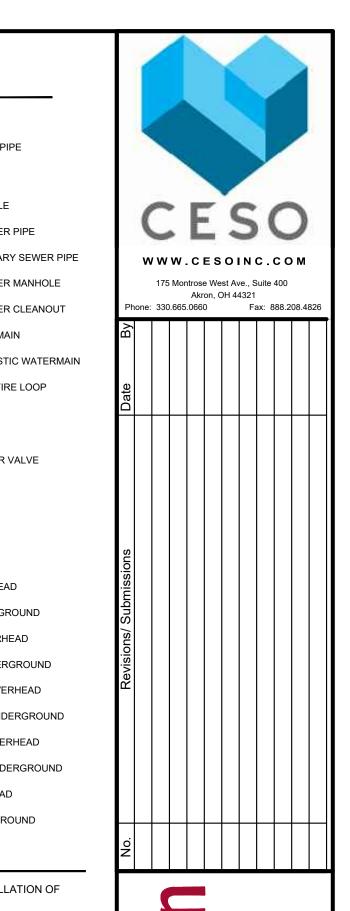


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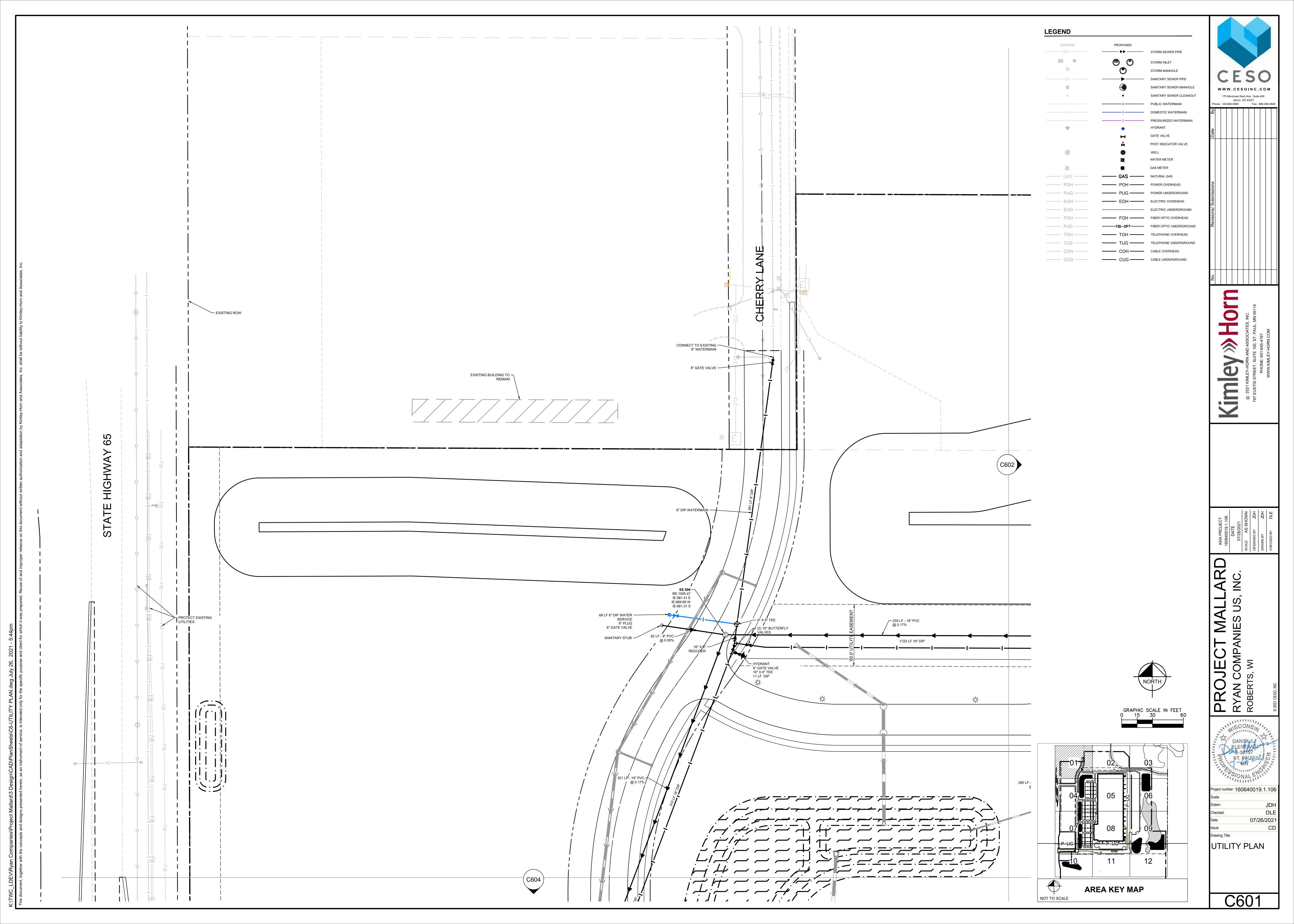
hone: 330.665.0660 Fax: 888.208.4826

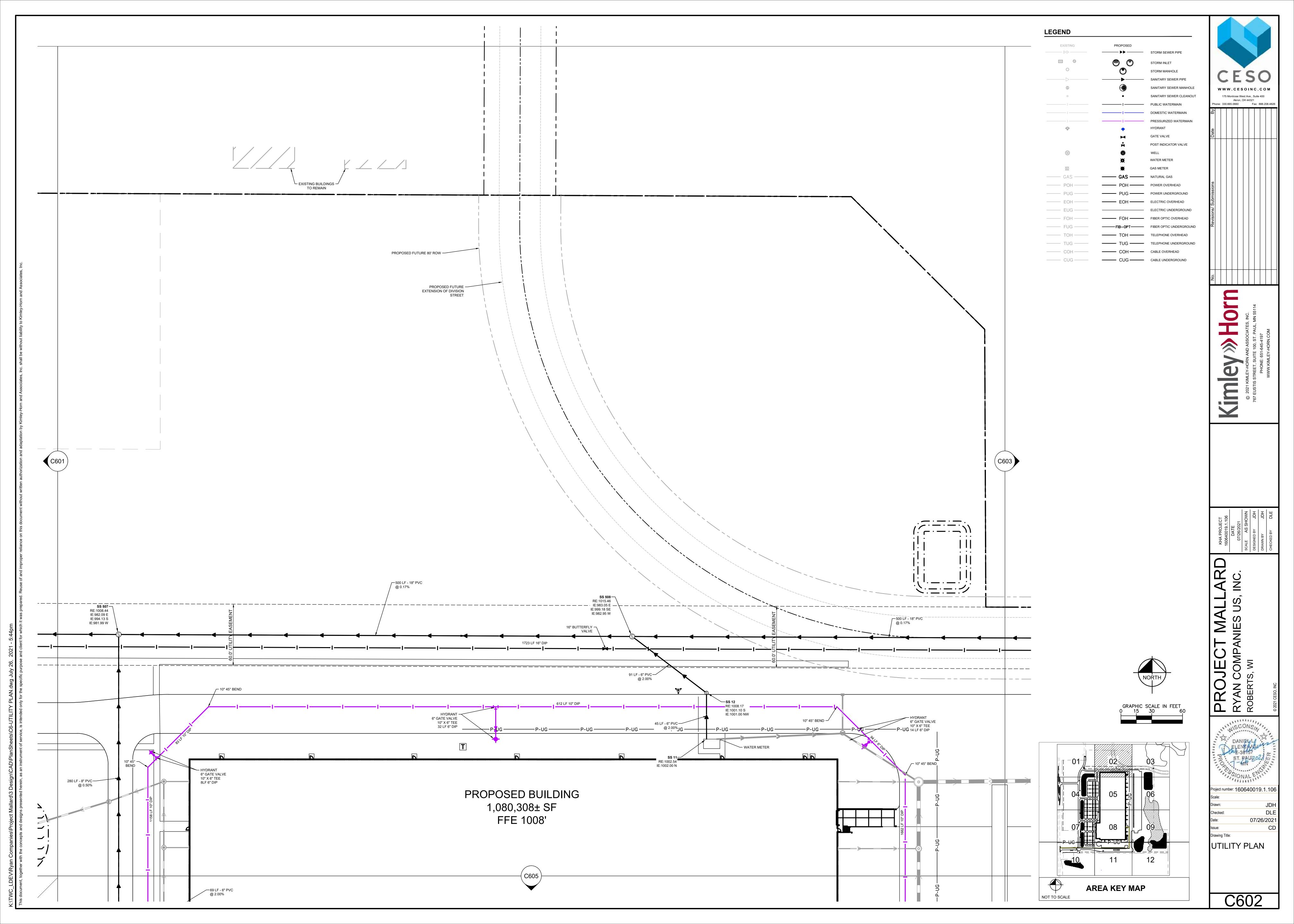
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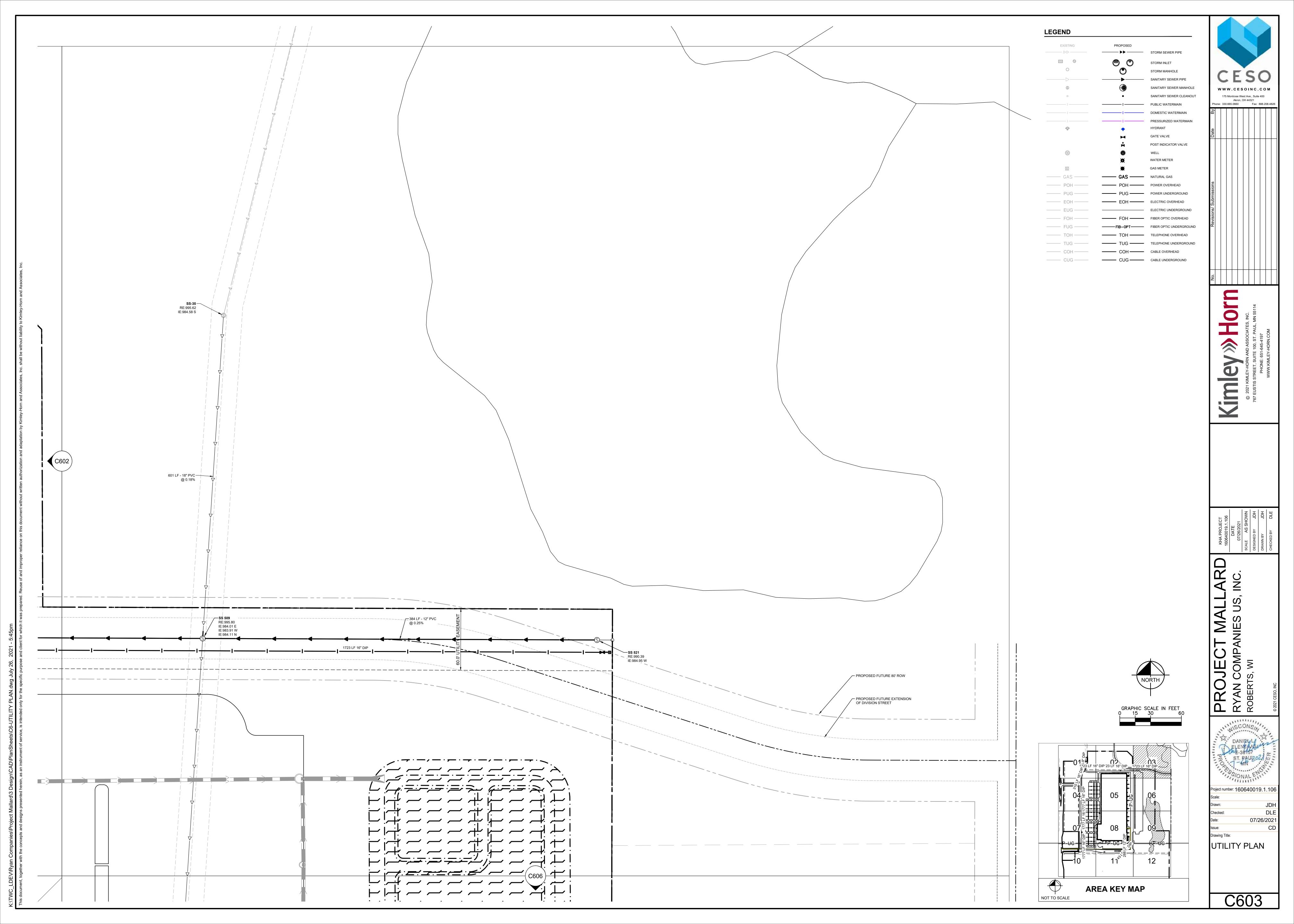


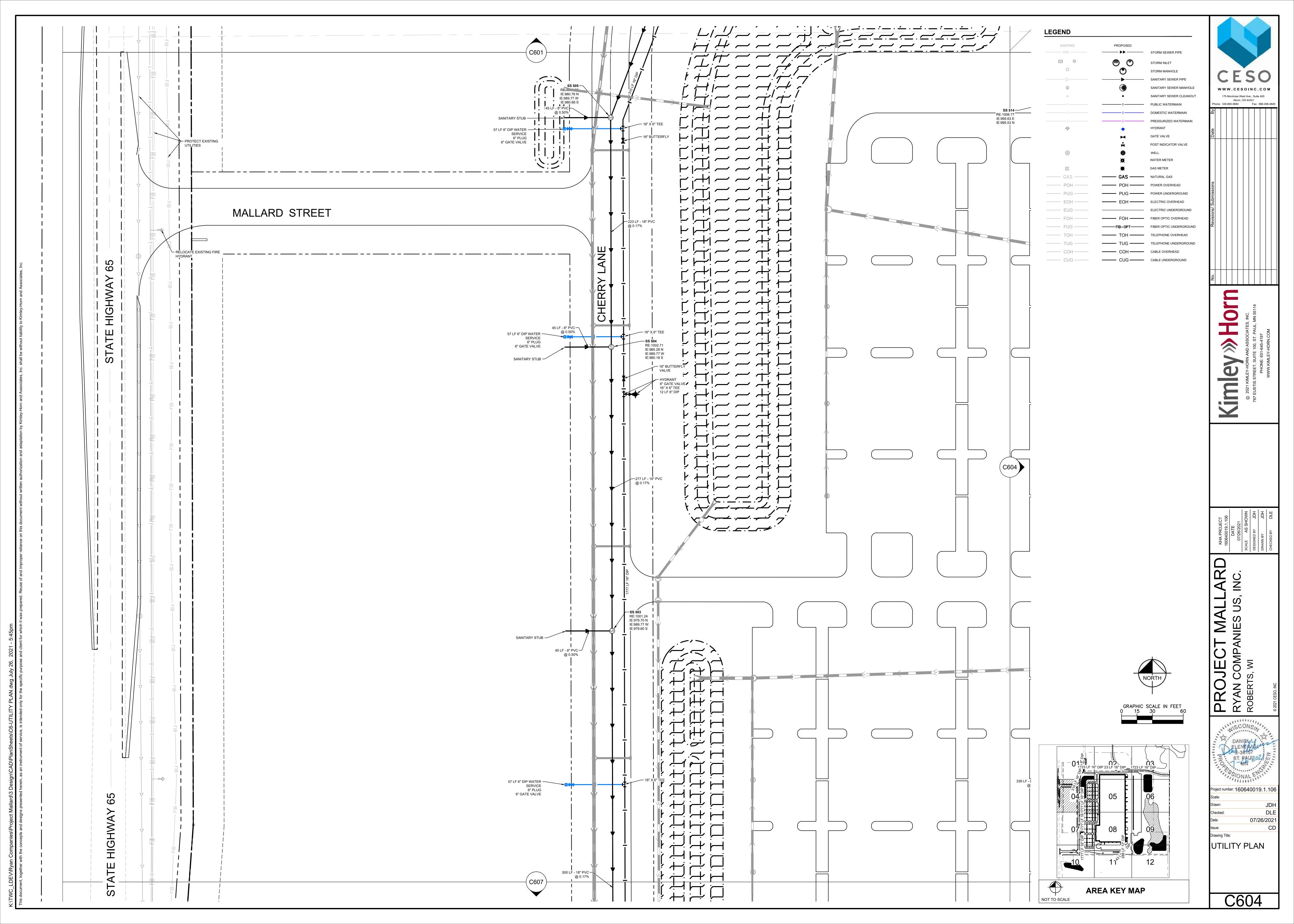


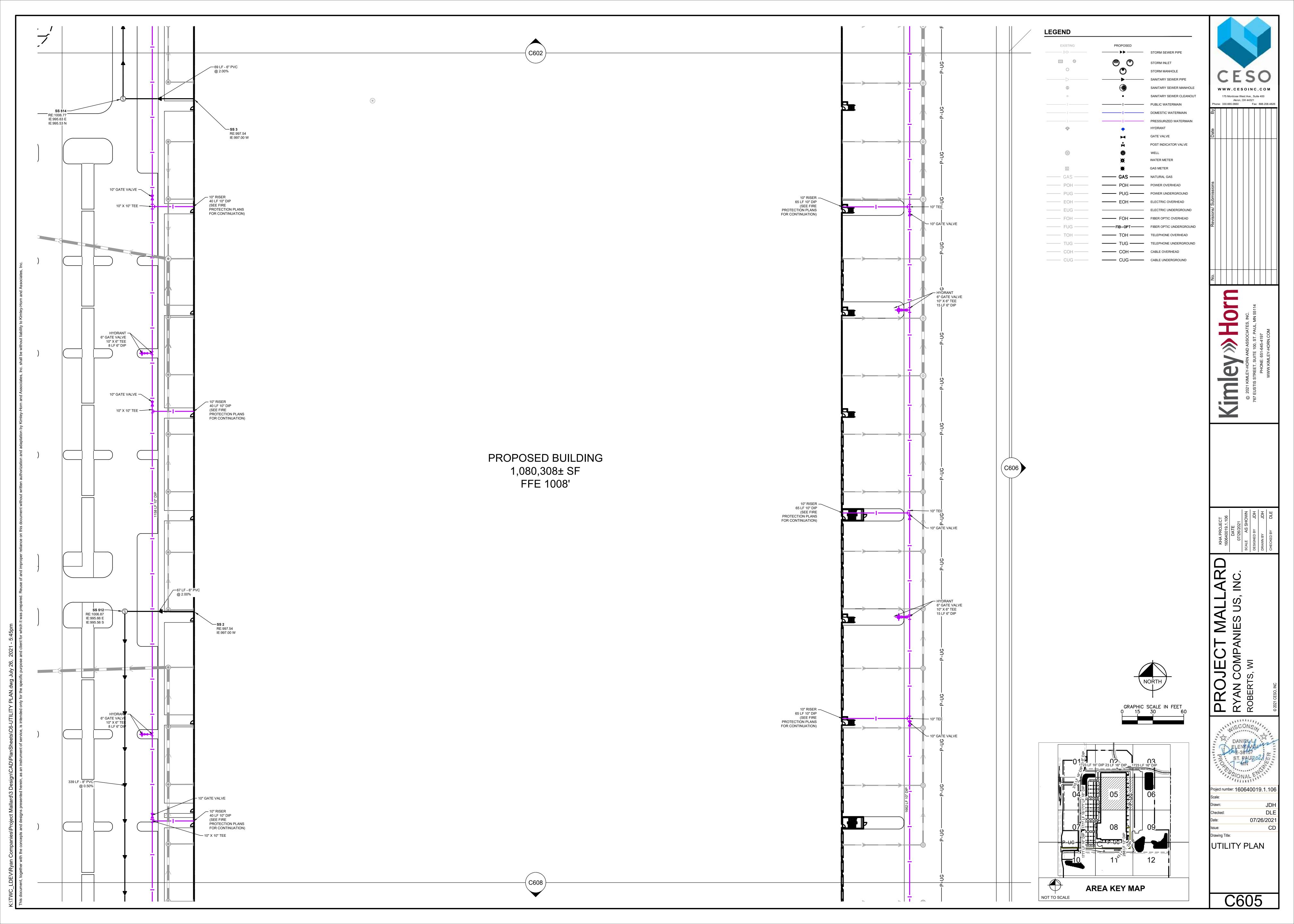


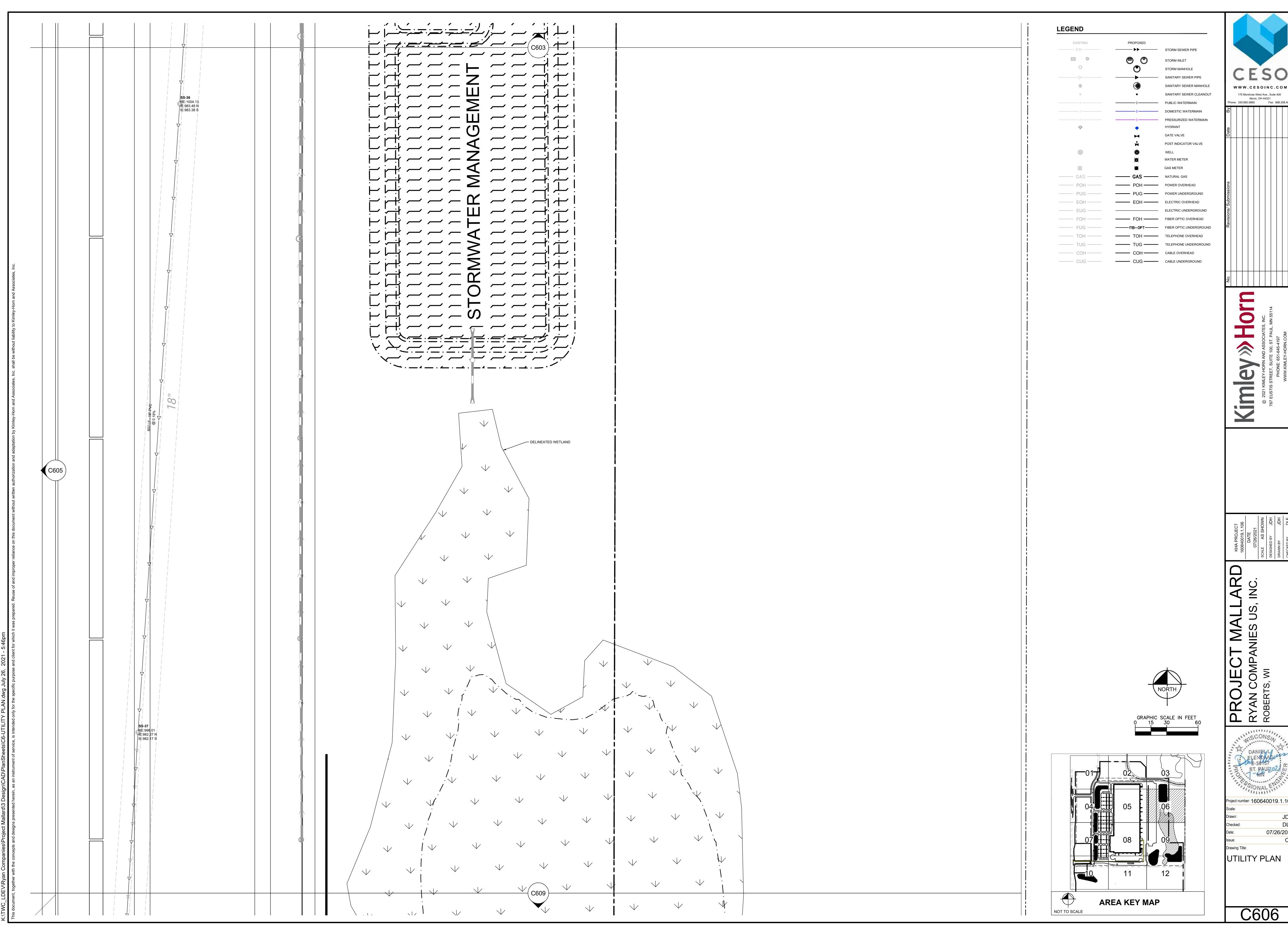


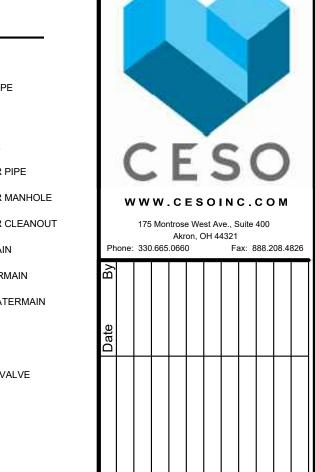


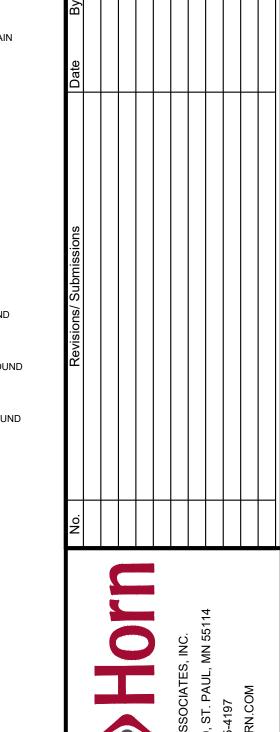


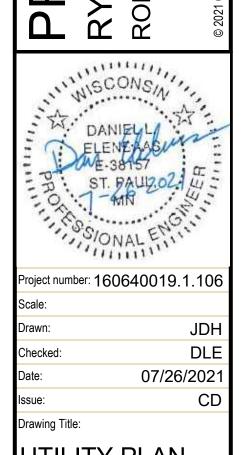


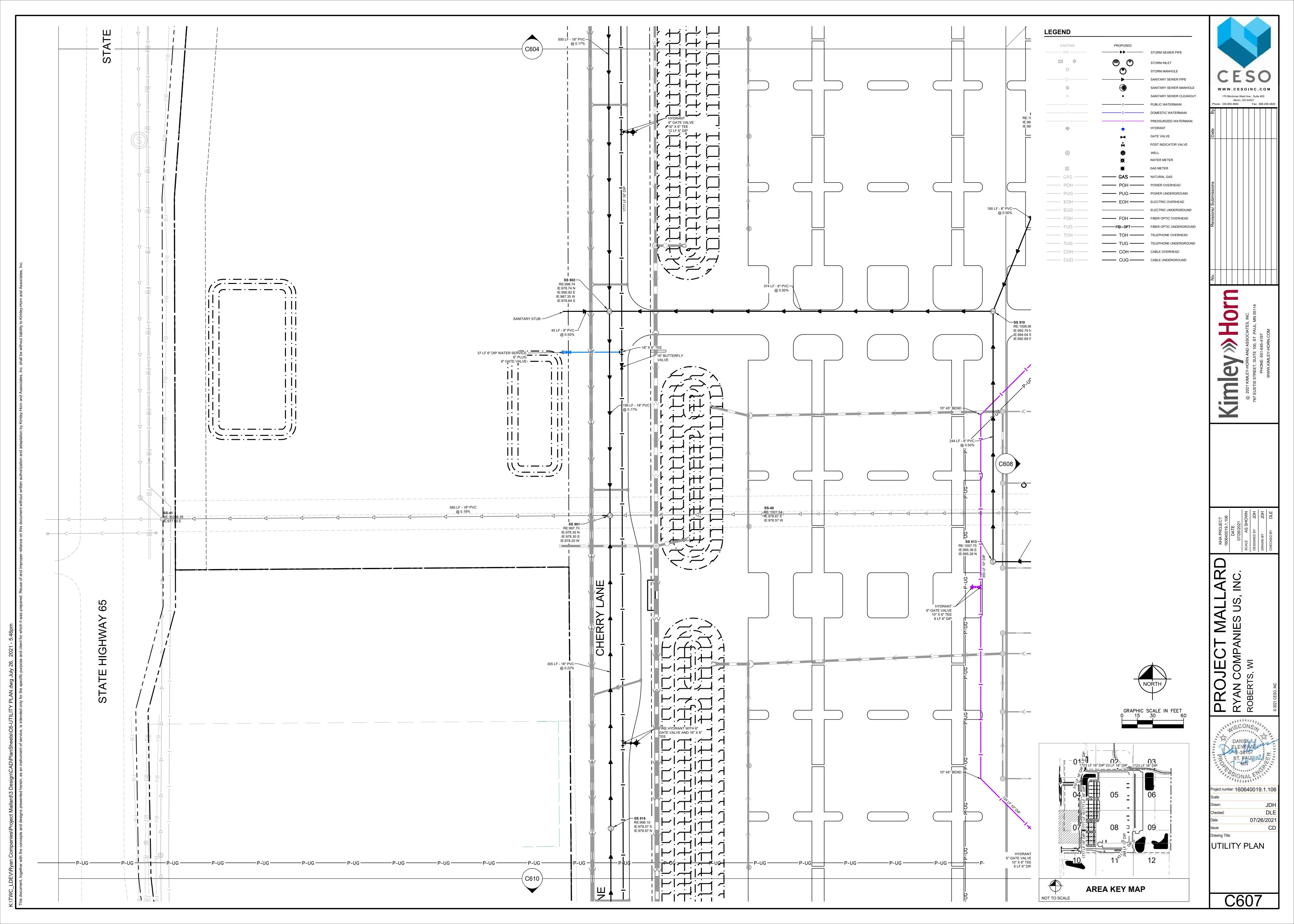


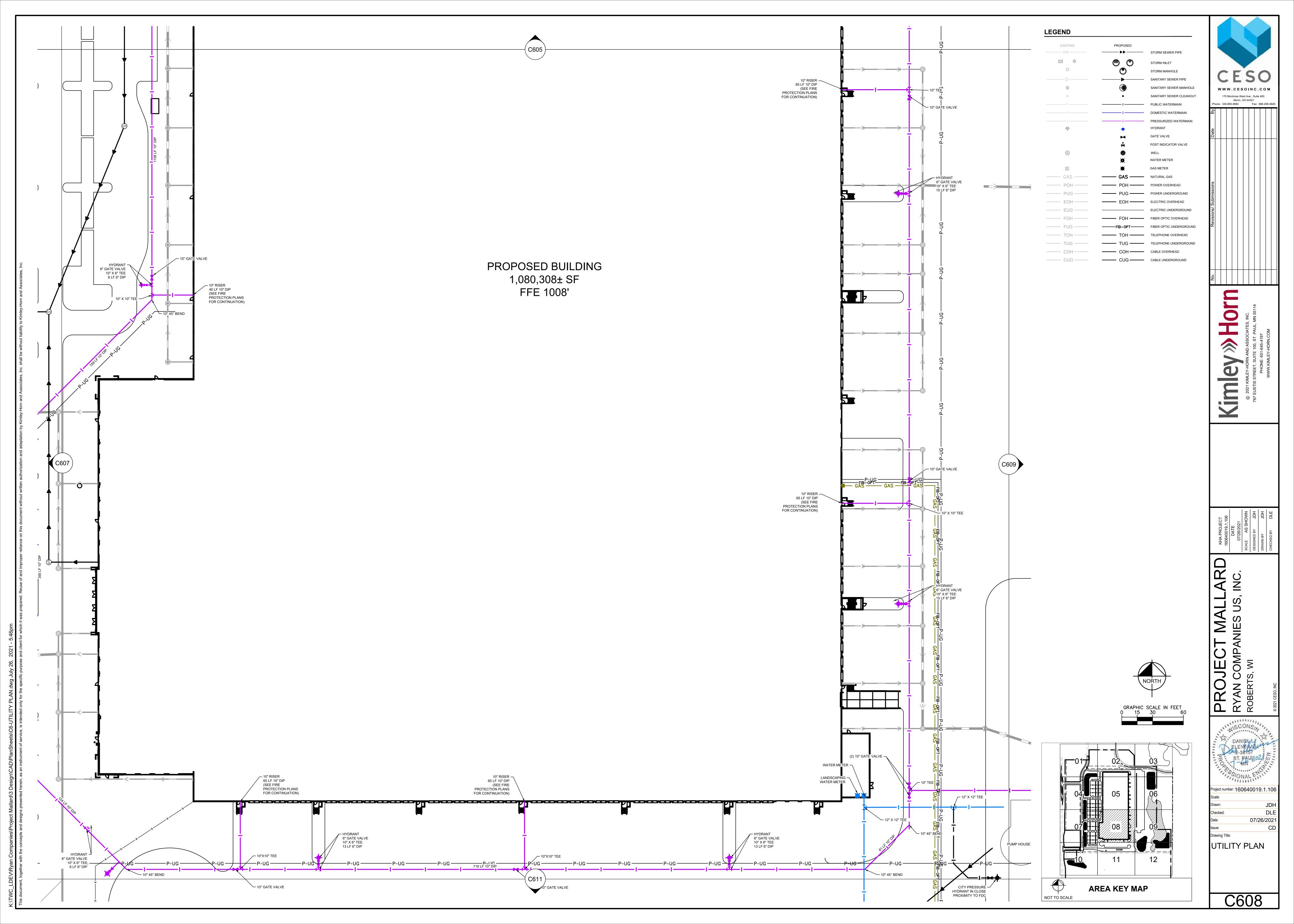




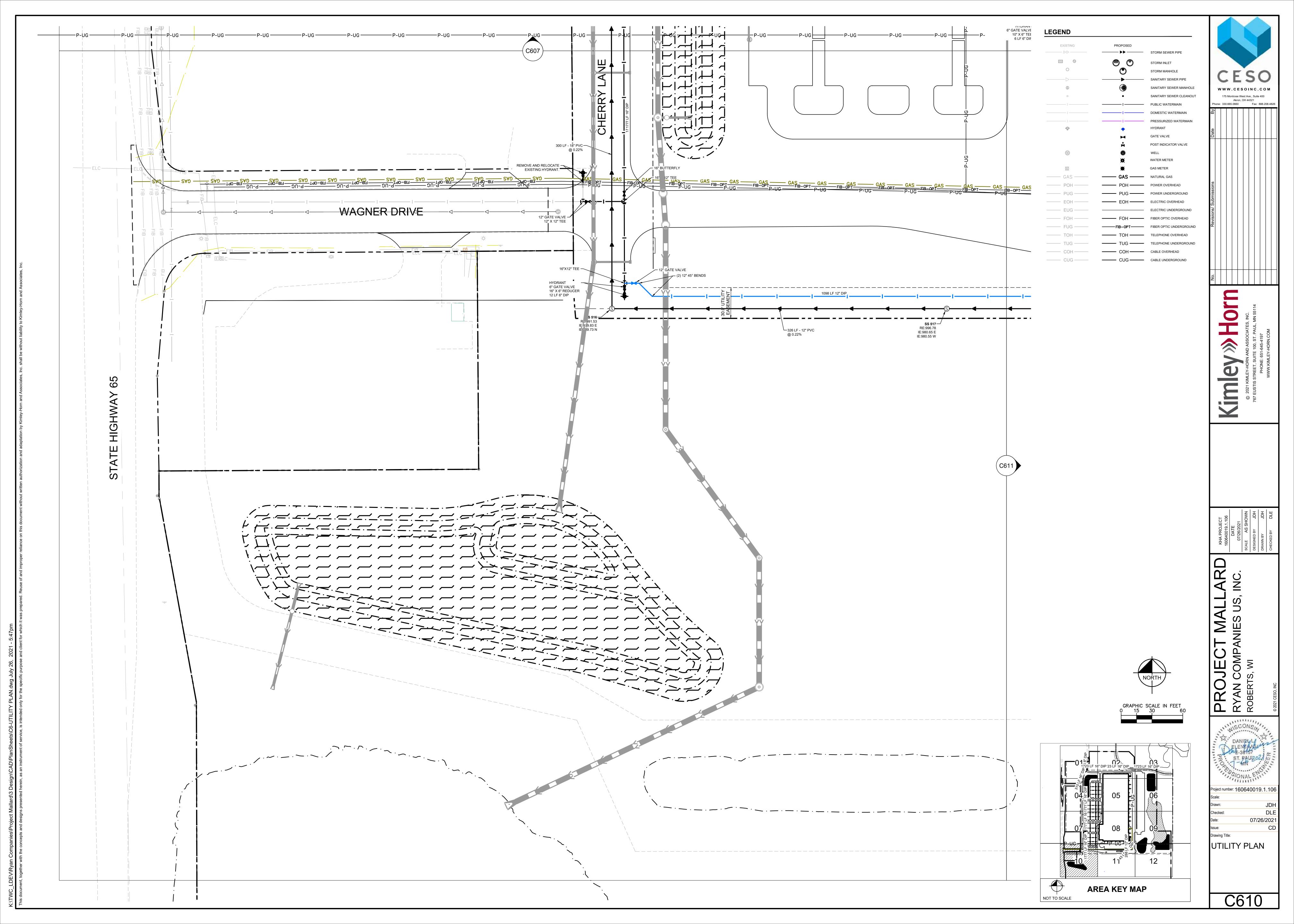


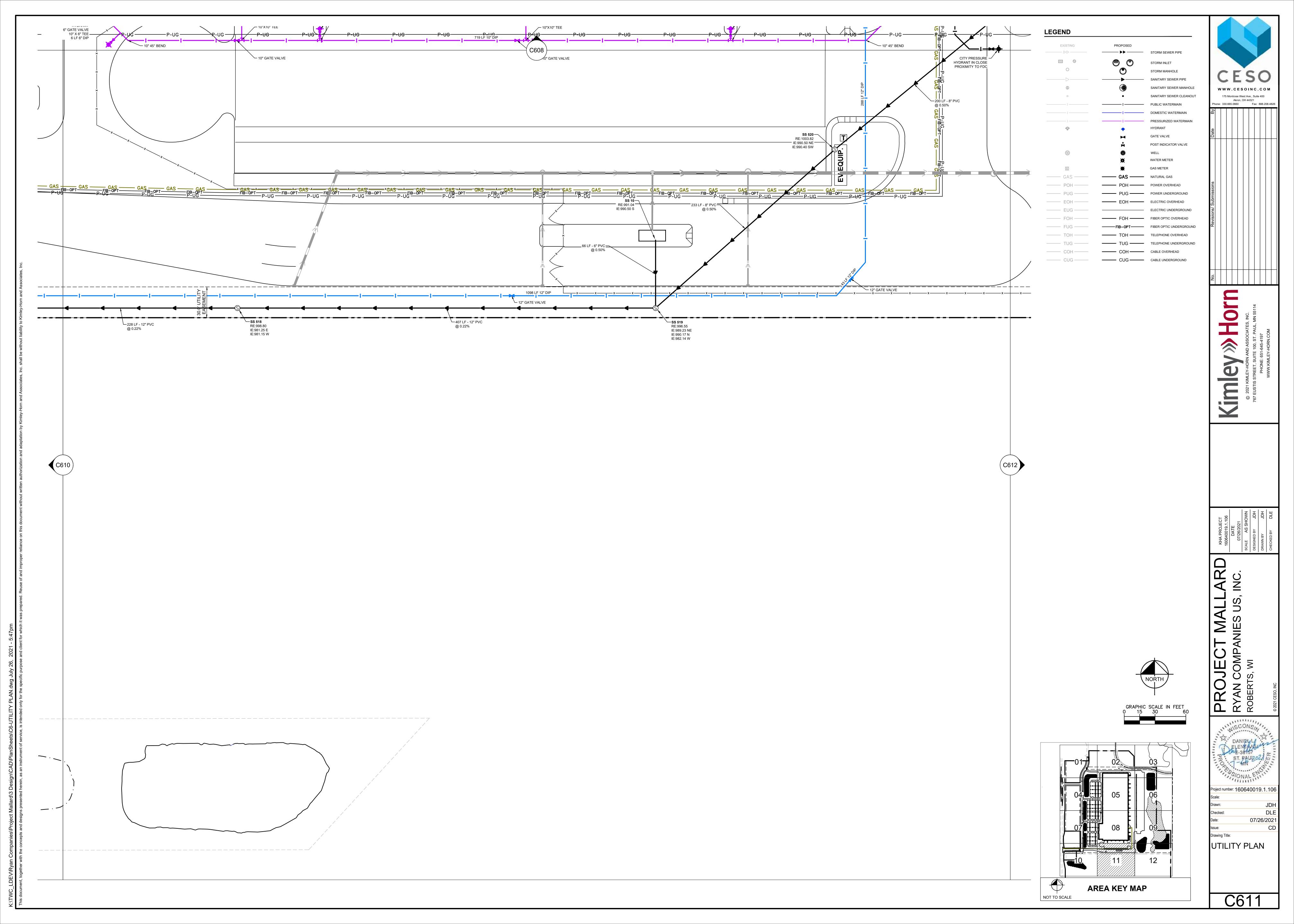


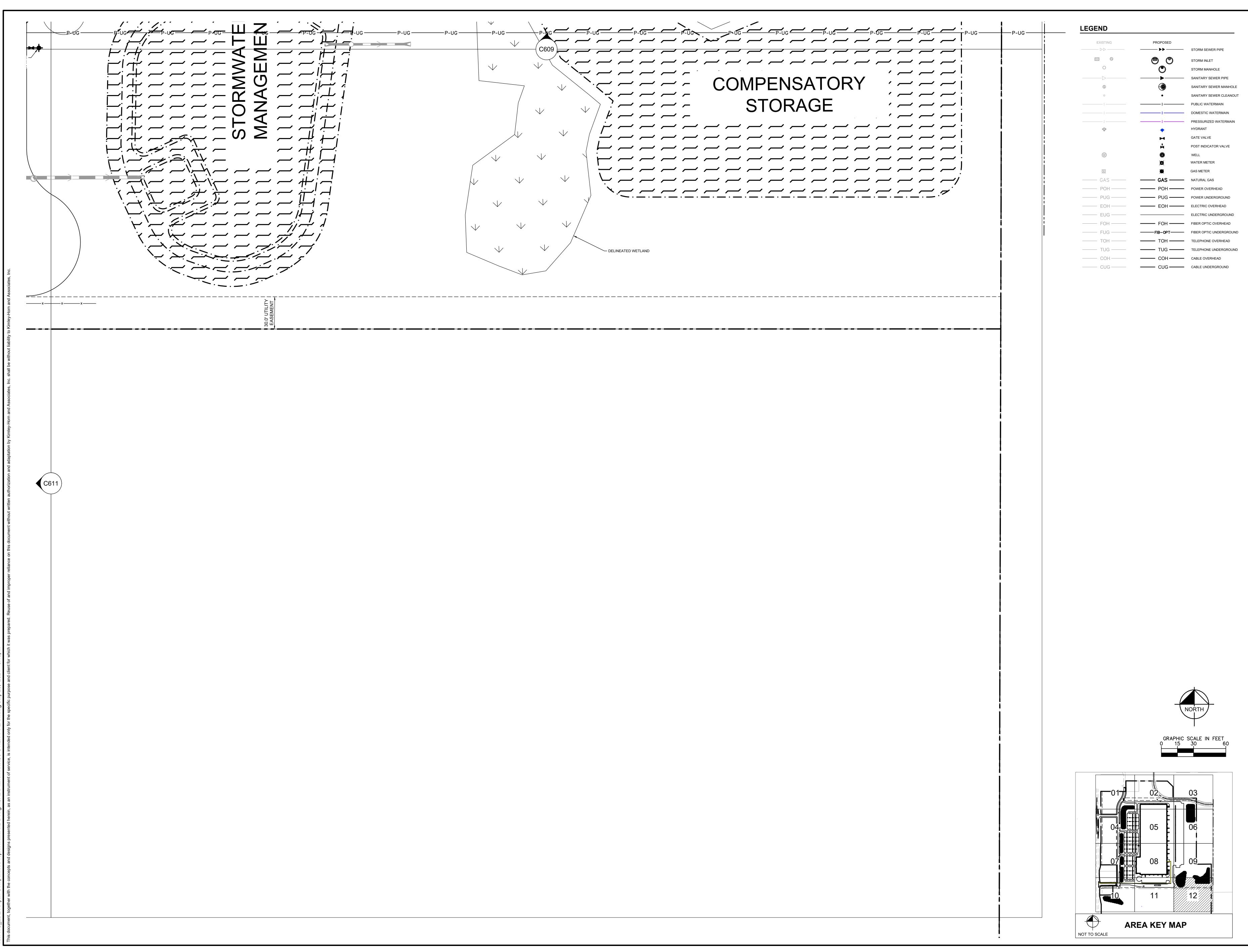


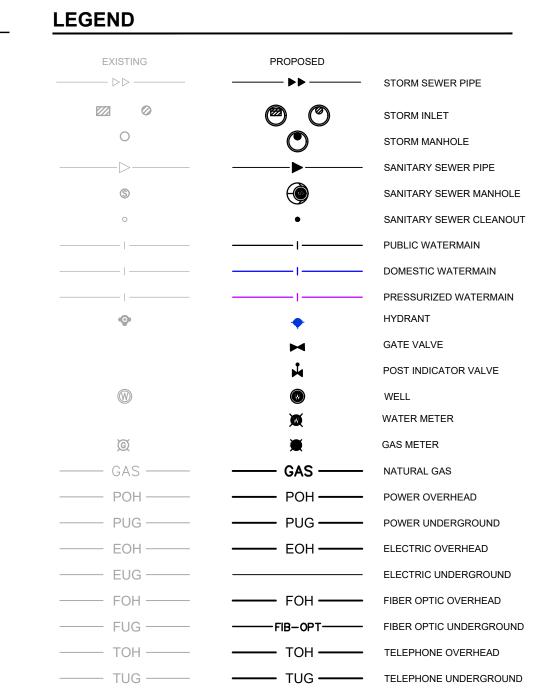


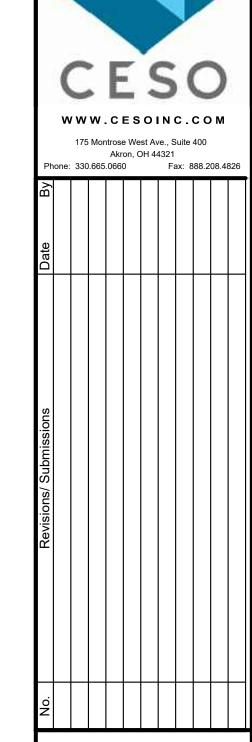


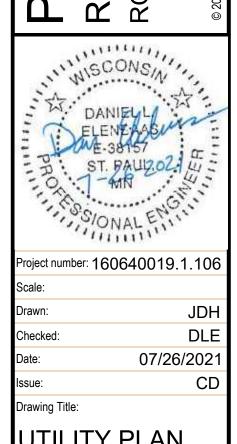




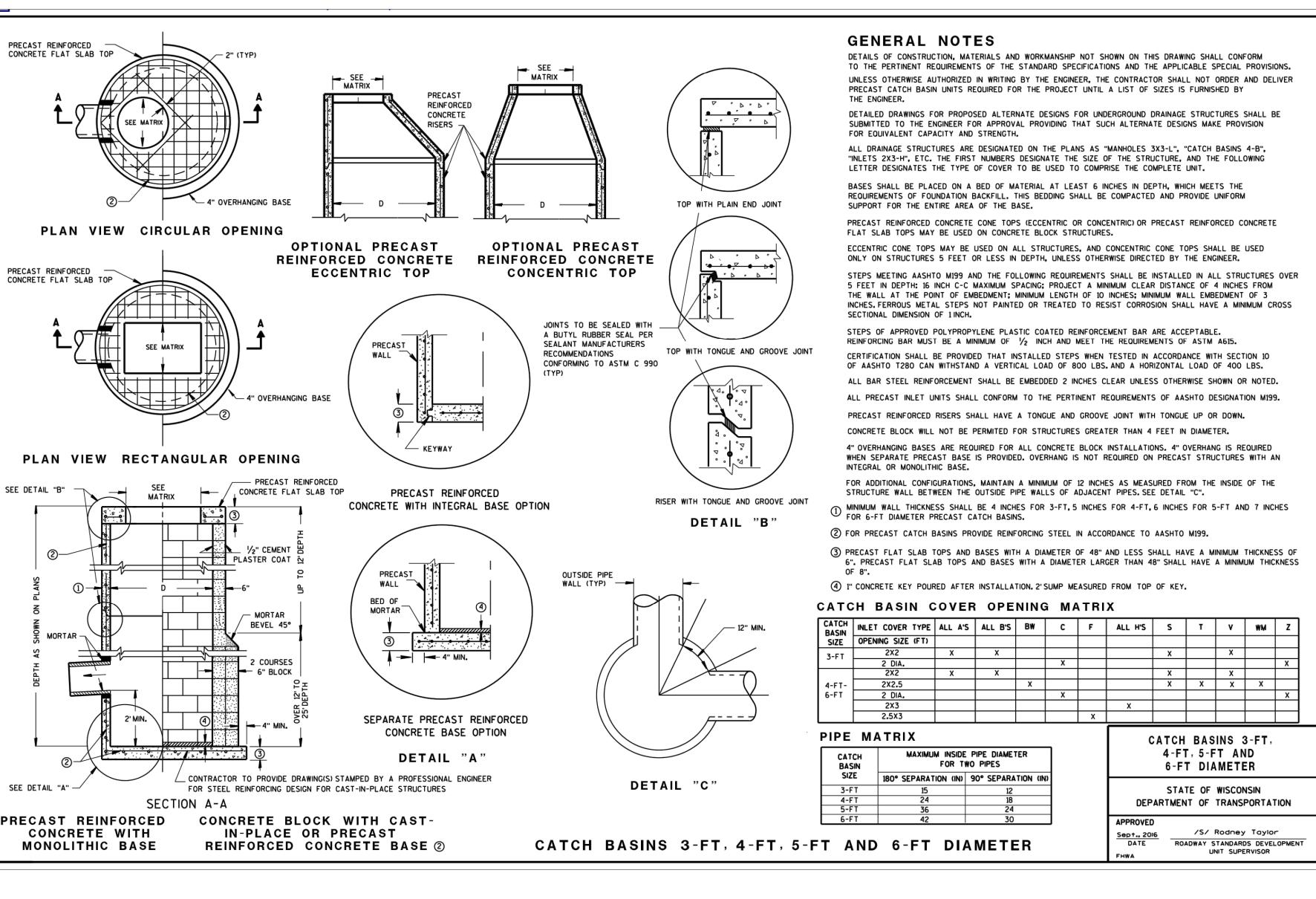


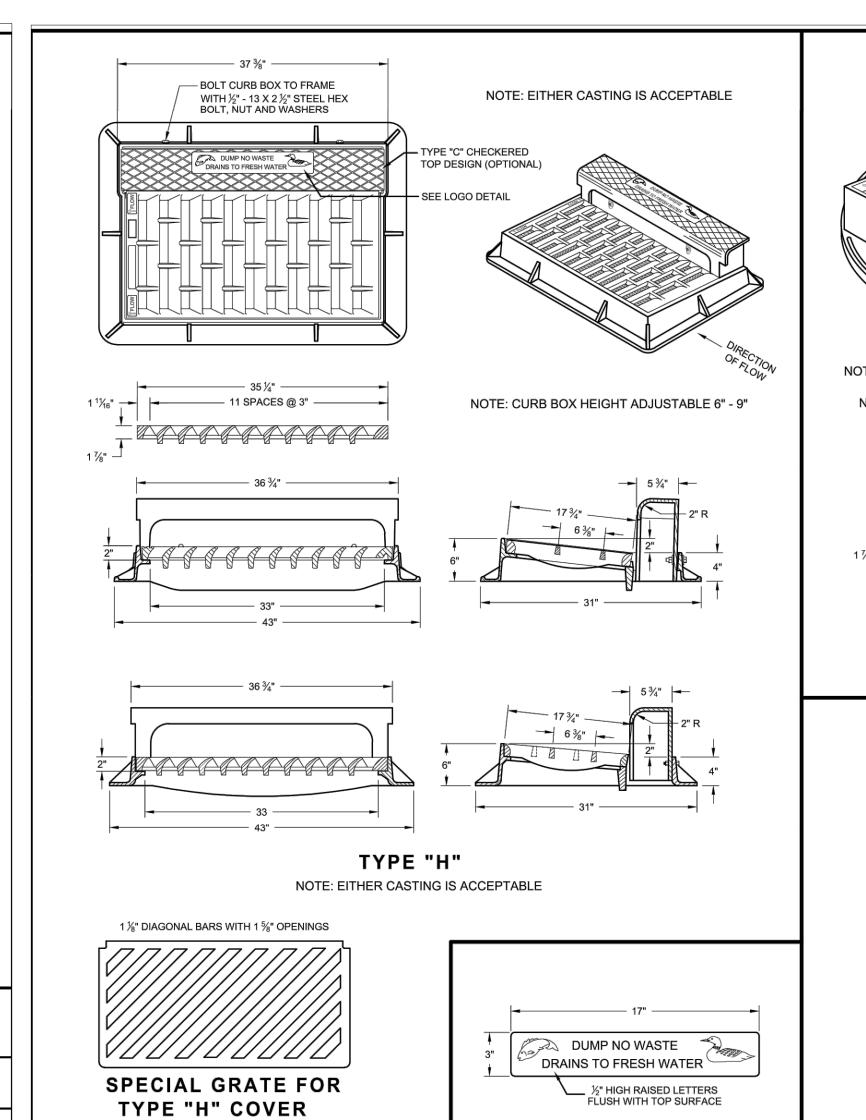






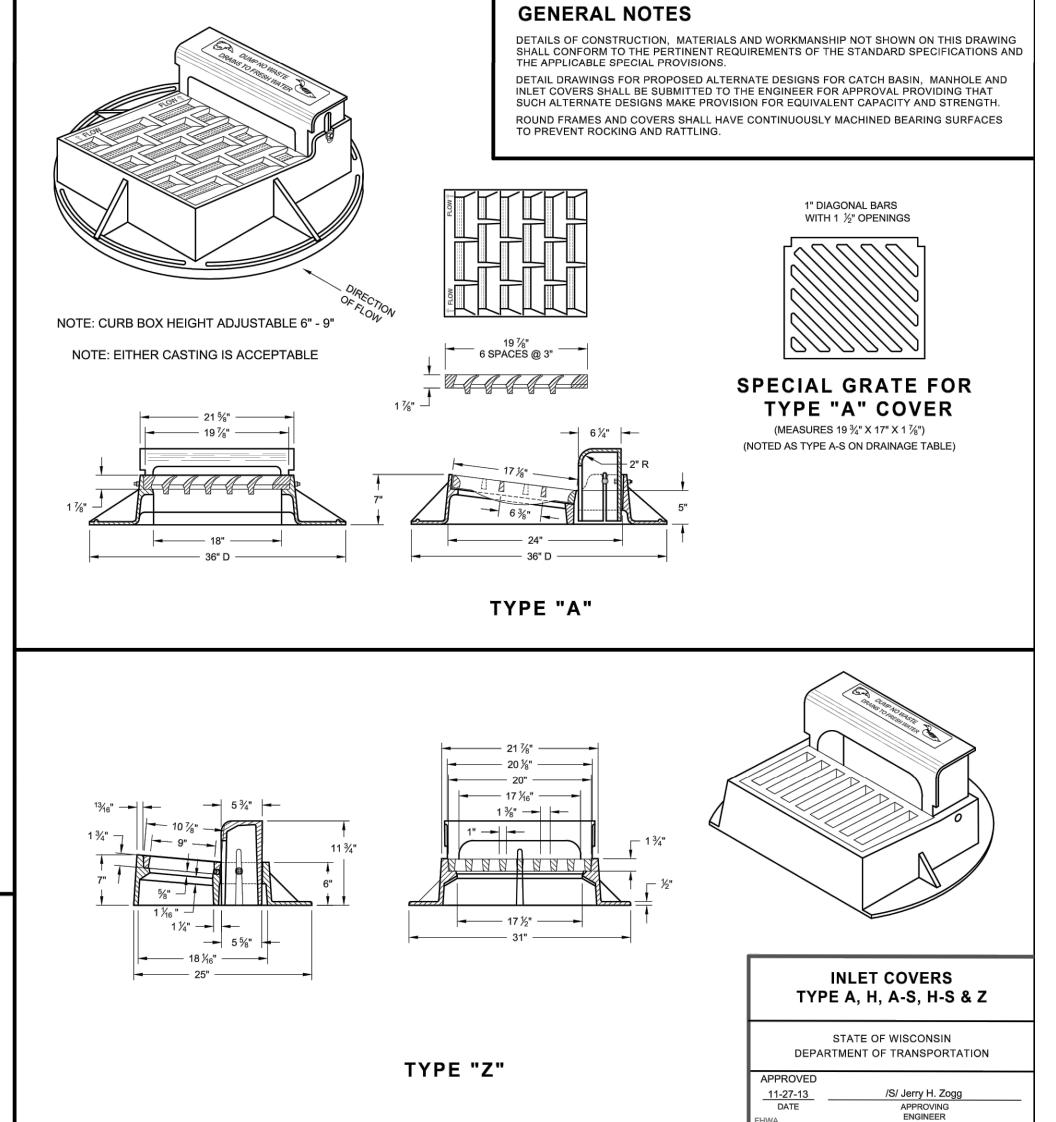
UTILITY PLAN

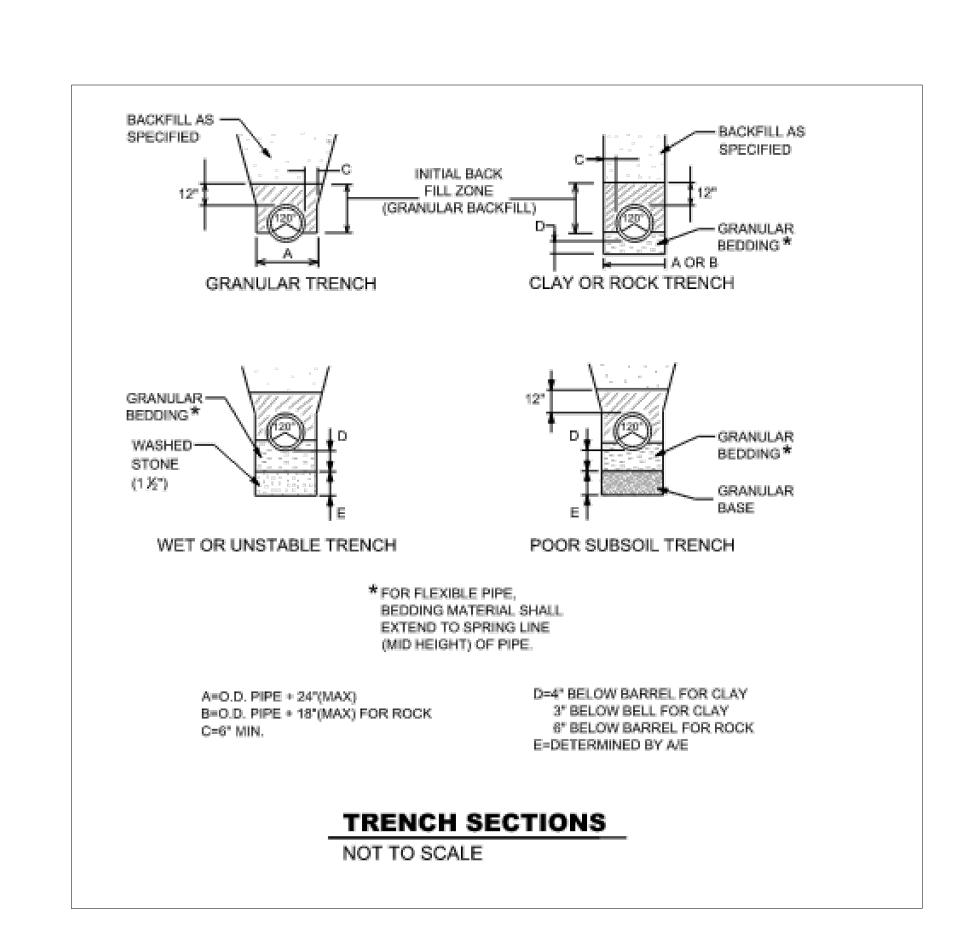


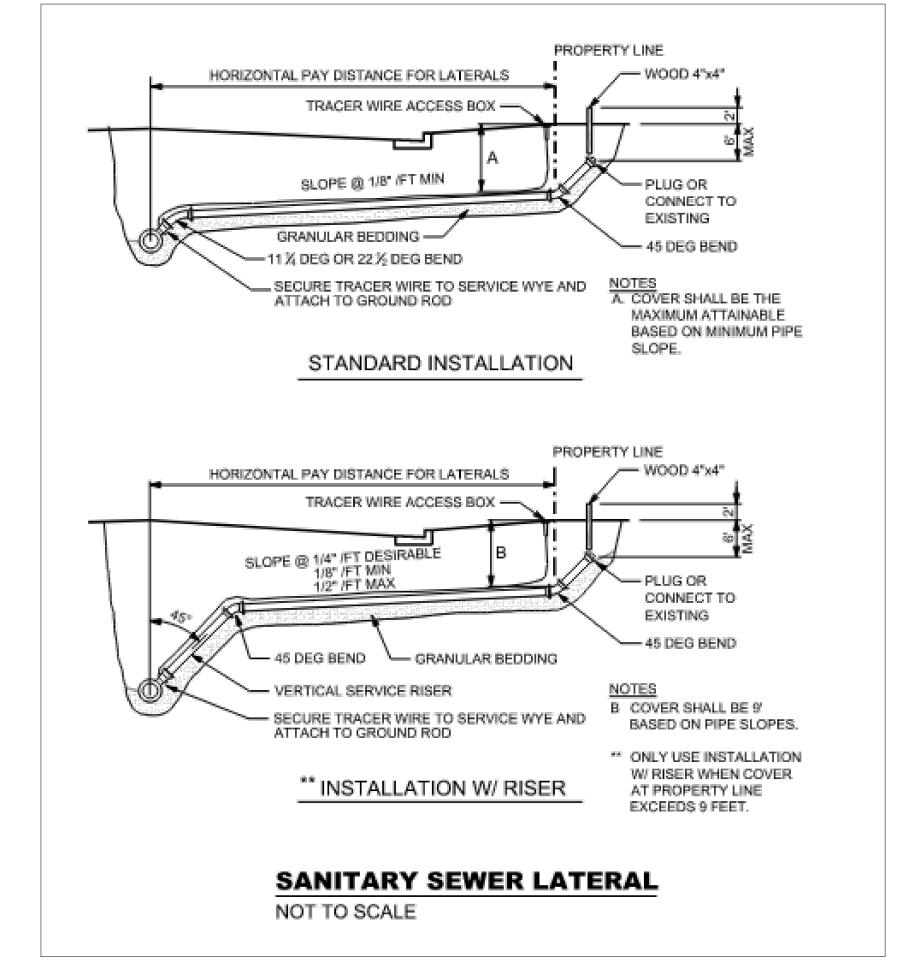


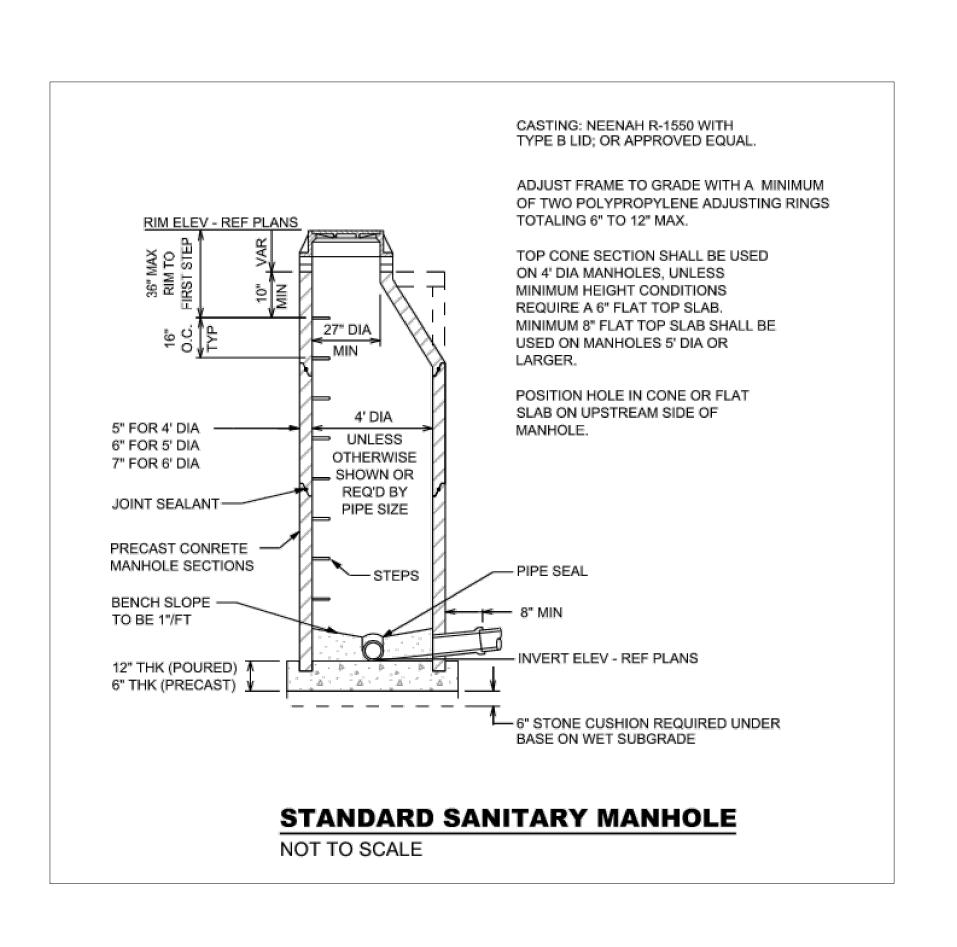
(MEASURES 35" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

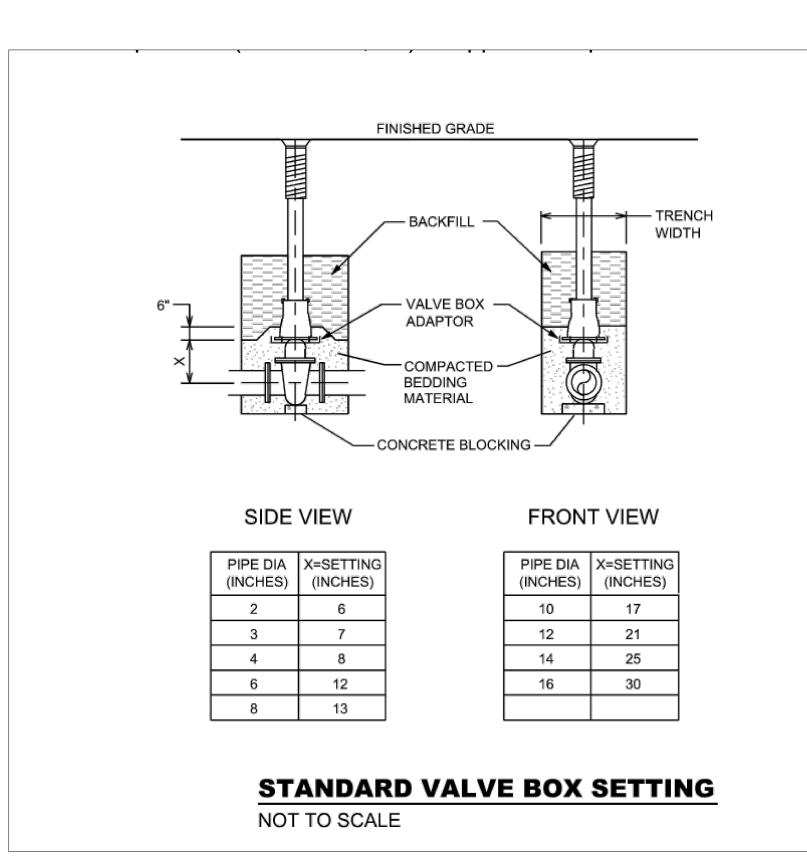


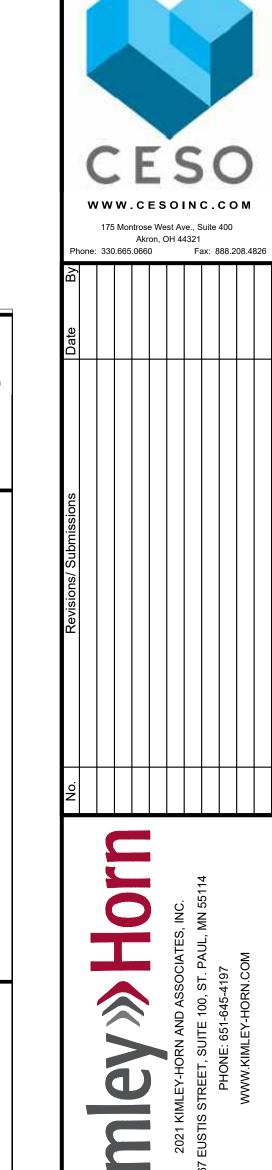






LOGO DETAIL

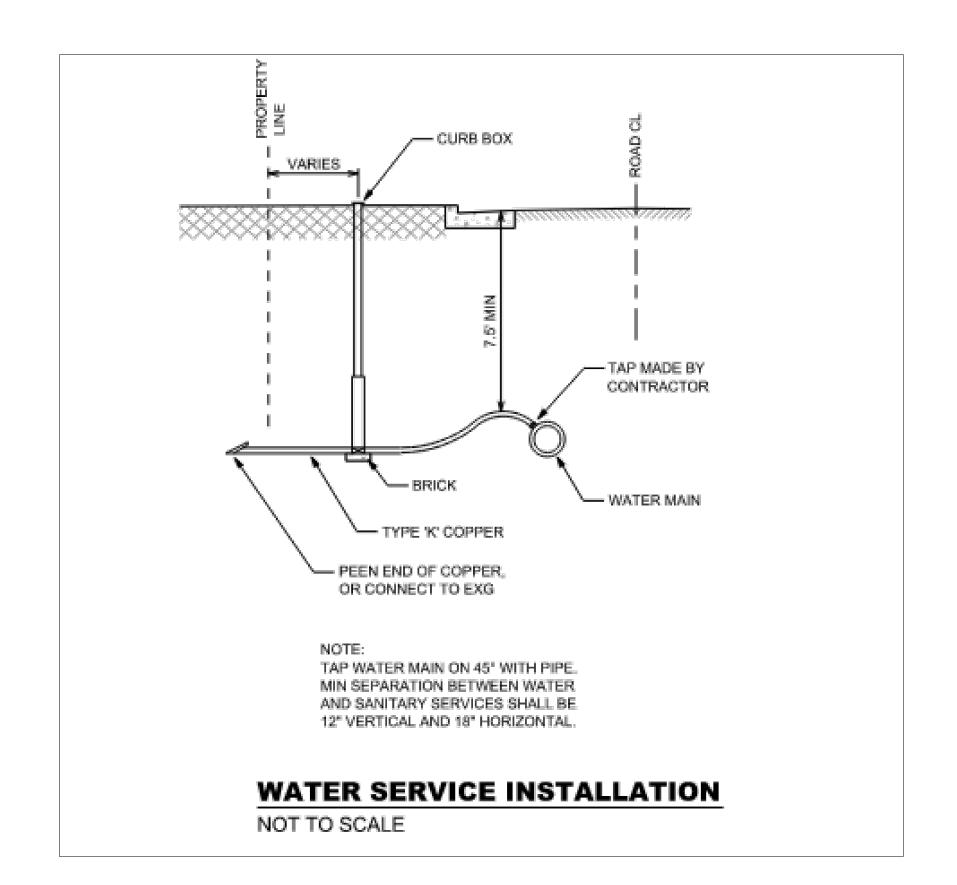


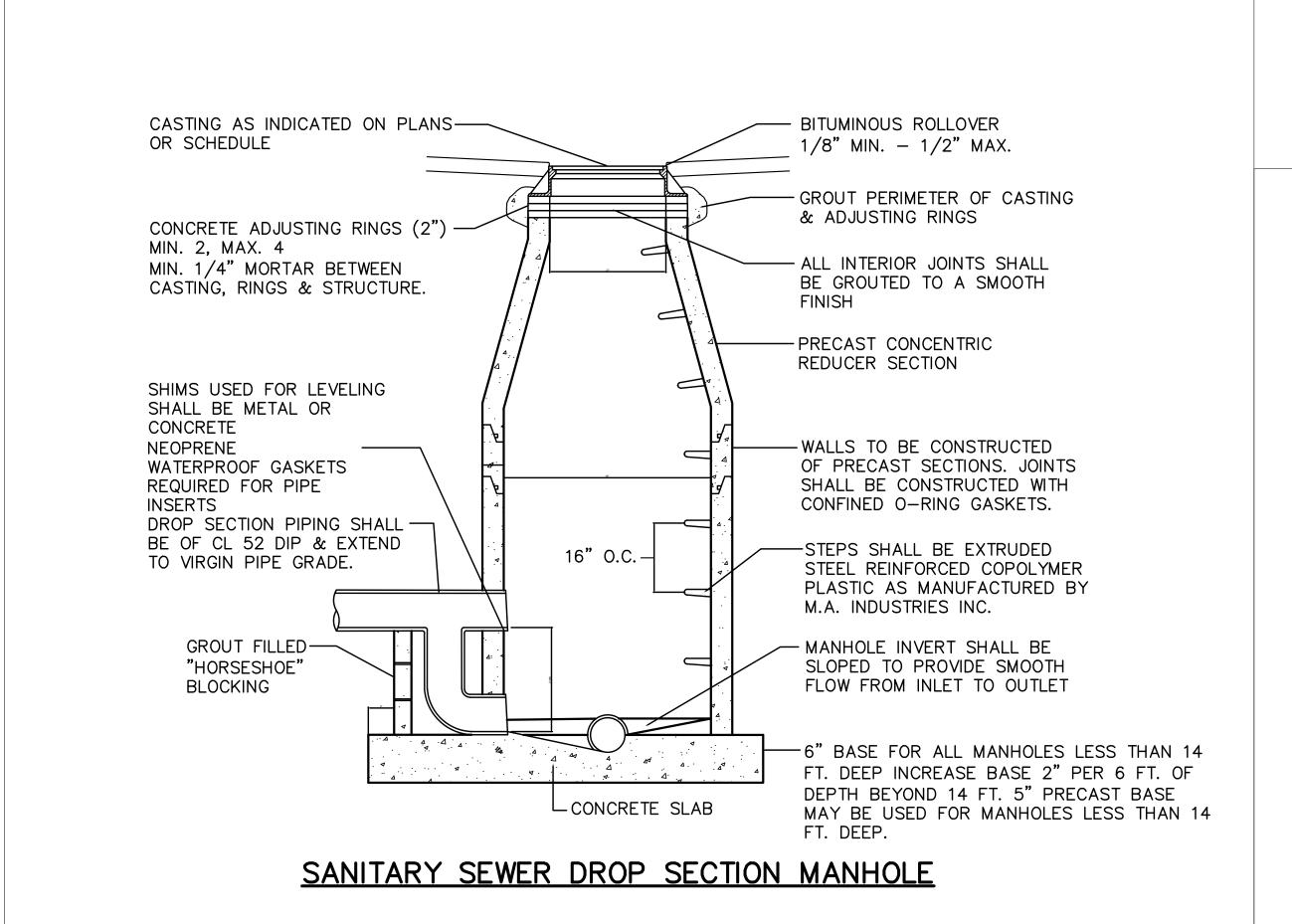


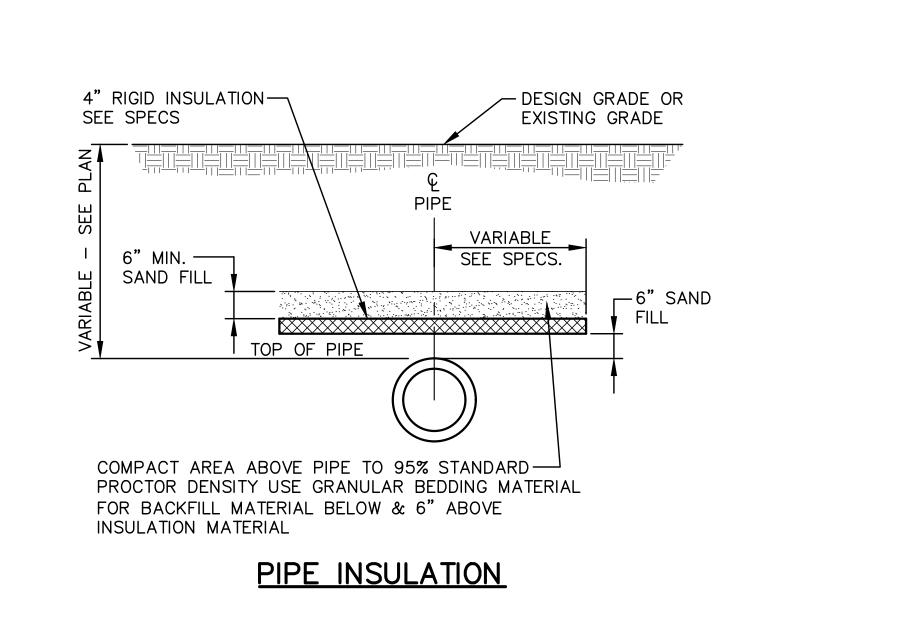
PROJECT MALLARI
RYAN COMPANIES US, INC.
ROBERTS, WI

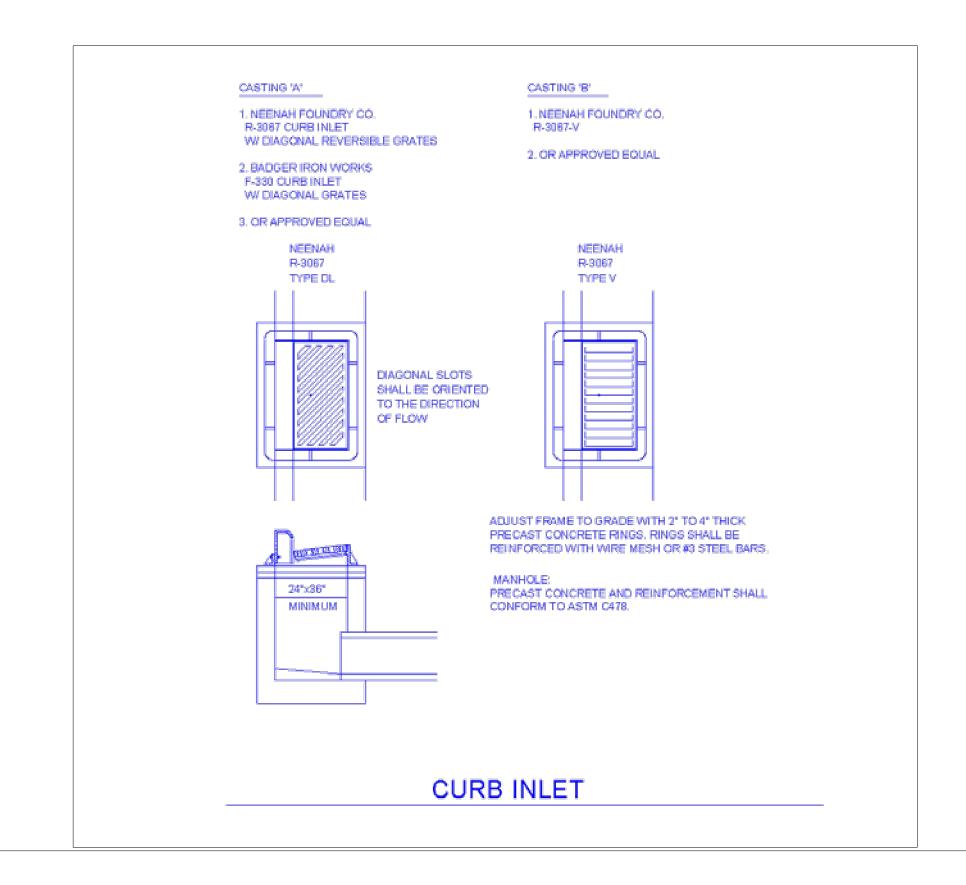
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Danie L.

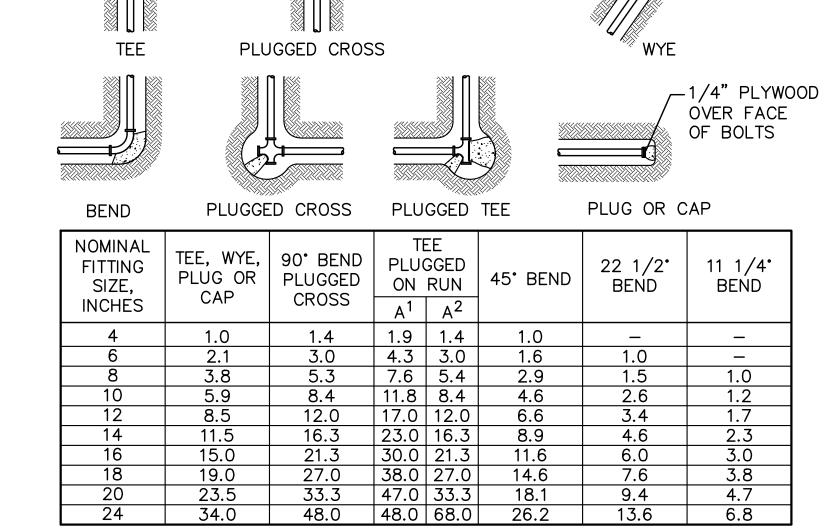
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Drawing Title:
UTILITY DETAILS











NOTE: ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION:

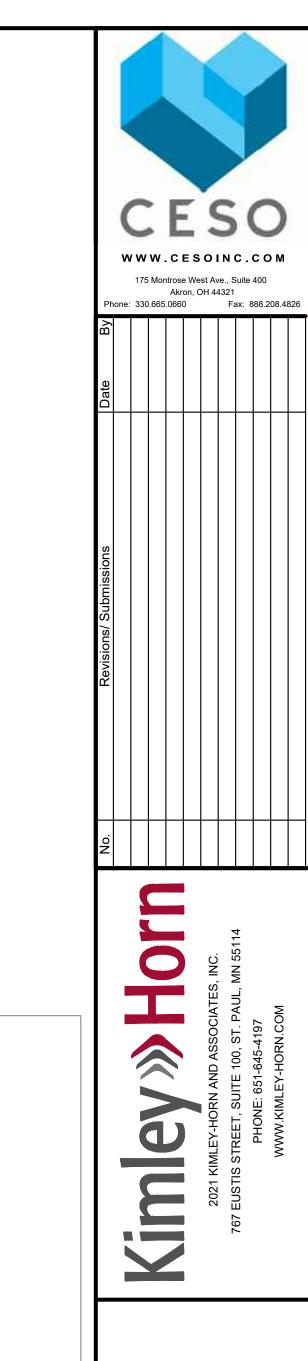
## BEARING AREA=(TEST PRESSURE/150)x(2000/SOIL BEARING STRESS)x(TABLE VALUE)

- NOTES:

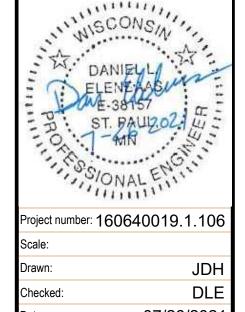
  I. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
- E. KEEP CONCRETE CLEAR OF JOINTS AND ACCESSORIES.

  5. IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS
- INDICATED ABOVE, ADJUST IF NECESSARY TO CONFORM TO THE TEST PRESSURES AND ALLOWBLE SOIL BEARING STRESS(ES).
- 4. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN THIS STANDARD DETAIL.

## WATERMAIN THRUST BLOCKING

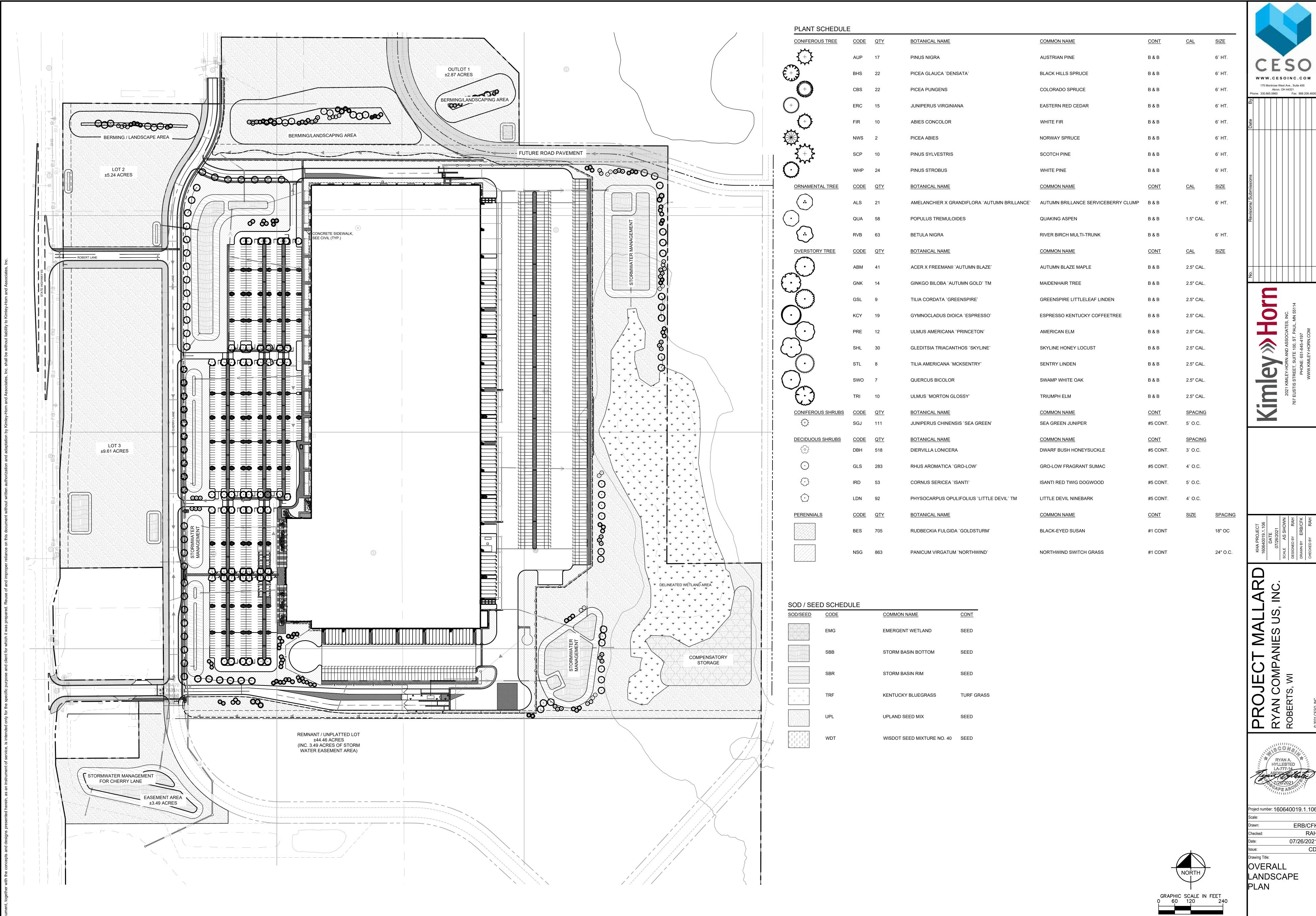


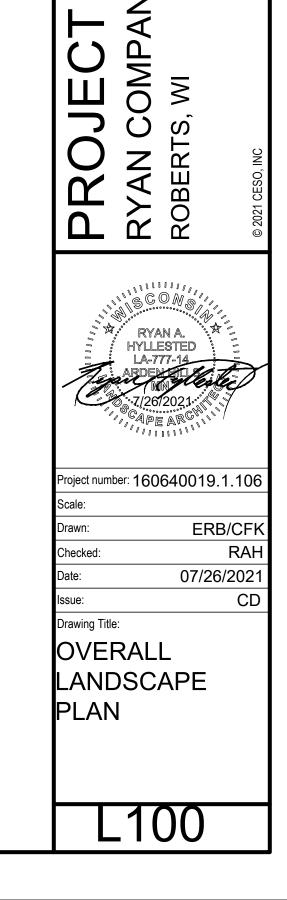
PROJECT MALLARD
RYAN COMPANIES US, INC.
ROBERTS, WI

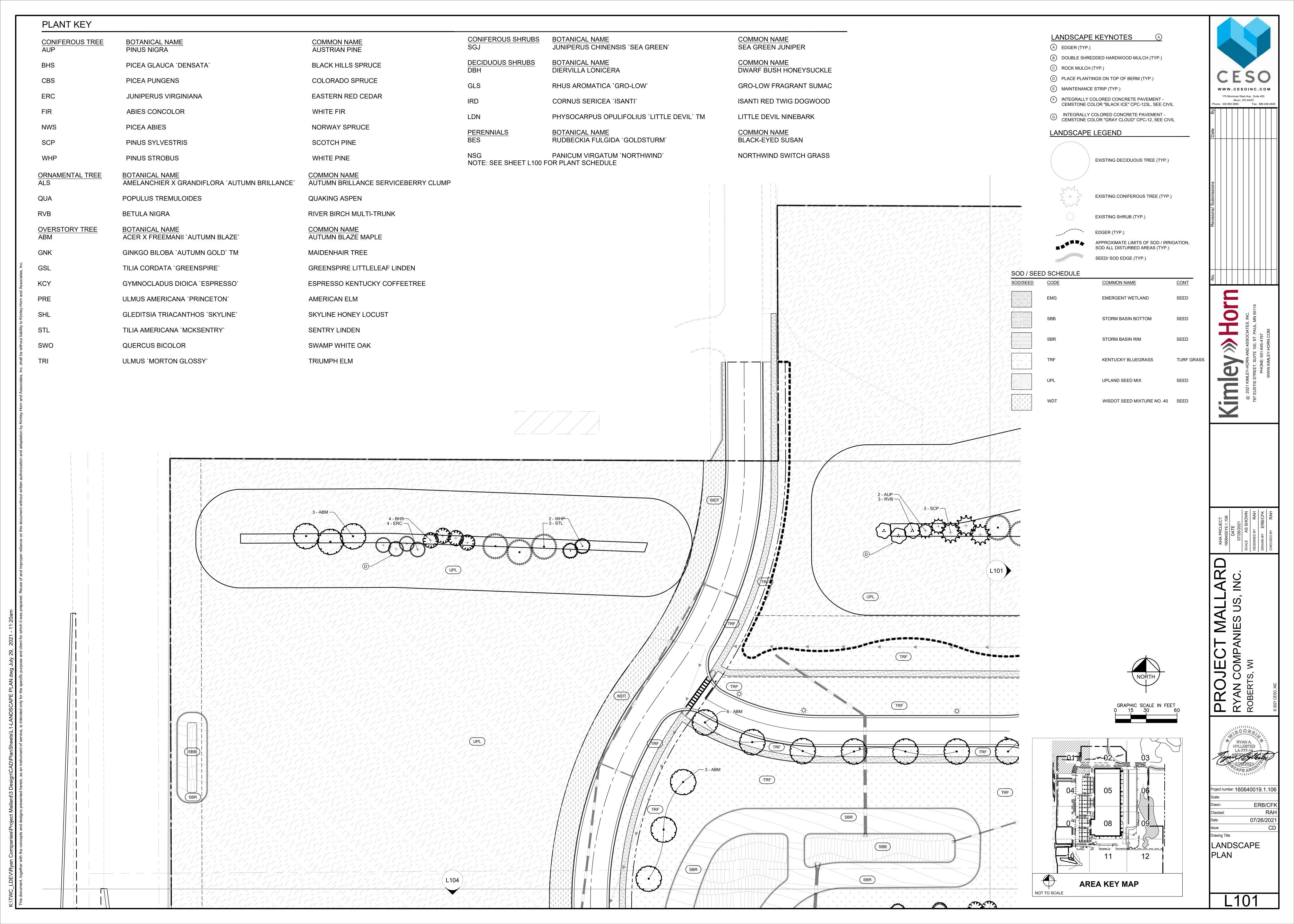


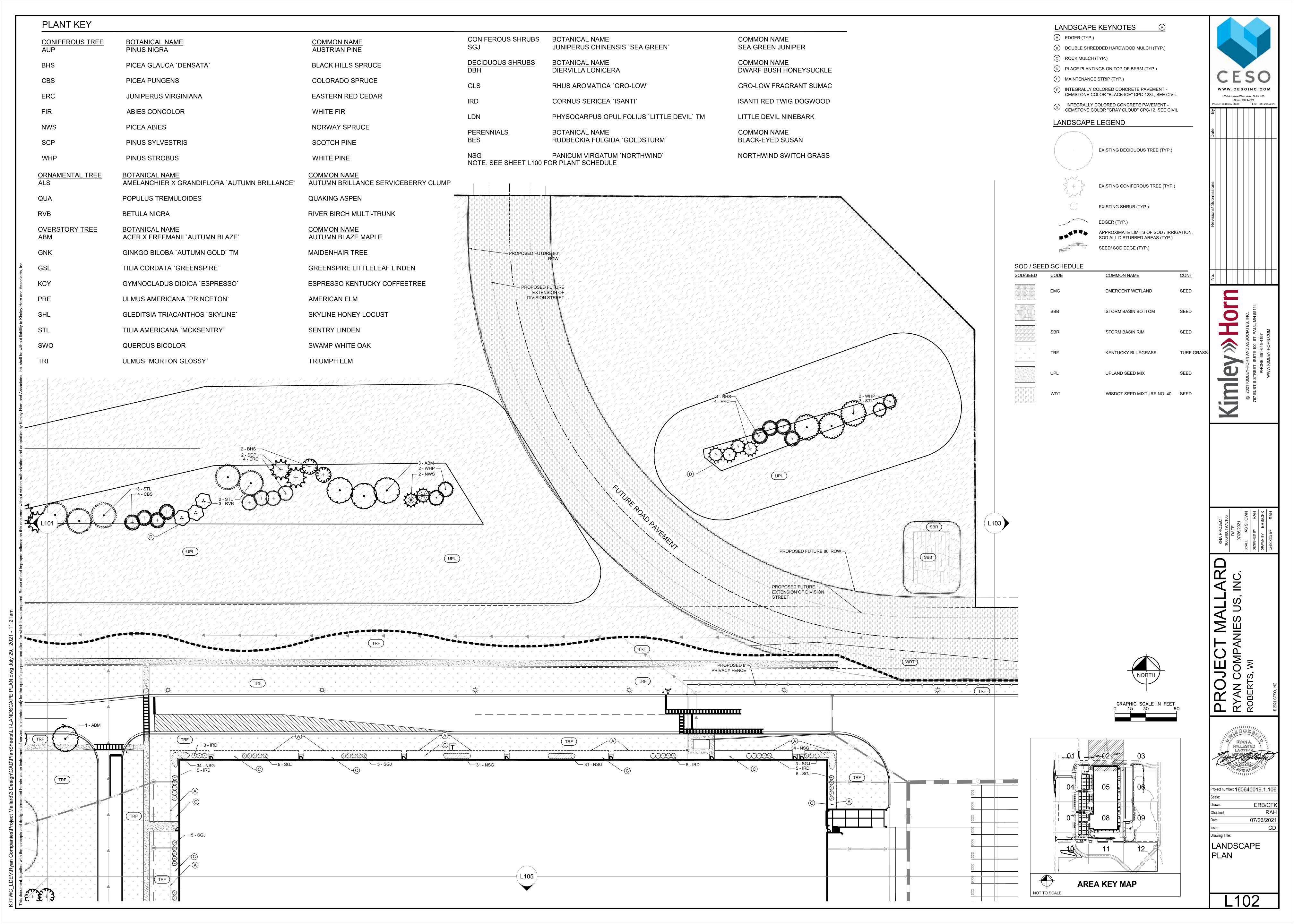
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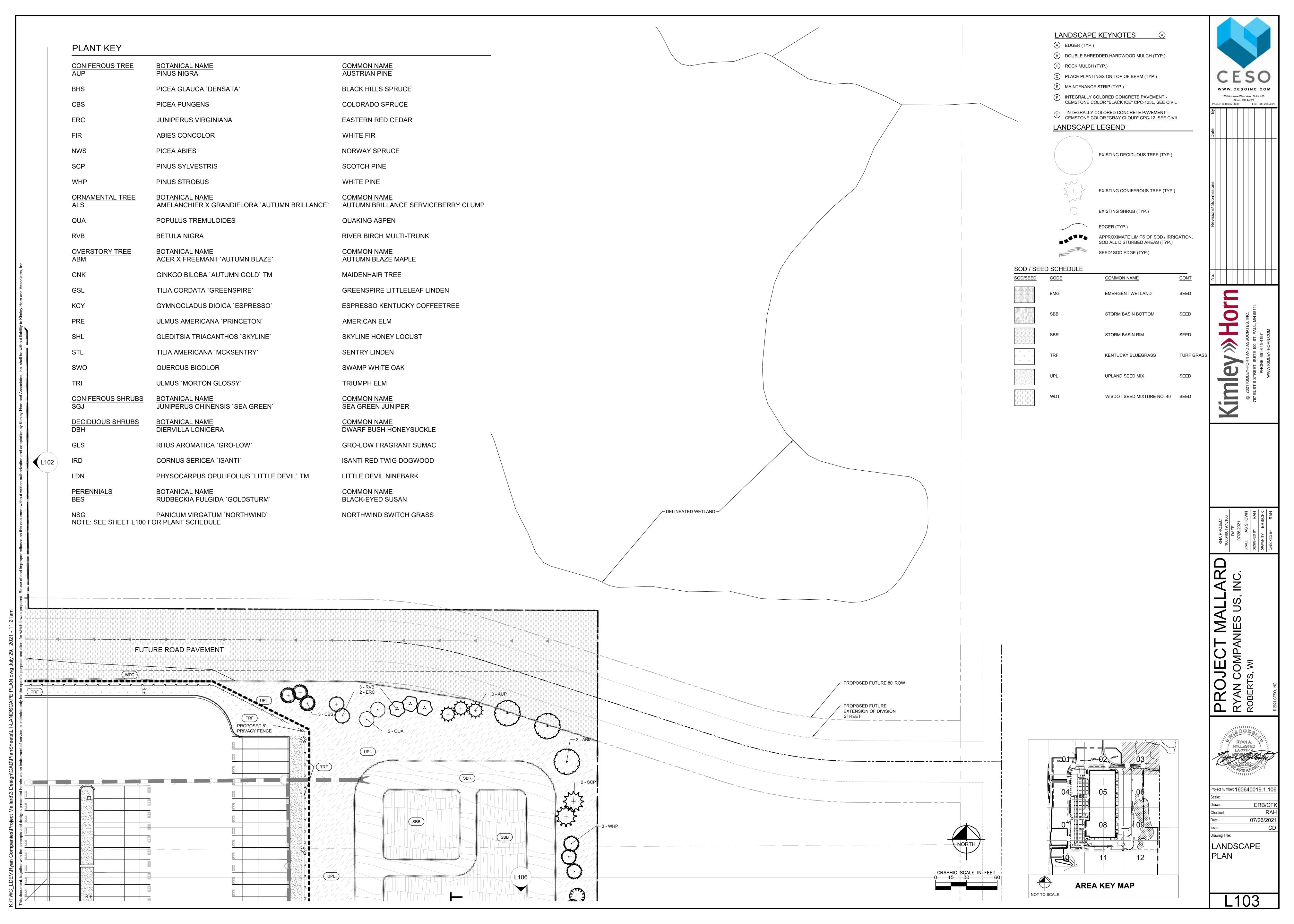
UTILITY DETAILS

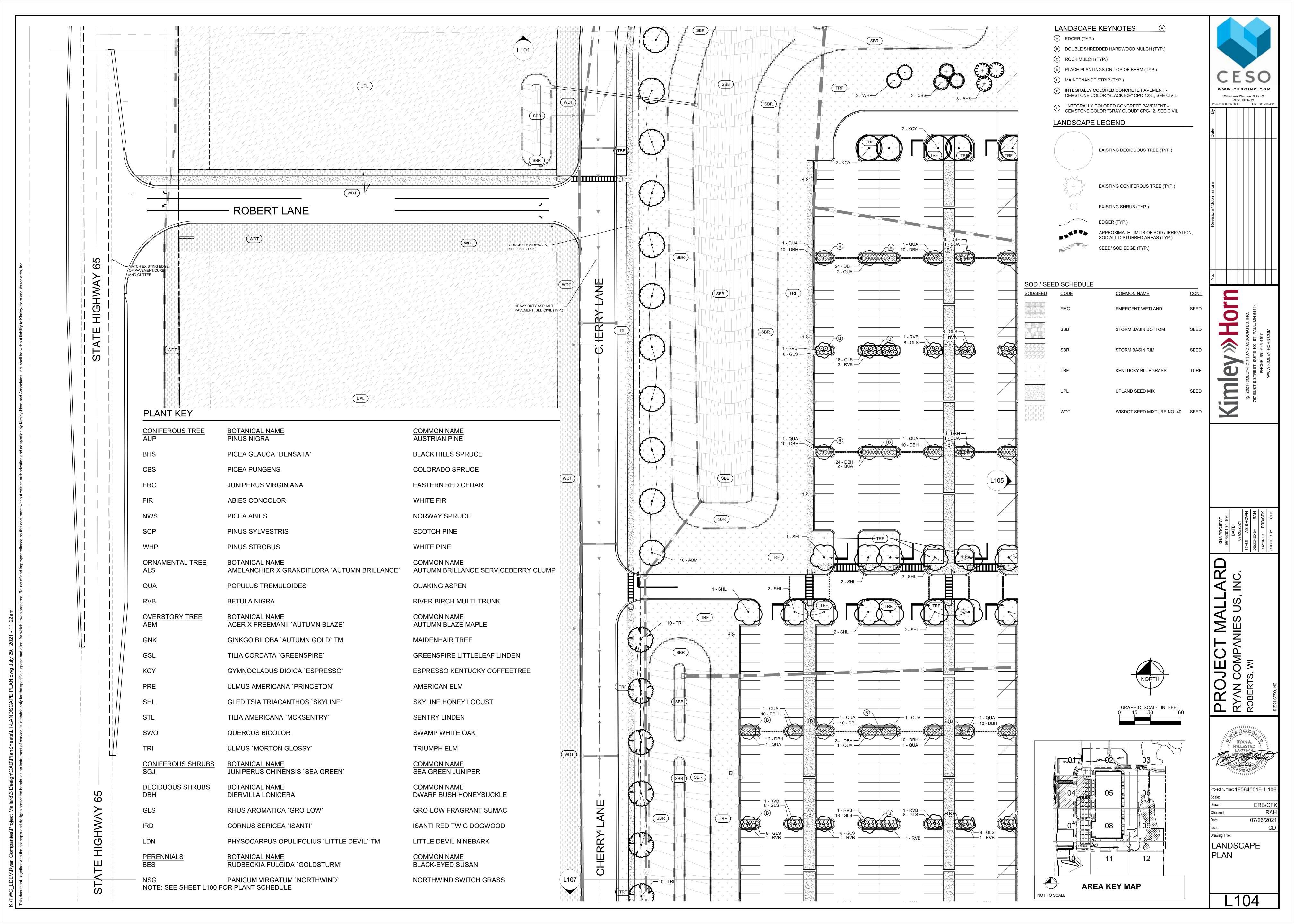


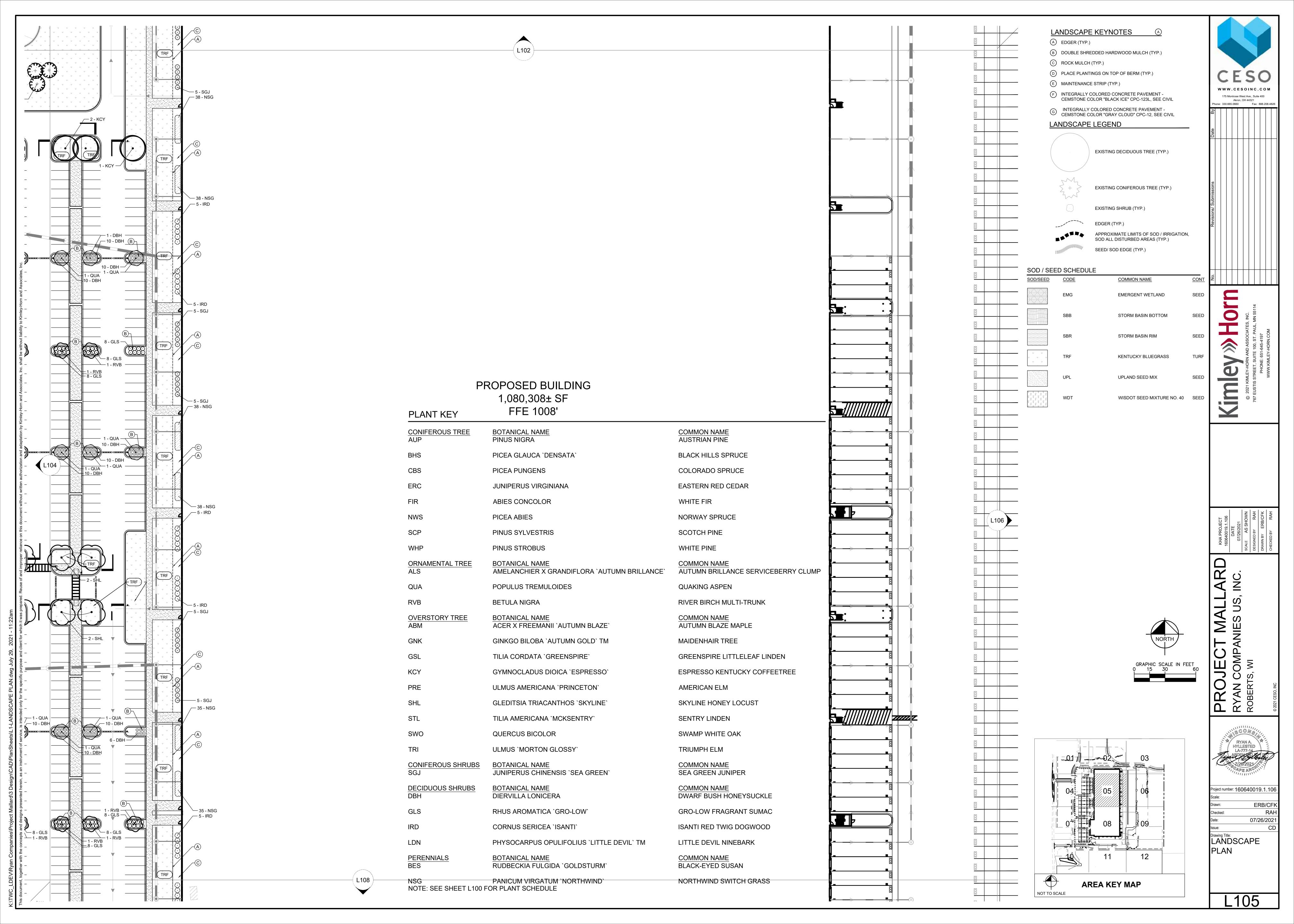


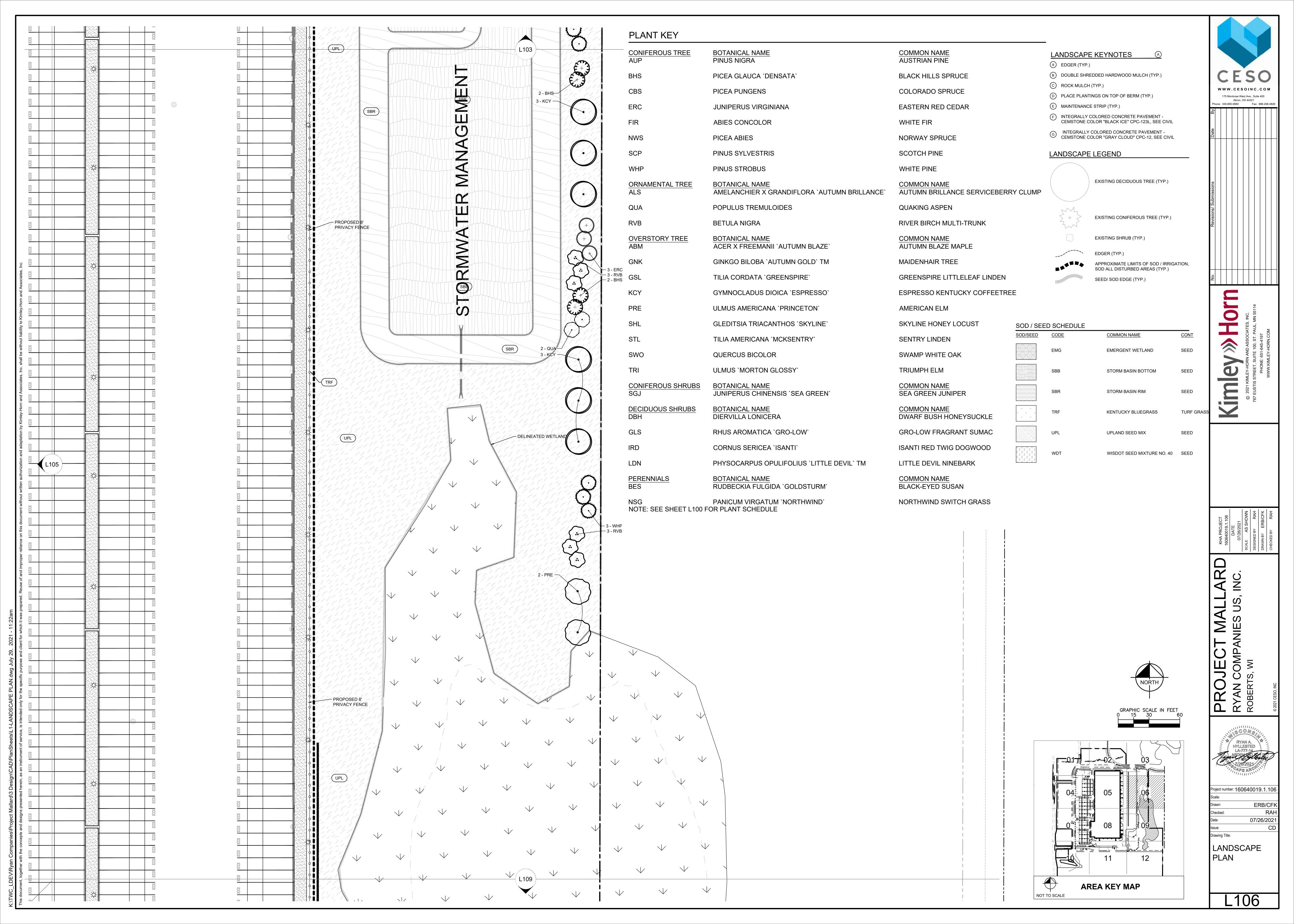


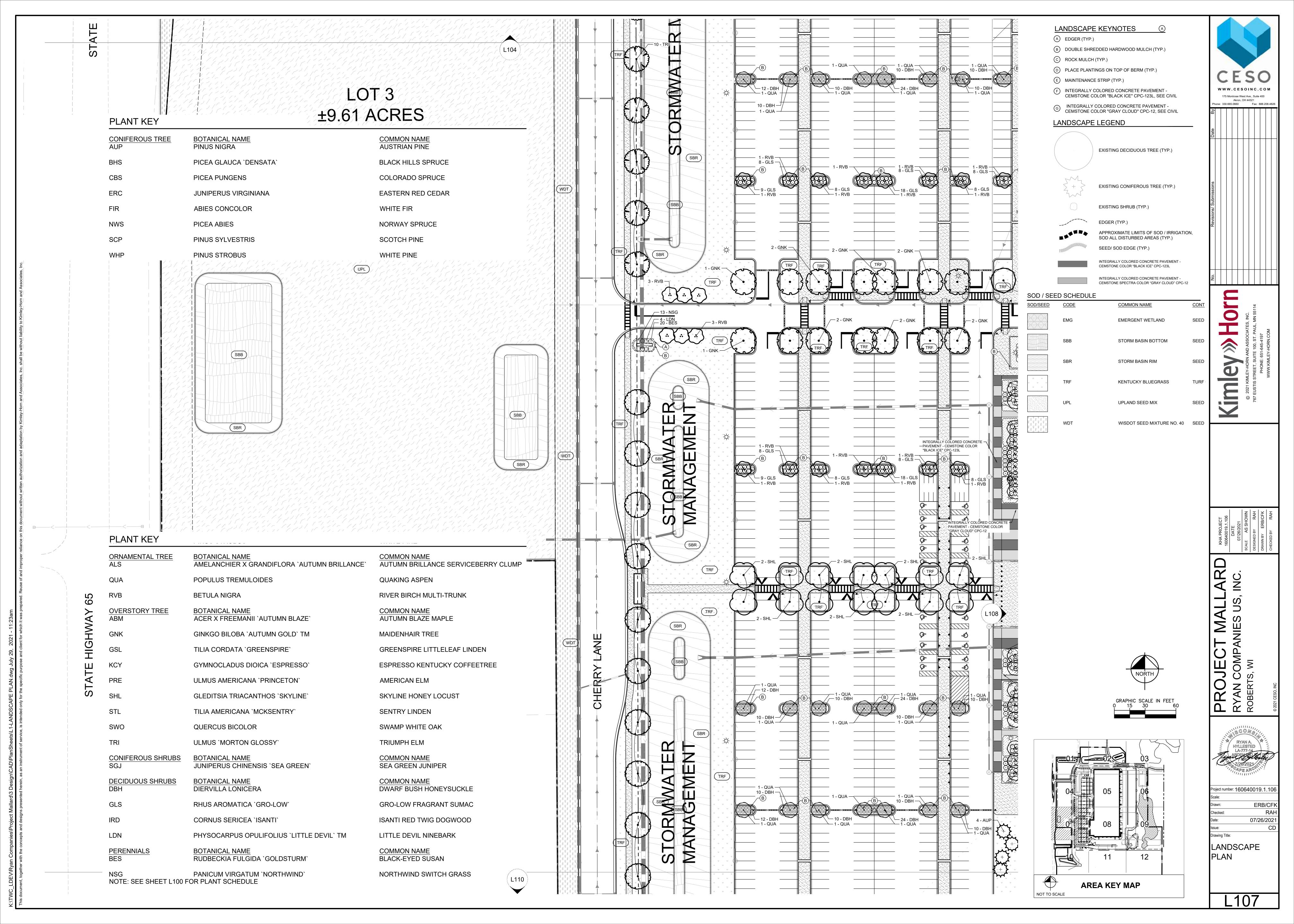


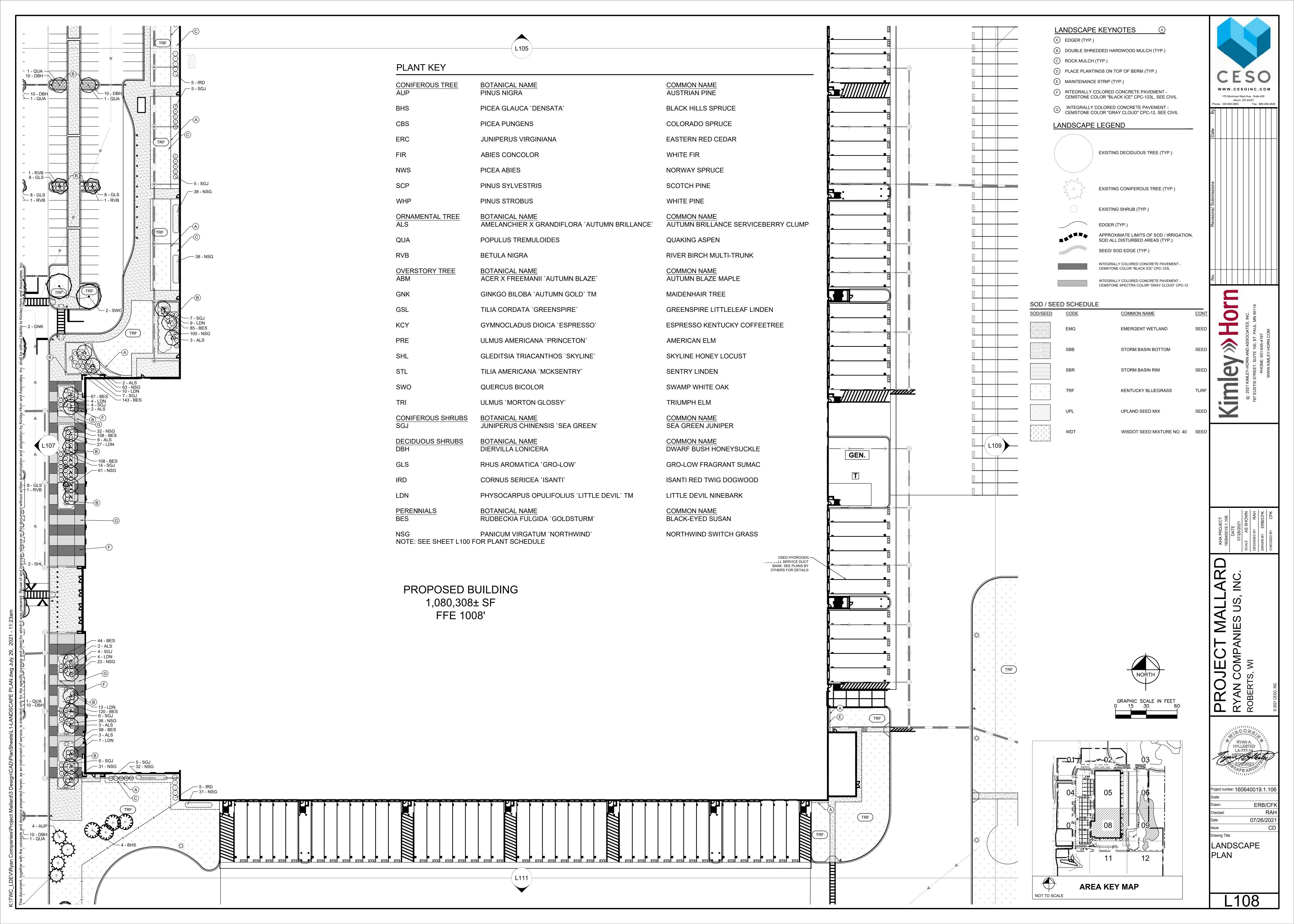


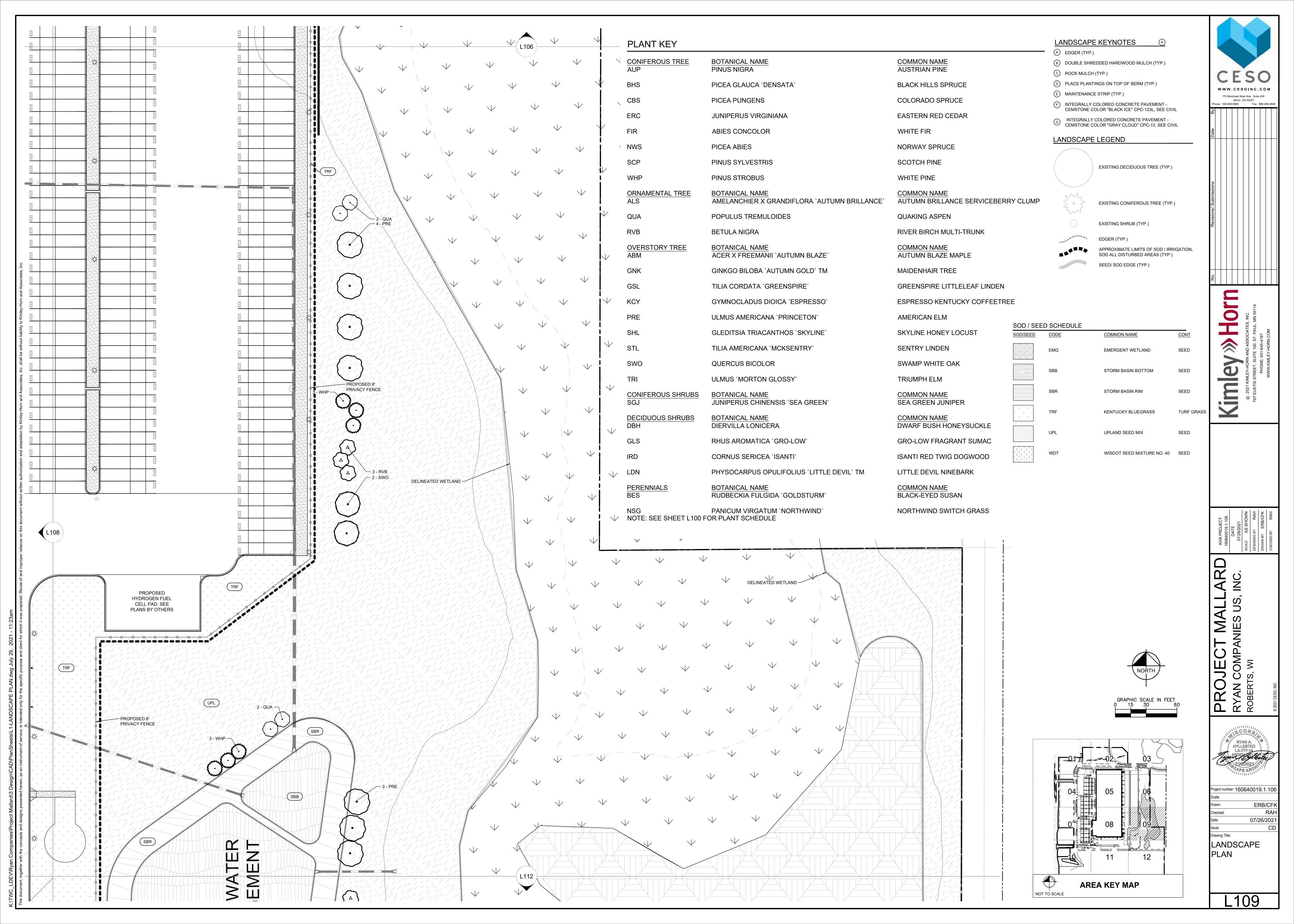


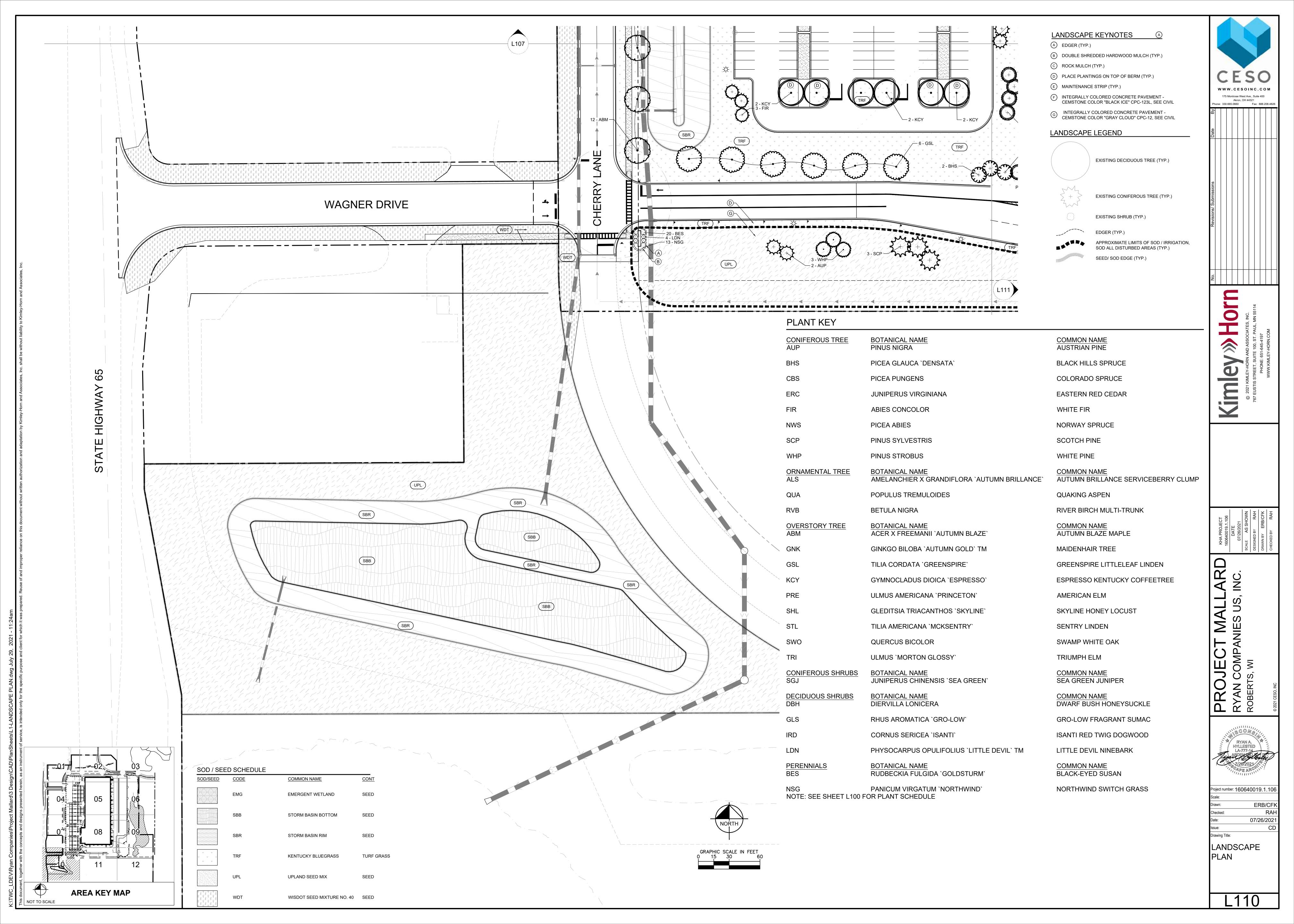


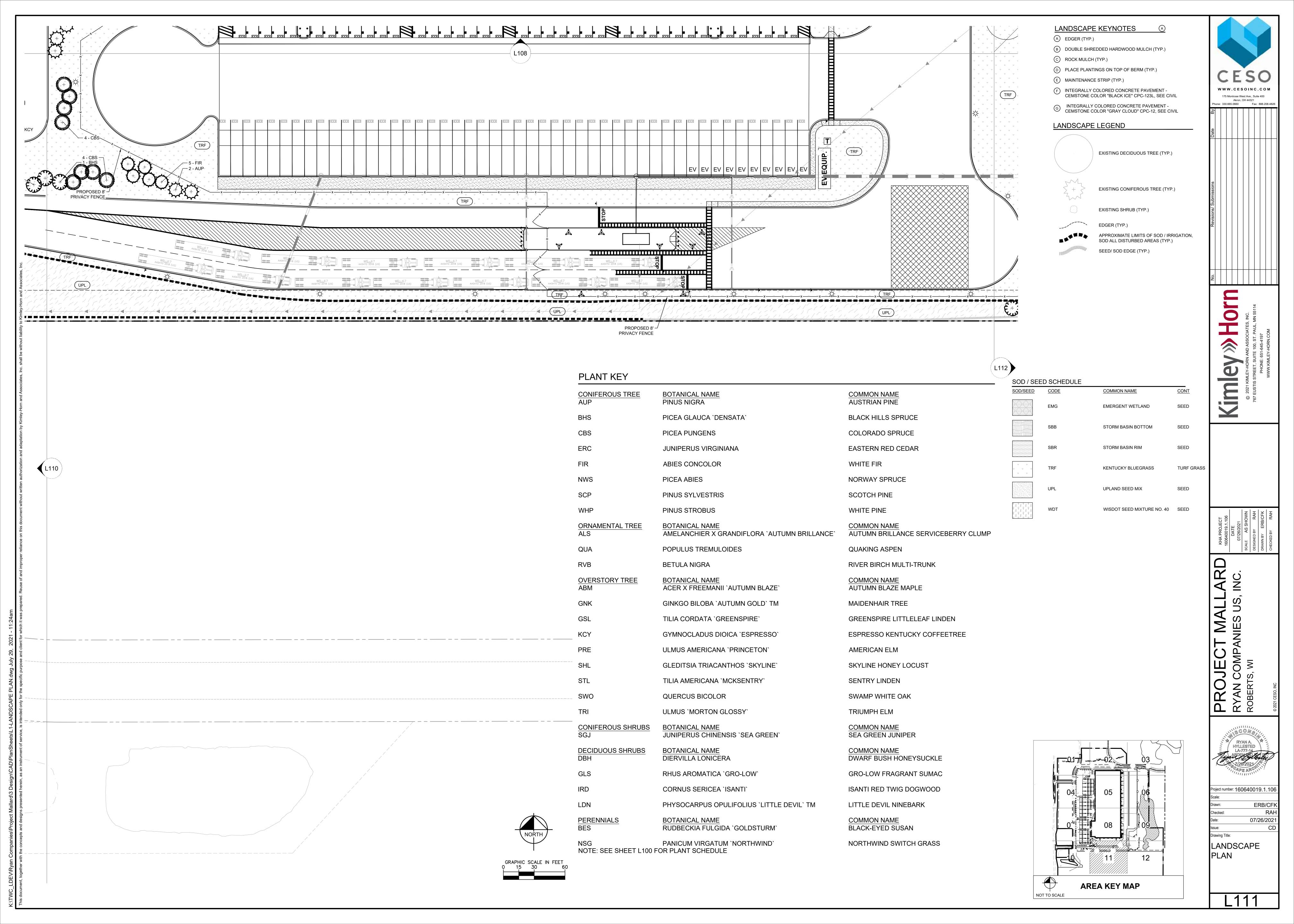


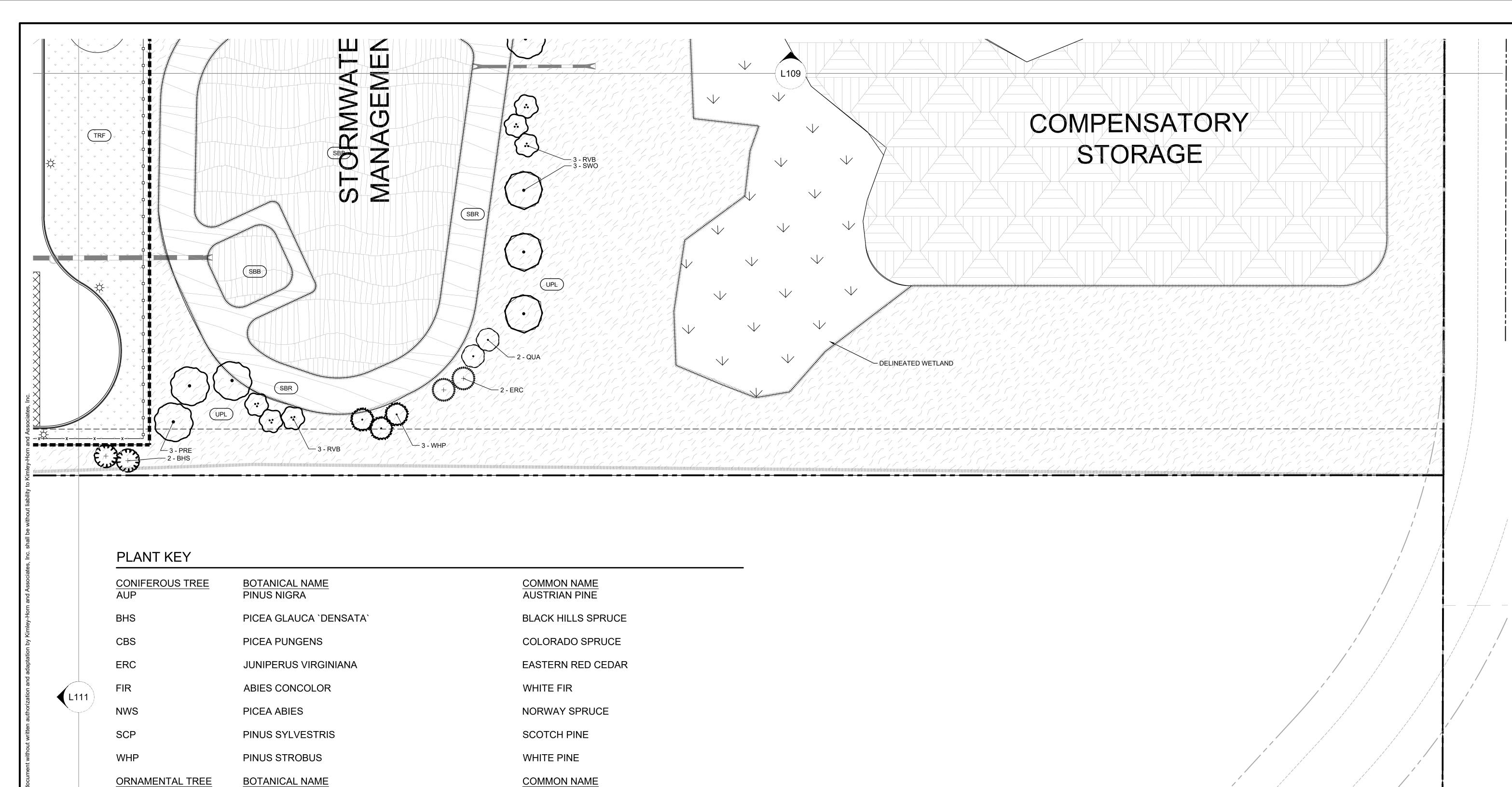












**FUTURE 80' ROW** 

PROPOSED FUTURE -**EXTENSION OF** 

DIVISION STREET

AUTUMN BRILLANCE SERVICEBERRY CLUMP

**QUAKING ASPEN** 

**COMMON NAME** 

MAIDENHAIR TREE

AMERICAN ELM

SENTRY LINDEN

TRIUMPH ELM

**COMMON NAME** 

COMMON NAME

**COMMON NAME** 

BLACK-EYED SUSAN

SEA GREEN JUNIPER

DWARF BUSH HONEYSUCKLE

GRO-LOW FRAGRANT SUMAC

ISANTI RED TWIG DOGWOOD

NORTHWIND SWITCH GRASS

LITTLE DEVIL NINEBARK

SWAMP WHITE OAK

SKYLINE HONEY LOCUST

RIVER BIRCH MULTI-TRUNK

GREENSPIRE LITTLELEAF LINDEN

ESPRESSO KENTUCKY COFFEETREE

AUTUMN BLAZE MAPLE

AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLANCE'

POPULUS TREMULOIDES

ACER X FREEMANII 'AUTUMN BLAZE'

GINKGO BILOBA 'AUTUMN GOLD' TM

GYMNOCLADUS DIOICA 'ESPRESSO'

GLEDITSIA TRIACANTHOS 'SKYLINE'

JUNIPERUS CHINENSIS 'SEA GREEN'

PHYSOCARPUS OPULIFOLIUS 'LITTLE DEVIL' TM

**ULMUS AMERICANA 'PRINCETON'** 

TILIA AMERICANA 'MCKSENTRY'

QUERCUS BICOLOR

**BOTANICAL NAME** 

**BOTANICAL NAME** 

BOTANICAL NAME

NOTE: SEE SHEET L100 FOR PLANT SCHEDULE

DIERVILLA LONICERA

RHUS AROMATICA `GRO-LOW`

RUDBECKIA FULGIDA `GOLDSTURM`

PANICUM VIRGATUM 'NORTHWIND'

CORNUS SERICEA 'ISANTI'

ULMUS 'MORTON GLOSSY'

TILIA CORDATA 'GREENSPIRE'

**BETULA NIGRA** 

**BOTANICAL NAME** 

**OVERSTORY TREE** 

CONIFEROUS SHRUBS

DECIDUOUS SHRUBS

PERENNIALS

LANDSCAPE KEYNOTES

A EDGER (TYP.)

B) DOUBLE SHREDDED HARDWOOD MULCH (TYP.)

© ROCK MULCH (TYP.)

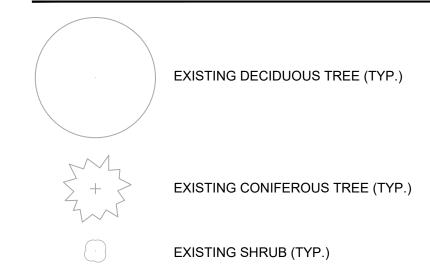
D PLACE PLANTINGS ON TOP OF BERM (TYP.)

E MAINTENANCE STRIP (TYP.)

F INTEGRALLY COLORED CONCRETE PAVEMENT - CEMSTONE COLOR "BLACK ICE" CPC-123L, SEE CIVIL

G INTEGRALLY COLORED CONCRETE PAVEMENT - CEMSTONE COLOR "GRAY CLOUD" CPC-12, SEE CIVIL

LANDSCAPE LEGEND

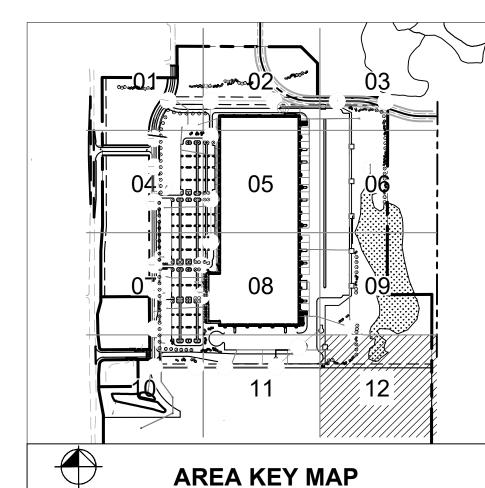


APPROXIMATE LIMITS OF SOD / IRRIGATION, SOD ALL DISTURBED AREAS (TYP.) SEED/ SOD EDGE (TYP.)

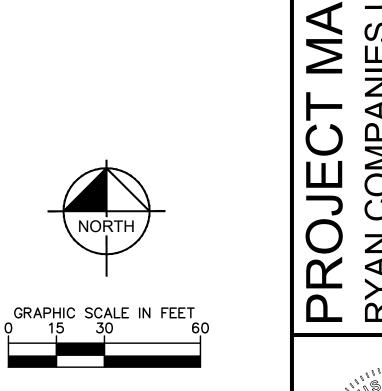
Akron, OH 44321
Phone: 330.665.0660 Fax: 888.208.4826

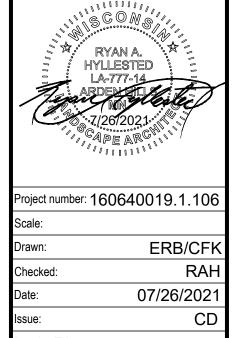
SOD / SEED SCHEDULE

SOD/SEED	CODE	COMMON NAME	CONT
	EMG	EMERGENT WETLAND	SEED
	SBB	STORM BASIN BOTTOM	SEED
	SBR	STORM BASIN RIM	SEED
ψ ψ ψ ψ ψ ψ ψ	TRF	KENTUCKY BLUEGRASS	TURF GRAS
	UPL	UPLAND SEED MIX	SEED
	WDT	WISDOT SEED MIXTURE NO. 40	SEED

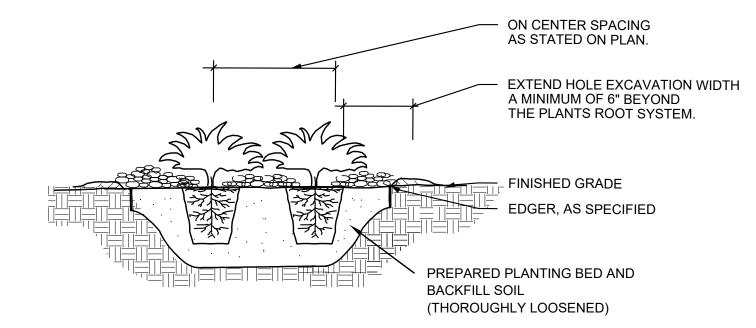


NOT TO SCALE





LANDSCAPE PLAN



## NOTES:

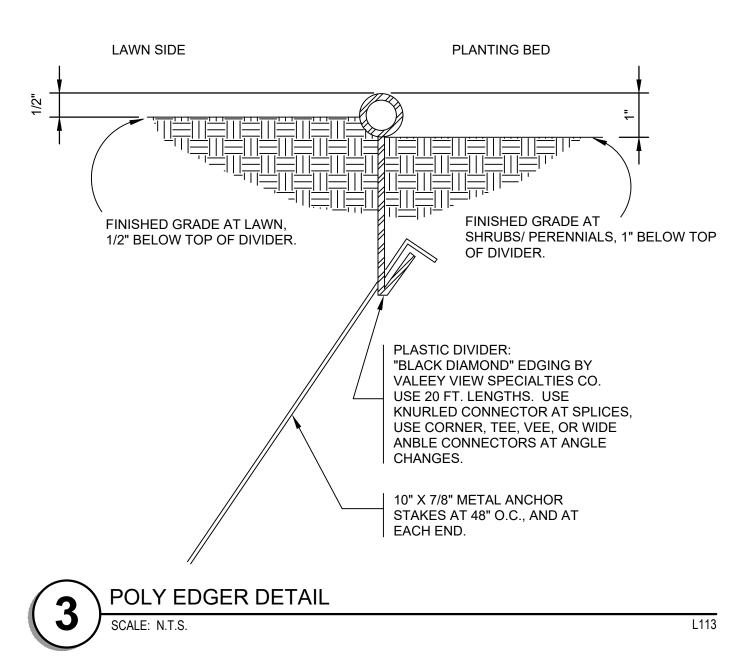
- SCARIFY SIDES AND BOTTOM OF HOLE.
   PROCEED WITH CORRECTIVE PRUNING OF TOP AND ROOT.
   REMOVE CONTAINER AND SCORE OUTSIDE OF SOIL MASS TO REDIRECT AND PREVENT CIRCLING FIBROUS ROOTS. REMOVE OR CORRECT STEM GIRDLING ROOTS.
- PLUMB AND BACKFILL WITH PLANTING SOIL.
   WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL
- 6. BACK FILL VOIDS AND WATER SECOND TIME.
  7. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS
- SOIL MOISTURE IS EXCESSIVE.

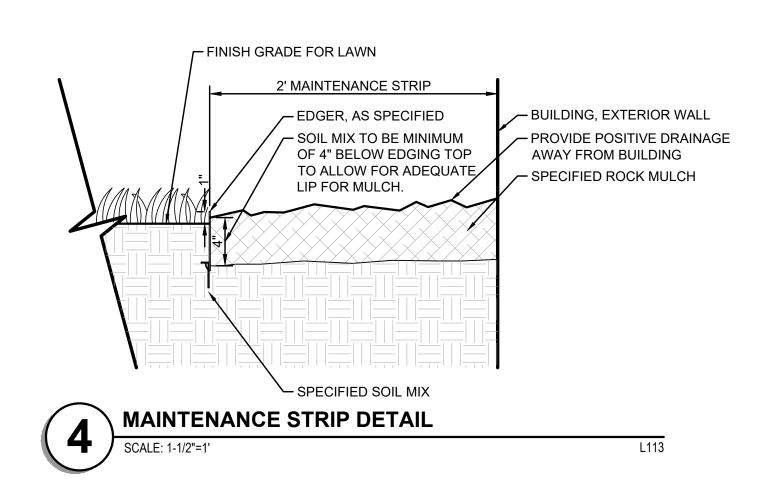
  8. MIX IN 3-4" OF ORGANIC COMPOST.

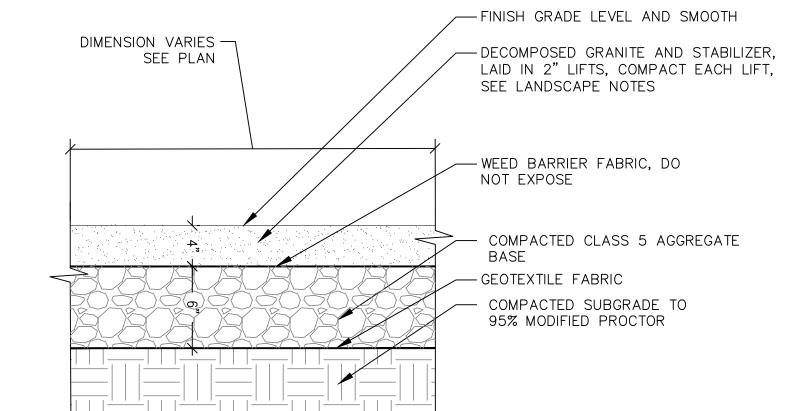
SHRUB / PERENNIAL PLANTING DETAIL
SCALE: N.T.S.

TREE PLANTING DETAIL

SCALE: N.T.S.







## NOTES:

- DECOMPOSED GRANITE AROUND TREES NOT TO HAVE STABILIZER OR FINES IN A CIRCLE 2X THE ROOT BALL IN WIDTH.
- 2. DECOMPOSED GRANITE AROUND SHRUBS NOT TO HAVE STABILIZER OR FINES IN A CIRCLE 6" BEYOND THE PLANTS ROOT SYSTEM.
- 3. GRADING PER GRADING AND DRAINAGE PLAN.

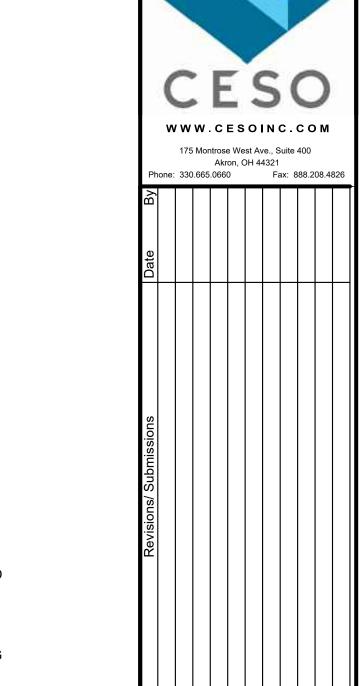
<u>SECTION</u>



- 1. CONTRACTOR SHALL CONTACT DIGGERS HOTLINE, (800) 242-8511 OR DIGGERSHOTLINE.COM TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
- 2. ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS.

LANDSCAPE NOTES

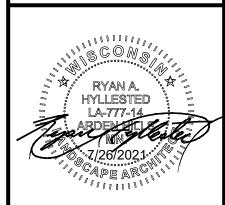
- 3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- 4. ALL SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
- 5. CONTRACTOR SHALL PROVIDE TWO YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
- 6. ALL PLANTS TO BE SPECIMEN GRADE, WISCONSIN-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ADHERE TO, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:
- ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC. ALL PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES.
- ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.
- ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.
- CONIFEROUS TREES SHALL HAVE AN ESTABLISHED MAIN LEADER AND A HEIGHT TO WIDTH RATIO OF NO LESS THAN 5:3.
- PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
- 8. PLANTS TO BE INSTALLED AS PER MNLA & ANSI STANDARD PLANTING PRACTICES.
- 9. PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY; TEMPORARY ONLY.
- 10. PRIOR TO PLANTING, FIELD VERIFY THAT THE ROOT COLLAR/ROOT FLAIR IS LOCATED AT THE TOP OF THE BALLED & BURLAP TREE. IF THIS IS NOT THE CASE, SOIL SHALL BE REMOVED DOWN TO THE ROOT COLLAR/ROOT FLAIR. WHEN THE BALLED & BURLAP TREE IS PLANTED, THE ROOT COLLAR/ROOT FLAIR SHALL BE EVEN OR SLIGHTLY ABOVE FINISHED
- 11. OPEN TOP OF BURLAP ON BB MATERIALS; REMOVE POT ON POTTED PLANTS; SPLIT AND BREAK APART PEAT POTS.
- 12. PRUNE PLANTS AS NECESSARY PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING
- 13. WRAP ALL SMOOTH-BARKED TREES FASTEN TOP AND BOTTOM. REMOVE BY APRIL 1ST.
- 14. STAKING OF TREES AS REQUIRED; REPOSITION, PLUMB AND STAKE IF NOT PLUMB AFTER ONE YEAR.
- 15. THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR THE NEED OF ANY SOIL AMENDMENTS.
- 16. BACKFILL SOIL AND TOPSOIL TO ADHERE TO WISDOT STANDARD SPECIFICATION 625 (TOPSOIL AND SALVAGED TOPSOIL) AND TO BE EXISTING TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 4" DEPTH TOPSOIL FOR ALL LAWN GRASS AREAS AND 12" DEPTH TOPSOIL FOR TREE, SHRUBS, AND PERENNIALS.
- 17. MULCH TO BE AT ALL TREE, SHRUB, PERENNIAL, AND MAINTENANCE AREAS. TREE AND SHRUB PLANTING BEDS SHALL HAVE 4" DEPTH OF SHREDDED HARDWOOD MULCH. SHREDDED HARDWOOD MULCH TO BE USED AROUND ALL PLANTS WITHIN TURF AREAS. PERENNIAL AND ORNAMENTAL GRASS BEDS SHALL HAVE 2" DEPTH SHREDDED HARDWOOD MULCH. MULCH TO BE FREE OF DELETERIOUS MATERIAL AND NATURAL BROWN COLOR (NO DYE), OR APPROVED EQUAL. ROCK MULCH TO BE RIVER ROCK, 1-1/2" TO 3" DIAMETER, AT MINIMUM 3" DEPTH, OR APPROVED EQUAL. ROCK MULCH TO BE ON COMMERCIAL GRADE FILTER FABRIC, BY TYPAR, OR APPROVED EQUAL WITH NO EXPOSURE. MULCH AND FABRIC TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. MULCH TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE)
- 18. DECOMPOSED GRANITE TO BE STABILIZED DECOMPOSED GRANITE PATHWAY MIX BY KAFKA GRANITE, AGGREGATE COLOR TO BE CARMEL QUARTZITE. STABILIZER BY STABILIZER SOLUTIONS. DECOMPOSED GRANITE AND STABILIZER TO BE APPROVED BY OWNER PRIOR TO INSTILLATION. INSTALL PER MANUFACTURERS SPECIFICATIONS.
- 18. EDGING TO BE COMMERCIAL GRADE VALLEY-VIEW BLACK DIAMOND (OR EQUAL) POLY EDGING OR SPADED EDGE, AS INDICATED. POLY EDGING SHALL BE PLACED WITH SMOOTH CURVES AND STAKED WITH METAL SPIKES NO GREATER THAN 4 FOOT ON CENTER WITH BASE OF TOP BEAD AT GRADE, FOR MOWERS TO CUT ABOVE WITHOUT DAMAGE. UTILIZE CURBS AND SIDEWALKS FOR EDGING WHERE POSSIBLE. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. INDIVIDUAL TREE, SHRUB, OR RAIN-GARDEN BEDS TO BE SPADED EDGE, UNLESS NOTED OTHERWISE. EDGING TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).
- 19. ALL DISTURBED AREAS TO BE SODDED OR SEEDED, UNLESS OTHERWISE NOTED. SOD TO BE STANDARD WISCONSIN GROWN AND HARDY BLUEGRASS MIX, FREE OF LAWN WEEDS. ALL TOPSOIL AREAS TO BE RAKED TO REMOVE DEBRIS AND ENSURE DRAINAGE. SLOPES OF 3:1 OR GREATER SHALL BE STAKED. SEED AS SPECIFIED AND PER WISDOT SPECIFICATIONS. IF NOT INDICATED ON LANDSCAPE PLAN, SEE EROSION CONTROL PLAN.
- 20. PROVIDE IRRIGATION TO ALL PLANTED AREAS ON SITE. IRRIGATION SYSTEM TO BE DESIGN/BUILD BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. CONTRACTOR TO PROVIDE OPERATION MANUALS, AS-BUILT PLANS, AND NORMAL PROGRAMMING. SYSTEM SHALL BE WINTERIZED AND HAVE SPRING STARTUP DURING FIRST YEAR OF OPERATION. SYSTEM SHALL HAVE ONE-YEAR WARRANTY ON ALL PARTS AND LABOR. ALL INFORMATION ABOUT INSTALLATION AND SCHEDULING CAN BE OBTAINED FROM THE GENERAL CONTRACTOR.
- 21. CONTRACTOR SHALL PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEM IS OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
- 22. REPAIR, REPLACE, OR PROVIDE SOD/SEED AS REQUIRED FOR ANY ROADWAY BOULEVARD AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.
- 23. REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
- 24. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS UNTIL PROJECT COMPLETION, BUT IN NO CASE, LESS THAN FOLLOWING PERIOD; 2 YEAR AFTER PROJECT COMPLETION. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. REPLENISH MULCH TO THE REQUIRED DEPTH. MAINTAIN LAWNS FOR 45 DAYS AFTER INSTALLING SOD INCLUDING MOWING WHEN SOD RECITES 4" IN HEIGHT. WEED PLANTING BEDS AND MULCH SAUCERS AT MINIMUM ONCE A MONTH DURING THE GROWING SEASON. PROVIDE A MONTHLY REPORT TO THE OWNER ON WEEDING AND OTHER MAINTENANCE RESPONSIBILITIES.



2021 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197
WWW.KIMLEY-HORN.COM

DATE
07/26/2021
ALE AS SHOWN
SIGNED BY KHA
AWN BY KHA

ROJECT MALLAF



 Project number: 160640019.1.106

 Scale:

 Drawn:
 ERB/CFK

 Checked:
 RAH

 Date:
 07/26/2021

LANDSCAPE DETAILS

L113

	Native Seed Mix De	esign		
The native seed mixes below are designed with four specific requirements in mind: Biomass production, specific site saling soil conditions, rapid first year initial establishment and the need to be budget conscious. Considered sources include MNDOT Seeding Manual (2014), Dr. Jack Norlands "Spike Seeding" method and Minnesota Native Landscapes.  Storm Basin Rim Seed Mix (temporarily wet conditions)				
Storm Basin Rim Seed Mix (te	mporarily wet conditions)			
Common Name	Scientific Name	Rate (lb/ac)	% of Mix (by Weight)	Seeds / SF (Average)
	Grasses			
Liberty Switch Grass	Panicum virgatum	1.00	2.778%	8.93
Mandan Canada Rye	Elymus canadensis	2.00	5.556%	3.82
Virginia Wild Rye	Elymus virginicus	2.25	6.250%	3.47
Slender Wheat Grass	Elymus trachycaulus	2.25	6.250%	6.97
Fringed Brome	Bromus ciliatus	0.50	1.389%	1.84
Prairie Cordgrass	Spartina pectinata	1.00	2.778%	2.42
	Grasses Subtotal	9.00	25.000%	27.46
	Forbs			
Yarrow	Achillea millefolium	0.13	0.361%	8.50
Black-eyed Susan	Rudbeckia hirta	0.13	0.722%	8.79
Golden Alexander	Zizia aurea	0.20	0.722%	0.57
Blue Vervain	Verbena hastata	0.14	0.383%	1.37
Panicle Aster	Symphytrichum lanceolatum	0.04	0.083%	1.72
New England Aster	Symphyotrichum novae-angliae	0.03	0.003%	0.97
Common Ox-eye Sunflower	Heliopis helianthoides	0.54	1.500%	0.91
Wild Bergamot	Monarda fistulosa	0.16	0.444%	4.11
Purple Prairie Clover	Dalea purpurea	0.66	1.833%	3.64
Turple France Glover	Forbs Subtotal	2.00	5.556%	30.57
	Cover Crop*			
Oats	Avena sativa	25.00	69.444%	7.35
	Cover Crop Subtotal	25.00	69.444%	7.35
	Basin Rim Seed Mix Total	36.00	100.000%	65.37

Common Name	Scientific Name	Rate (lb/ac)	% of Mix (by Weight)	Seeds / SI (Average)
	Grasses			
Liberty Switch Grass	Panicum virgatum	1.00	2.778%	8.93
Mandan Canada Rye	Elymus canadensis	2.00	5.556%	3.82
Virginia Wild Rye	Elymus virginicus	1.58	4.389%	2.44
Slender Wheat Grass	Elymus trachycaulus	1.70	4.722%	5.27
Fringed Brome	Bromus ciliatus	0.50	1.389%	1.84
Prairie Cordgrass	Spartina pectinata	0.80	2.222%	1.94
Indian Grass	Sorghastrum nutans	1.35	3.750%	6.32
Dark Green Bulrush	Scirpus atrovirens	0.05	0.139%	8.45
Woolgrass	Scirpus cyperinus	0.02	0.056%	12.49
	Grasses Subtotal	9.00	25.000%	36.30
	Forbs			
Yarrow	Achillea millefolium	0.15	0.417%	9.81
Black-eyed Susan	Rudbeckia hirta	0.25	0.694%	8.45
Golden Alexander	Zizia aurea	0.14	0.389%	0.57
Blue Vervain	Verbena hastata	0.15	0.417%	5.12
Panicle Aster	Symphytrichum lanceolatum	0.03	0.083%	1.72
New England Aster	Symphyotrichum novae-angliae	0.04	0.111%	0.97
Common Ox-eye Sunflower	Heliopis helianthoides	0.33	0.917%	0.56
Wild Bergamot	Monarda fistulosa	0.14	0.389%	3.60
Purple Prairie Clover	Dalea purpurea	0.45	1.250%	2.48
Swamp Milkweed	Asclepias incarnata	0.32	0.889%	0.56
	Forbs Subtotal	2.00	5.556%	33.83
	Cover Crop*			
Oats	Avena sativa	25.00	69.444%	7.35
,	Cover Crop Subtotal	25.00	69.444%	7.35
,	Basin Rim Seed Mix Total	36.00	100.000%	77.48

Common Name	Scientific Name	Rate (lb/ac)	% of Mix (by Weight)	Seeds / SF (Average)
	Grasses	•	•	
Big Bluestem	Andropogon gerardii	1.50	3.488%	5.67
Prairie Brome	Bromus kalmii	0.20	0.465%	0.73
Side-oats Grama	Bouteloua curtipendula	3.00	6.977%	6.61
Buffalograss - Bowie	Buchloe dactyloides	1.50	3.488%	1.98
Canada Wild Rye	Elymus canadensis	2.25	5.233%	4.30
Slender Wheat Grass	Elymus trachycaulus	2.80	6.512%	8.68
Liberty Switch Grass	Panicum virgatum	1.00	2.326%	8.93
Little Bluestem	Schizachyrium scoparium	2.00	4.651%	11.02
ndian Grass	Sorghastrum nutans	1.75	4.070%	7.71
	Grasses Subtotal	16.00	37.209%	55.64
	Forbs			
Yarrow	Achillea millefolium	0.08	0.186%	5.23
Black-eyed Susan	Rudbeckia hirta	0.15	0.349%	5.07
Purple Prairie Clover	Dalea purpurea	0.40	0.930%	2.20
Wild Bergamot	Monarda fistulosa	0.16	0.372%	4.11
Anise Hyssop	Agastache foeniculum	0.02	0.047%	0.66
Common Milkweed	Asclepias syriaca	0.20	0.465%	0.29
Butterfly Weed	Asclepias tuberosa	0.02	0.047%	0.03
White Prairie Clover	Dalea candida	0.02	0.047%	0.14
Canada Tick Trefoil	Desmodium canadense	0.20	0.465%	0.40
Golden Alexander	Zizia aurea	0.20	0.465%	0.81
Blue Vervain	Verbena hastata	0.02	0.047%	0.68
Culvers Root	Veronicastrum virginicum	0.02	0.047%	5.88
Mountain Mint	Pycnanthemum virginianum	0.01	0.023%	0.81
Long-Headed Cone Flower	Ratibida columnifera	0.16	0.372%	2.47
Smooth Blue Aster	Symphyotrichum laeve	0.04	0.093%	0.97
New England Aster	Symphyotrichum novae-angliae	0.04	0.093%	0.81
Maximillian's Sunflower	Helianthus maximiliani	0.10	0.233%	0.48
Common Ox-eye Sunflower	Heliopsis helianthoides	0.10	0.233%	0.17
Prairie Blazing Star	Liatris pycnostachya	0.02	0.047%	0.08
Yellow Cone Flower	Ratibida pinnata	0.02	0.047%	0.22
Stiff Goldenrod	Oligoneuron rigidum	0.02	0.047%	0.30
	Forbs Subtotal	2.00	4.651%	12.17
	Cover Crop*			
Oats	Avena sativa	25.00	58.140%	7.35
	Cover Crop Subtotal	25.00	58.140%	7.35
	Basin Rim Seed Mix Total	43.00	100.000%	75.16



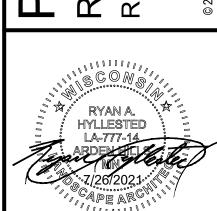
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SEED MIX SCHEDULE

L114

Common Name	Scientific Name	Rate (lb/ac)	Rate (kg/ha)	% of Mix (by weight)	Seeds/ sq ft
	Beckmannia				
American slough grass	syzigachne	0.70	0.78	14.07%	12.92
rice cut grass	Leersia oryzoides	0.30	0.34	5.93%	3.70
tall manna grass	Glyceria grandis	0.25	0.28	4.98%	6.40
	Grasses Subtotal	1.25	1.40	24.98%	23.02
river bulrush	Bolboschoenus fluviatilis	0.76	0.85	15.20%	1.20
soft stem bulrush	Schoenoplectus tabernaemontani	0.44	0.49	8.78%	5.00
Three-square bulrush	Schoenoplectus pungens	0.23	0.26	4.54%	1.00
bristly sedge	Carex comosa	0.18	0.20	3.63%	2.00
least spikerush	Eleocharis acicularis	0.10	0.11	1.94%	2.50
marsh spikerush	Eleocharis palustris	0.10	0.11	2.03%	1.90
lake sedge	Carex lacustris	0.06	0.07	1.19%	0.24
woolgrass	Scirpus cyperinus	0.05	0.06	1.02%	32.00
tussock sedge	Carex stricta	0.04	0.04	0.77%	0.75
Torrey's rush	Juncus torreyi	0.04	0.04	0.85%	25.00
	Sedges & Rushes Subtotal	2.00	2.24	39.95%	71.59
giant bur reed	Sparganium eurycarpum	0.49	0.55	9.80%	0.09
common water plantain	Alisma triviale	0.40	0.45	8.00%	9.70
broad-leaved arrowhead	Sagittaria latifolia	0.30	0.34	6.07%	6.80
Sweet flag	Acorus americanus	0.28	0.31	5.53%	0.67
marsh milkweed	Asclepias incarnata	0.28	0.31	5.67%	0.50
	Forbs Subtotal	1.75	1.96	35.07%	17.76
	Total	5.00	5.60	100.00%	112.37
Purpose:	Emergent wetland restora wet stormwater ponds wh				estoration,

