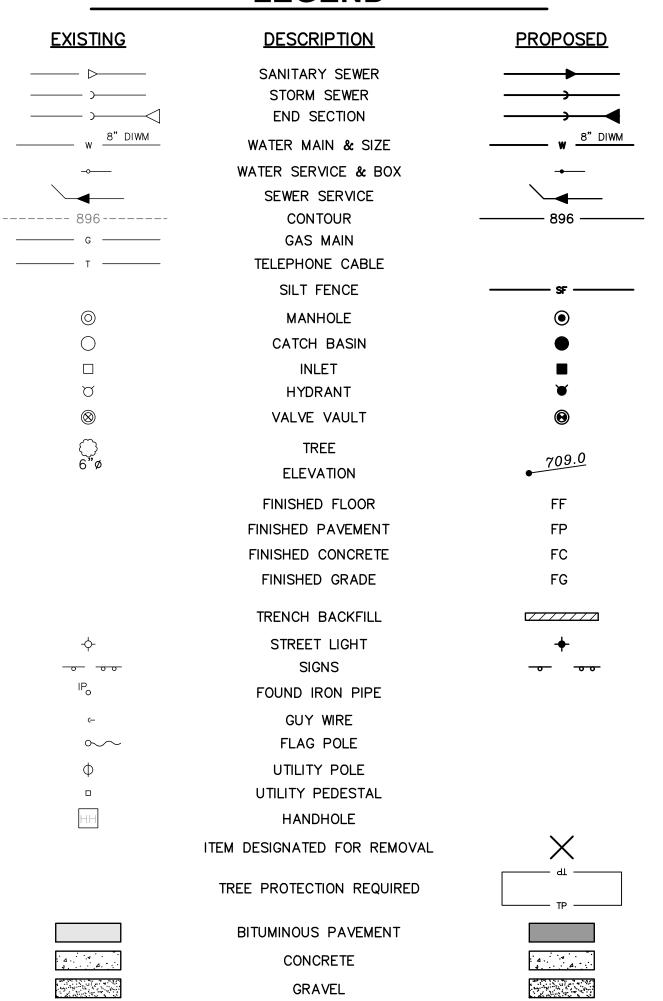
IMPROVEMENT PLANS

FOR

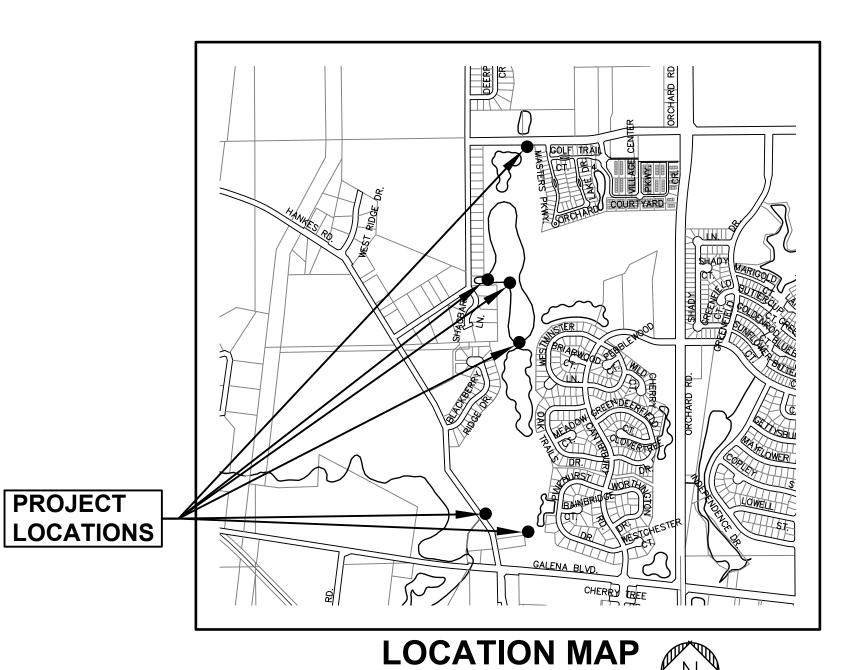
ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

LEGEND





101 W. ILLINOIS AVENUE AURORA, IL 60506 (630) 897-0516



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SITE REFERENCE MARK 1

BURY FLANGE BOLT ON FIRE HYDRANT ON THE NORTH SIDE OF INDIAN TRAIL ROAD, NORTH OF TEE BRIDGE 4.

ELEVATION = 672.22

SITE REFERENCE MARK 2

SOUTHEAST FLANGE BOLT ON FIRE HYDRANT ON THE EAST SIDE OF HANKES ROAD, SOUTH OF TEE BRIDGE 16.

ELEVATION = 667.94



SCALE: 1" = 1200'

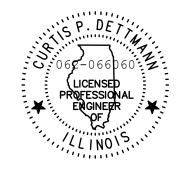
CITY OF AURORA

KANE COUNTY, ILLINOIS

Engineering Enterprises, Inc.

Consulting Engineers 52 Wheeler Road

Sugar Grove, Illinois 60554 630.466.6700 / www.eeiweb.com PROFESSIONAL DESIGN FIRM # 184-002003



ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION.

DATED AT SUGAR GROVE, ILLINOIS,

THIS 16TH DAY OF JANUARY , 2025.

CURTIS P. DETTMANN, P.E.

CURTIS P. DETTMANN, P.E. ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 062-066060 EXPIRATION DATE: 11/30/25

REVISIONS

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GENERAL NOTES AND CONSTRUCTION SPECIFICATIONS

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1 2022, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" LATEST ADDITION, THE ORDINANCES AND CODES OF THE CITY OF AURORA, THE SPECIFICATIONS OF FOX METRO WATER RECLAMATION DISTRICT, AND THESE IMPROVEMENT PLANS AND
- 2. HOLD HARMLESS: THE CONTRACTOR, AS A CONDITION OF THE CONTRACT, HEREBY AGREES TO ASSUME THE ENTIRE RESPONSIBILITY AND LIABILITY FOR, AND DEFENSE OF, AND TO PAY AND INDEMNIFY AND HOLD THE OWNER, THEIR ENGINEERS, ARCHITECTS, LANDSCAPE ARCHITECTS AND EMPLOYEES; AND THE MUNICIPALITY, THEIR ENGINEERS, AGENTS AND EMPLOYEES HARMLESS FROM ALL CLAIMS FOR DAMAGES OR INJURY (OR DEATH RESULTING THEREFROM) TO ANY AND ALL PERSONS, INCLUDING EMPLOYEES OR AGENTS OR ANY PERSON OR FIRM ENGAGED IN WORK UPON THE PROJECT, ARISING OUT OF THE CONDUCT OF THE CONTRACTOR ARISING OUT OF THE PERFORMANCE OF THIS AGREEMENT OR ANY WORK RELEVANT THERETO, OR ARISING OUT OF ANY PROVISIONS OF THE OCCUPATIONS SAFETY AND HEALTH STANDARDS ACT
- 3. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF THEIR WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- 5. THE CONTRACTOR SHALL EXAMINE THE PLANS AND SPECIFICATIONS, VISIT THE SITE OF THE WORK AND INFORM THEMSELF FULLY WITH THE WORK INVOLVED, GENERAL AND LOCAL CONDITIONS, ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS AND ALL OTHER PERTINENT ITEMS WHICH MAY AFFECT THE COST AND TIME OF COMPLETION OF THIS PROJECT BEFORE SUBMITTING A PROPOSAL
- 6. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE ENGINEER TO ANY MATERIAL OR EQUIPMENT THEY DEEM INADEQUATE AND TO ANY ITEM OF WORK OMITTED.
- 7. PERMITS AND LICENSES OF A TEMPORARY NATURE NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR.
- 8. IF ANY APPROVED EQUAL ITEMS ARE REQUIRED THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR APPROVAL AT LEAST ONE WEEK PRIOR TO INSTALLATION.
- 9. THE CONTRACTOR SHALL HAVE A COMPETENT SUPERINTENDENT ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION OPERATIONS.
- 10. THE CONTRACTOR WILL HAVE IN THEIR POSSESSION ON THE JOB SITE A COPY OF THE PLANS AND SPECIFICATIONS DURING CONSTRUCTION.
- 11. ALL ELEVATIONS ARE BASED ON BENCHMARKS AS SHOWN.
- 12. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY REQUIRED INSPECTIONS WITH CITY OF AURORA AND OTHER AGENCIES.
- 13. THE CONTRACTOR SHALL KEEP ALL ADJOINING STREETS PAVEMENT CLEAN OF MUD, DIRT AND DEBRIS, AND WHEN NECESSARY SHALL CLEAN PAVEMENT ON A DAILY BASIS.
- 14. THE CONTRACTOR SHALL OBTAIN, ERECT, MAINTAIN AND REMOVE ALL SIGNS, BARRICADES, FLAGMEN AND OTHER CONTROL DEVICES AS MAY BE NECESSARY FOR THE PURPOSE OF REGULATING, WARNING OR GUIDING TRAFFIC. PLACEMENT AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE CITY OF AURORA REQUIREMENTS AND THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
- 15. ALL ROAD SIGNS, STREET SIGNS AND TRAFFIC SIGNS WHICH NEED TO BE RELOCATED OR MOVED DUE TO CONSTRUCTION SHALL BE TAKEN DOWN AND STORED BY THE CONTRACTOR AT THEIR OWN EXPENSE, EXCEPT THOSE THAT ARE NECESSARY FOR PROPER TRAFFIC CONTROL WHICH SHALL BE TEMPORARILY RESET UNTIL COMPLETION OF CONSTRUCTION OPERATIONS. AFTER COMPLETION OF THE WORK, THE CONTRACTOR SHALL RESET, AT THEIR EXPENSE, ALL SAID SIGNS.
- 16. THE CONTRACTOR SHALL BE REQUIRED TO MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS, STRUCTURES, POLES, CABLES AND PIPE LINES, BEFORE CONSTRUCTION BEGINS. THEY SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE ENGINEER AND OWNER AT THEIR OWN EXPENSE.
- 17. LOCATIONS OF UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY, AND ARE NOT NECESSARILY COMPLETE. CONTRACTOR SHALL MAKE THEIR OWN INVESTIGATIONS AS TO LOCATION OF ALL EXISTING UNDERGROUND STRUCTURES, CABLES AND PIPE
- 18. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER SO THAT THE CONFLICT MAY BE RESOLVED.
- 19. THE CONTRACTOR SHALL NOTIFY THE J.U.L.I.E. (1-800-892-0123 OR 811) AT LEAST THREE DAYS PRIOR TO CONSTRUCTION SO THAT EACH UTILITY COMPANY CAN STAKE OUT ANY UNDERGROUND IMPROVEMENTS THAT THEY MAY HAVE WHICH MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION.
- 20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PRIVATE AND PUBLIC UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER AND OWNER BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- 21. ALL TRENCHES CAUSED BY THE CONSTRUCTION OF SEWERS, SERVICE SEWERS, WATER MAINS, WATER SERVICE PIPES AND THE EXCAVATION AROUND CATCH BASINS. MANHOLES. INLETS AND OTHER APPURTENANCES WHICH OCCUR WITHIN THE LIMITS OF EXISTING OR PROPOSED PAVEMENTS, SIDEWALKS AND CURB AND GUTTERS OR WHERE THE EDGE OF THE TRENCH SHALL BE WITHIN TWO FEET (2') OF SAID IMPROVEMENTS SHALL BE BACKFILLED WITH APPROVED SUITABLE SELECT MATERIAL AND PROPERLY COMPACTED.
- 22. THE CONTRACTOR SHALL RESTORE ANY AREA DISTURBED OUTSIDE THE CONSTRUCTION SITE TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL USE. THIS SHALL INCLUDE FINISH GRADING, ESTABLISHMENT OF A VEGETATIVE COVER (SEEDING OR SOD), GENERAL CLEANUP AND PAVEMENT REPLACEMENT.
- 23. ALL LOT IRONS DAMAGED OR REMOVED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY THE ENGINEER AND SAID COST OF REPLACEMENT SHALL BE PAID BY THE CONTRACTOR.
- 24. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AND APPROVED BY THE OWNER. FINAL PAYMENT SHALL BE MADE AFTER ALL OF THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.
- 25. CAD FILES FOR THIS PROJECT ARE THE PROPERTY OF ENGINEERING ENTERPRISES, INC. EEI CAN PROVIDE CAD FILES FOR BIDDING PURPOSES UPON REQUEST. TO OBTAIN A CAD FILE FOR BIDDING, THE CONTRACTOR MUST SIGN AN ELECTRONIC FILE AGREEMENT AND PAY A \$25 CAD FILE FEE. CAD FILES OBTAINED FOR BIDDING PURPOSES CANNOT BE USED FOR CONSTRUCTION STAKING AS THEY WILL NOT REFLECT ANY CHANGES OR ADDENDUMS DURING THE BIDDING PROCESS.
- 26. THE CONTRACTOR IS RESPONSIBLE FOR THE PRODUCTION OF RECORD DRAWINGS PER CITY OF AURORA REQUIREMENTS. CITY OF AURORA REQUIREMENTS FOR RECORD DRAWINGS CAN BE FOUND AT: http://www.aurora-il.org/documents/engineering/recorddrawingrequirements.pdf

- 27. EXISTING FIELD TILE ENCOUNTERED AT AN ELEVATION BELOW THE PROPOSED DRAINAGE SYSTEM SHALL BE REPLACED BY A METHOD APPROVED BY THE ENGINEER. (THE USUAL METHOD WILL BE TO SLEEVE THE FIELD TILE WITH RIGID PIPE AND BED THE SLEEVE.) PLEASE CONTACT THE DESIGN ENGINEER AT ENGINEERING ENTERPRISES, INC. PRIOR TO MAKING ANY REPLACEMENTS. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION.
- 28. PERIMETER EROSION CONTROL AND STABILIZED CONSTRUCTION ENTRANCE SHALL BE IN PLACE PRIOR TO ANY EARTH DISTURBANCE.
- 29. THE GRADING AND CONSTRUCTION OF THE SITE IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORMWATER. ALL AREAS ADJACENT TO THESE IMPROVEMENTS SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE.
- 30. TOPSOIL EXCAVATED SHALL BE EXCAVATED FROM UNDER ALL PROPOSED IMPROVEMENTS AND REMOVED FROM SITE.
- 31. THE PROPOSED GRADING ELEVATIONS SHOWN ON THE PLANS ARE FINISH GRADE. A MINIMUM OF SIX INCHES (6") OF TOPSOIL IS TO BE PLACED BEFORE FINISH GRADE ELEVATIONS ARE ACHIEVED.

EARTHWORK SPECIFICATIONS AND GENERAL NOTES

- 1. PERIMETER EROSION CONTROL AND STABILIZED CONSTRUCTION ENTRANCE SHALL BE IN PLACE PRIOR TO ANY EARTH DISTURBANCE.
- 2. THE GRADING AND CONSTRUCTION OF THE SITE IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORMWATER. ALL AREAS ADJACENT TO THESE IMPROVEMENTS SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE.
- 3. THE PROPOSED GRADING ELEVATIONS SHOWN ON THE PLANS ARE FINISH GRADE. A MINIMUM OF SIX INCHES (6") OF TOPSOIL IS TO BE PLACED BEFORE FINISH GRADE ELEVATIONS ARE ACHIEVED.
- 4. EXCAVATED MATERIAL THAT IS CLEAN CONSTRUCTION DEMOLITION DEBRIS (CCDD) SHALL BE DISPOSED IN A LICENSED CCDD QUARRY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL 663 FORMS, TESTING AND OTHER RESTRICTIONS AS SET BY THE RECIEVING QUARRY.
- 5. ANY POSSIBLE CCDD MATERIAL THAT TESTS AS CONTAMINATED SHALL HAVE THE TEST VERIFIED BY OWNER PRIOR TO
- 6. CONTAMINATED MATERIAL PER CCDD REQUIREMENTS SHALL BE DISPOSED OF IN A LICENSED LANDFILL
- 7. ANY FILL MATERIAL SHALL BE PLACED IN LEVEL UNIFORM LAYERS SO THAT THE COMPACTED THICKNESS IS APPROXIMATELY SIX INCHES (6"). EACH LAYER SHALL BE THOROUGHLY MIXED DURING SPREADING TO ENSURE UNIFORMITY.
- 8. ANY FILL MATERIAL WITHIN BUILDING, ROADWAY, PATH AND PARKING AREAS SHALL BE COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT (95%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM SPECIFICATION D-1557 (MODIFIED PROCTOR METHOD).
- 9. ANY NATIVE MATERIAL WITHIN BUILDING, ROADWAY, PATH AND PARKING AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES AND COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT (95%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM SPECIFICATION D-1557 (MODIFIED PROCTOR METHOD).
- 10. UNSUITABLE MATERIAL ENCOUNTERED IN EXCAVATING FOR PARKING AREAS, DRIVEWAYS, ROADWAYS AND BUILDING PAD SUBGRADES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL TO THE SATISFACTION OF THE OWNER. UNSUITABLE MATERIAL THAT IS EXCAVATED SHALL BE REMOVED FROM THE SITE AND WILL BECOME THE PROPERTY OF THE CONTRACTOR.
- 11. ANY POSSIBLE UNSUITABLE MATERIAL SHALL BE VERIFIED BY OWNER PRIOR TO HAUL-OFF.
- 12. PROPOSED BUILDING, ROADWAY, PATH AND PARKING AREAS SHALL BE EXCAVATED OR FILLED TO PLUS OR MINUS 0.1 FOOT OF DESIGN SUBGRADE ELEVATIONS BY THE CONTRACTOR.
- 13. THE SUBGRADE FOR PROPOSED BUILDING, ROADWAY, PATH AND PARKING AREAS AREAS SHALL BE PROOF-ROLLED BY THE CONTRACTOR AND WITNESSED BY THE OWNER PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE COURSE. PROOF ROLL SHALL BE DONE WITH A FULL LEGALLY LOADED SIX-WHEEL OPERATED BY THE CONTRACTOR. SAID TRUCK SHALL BE LOADED WITH CRUSHED STONE. 48 HOURS NOTICE MUST BE GIVEN TO THE OWNER PRIOR TO PROOF ROLL. ANY UNSTABLE AREAS ENCOUNTERED SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE OWNER.
- 14. UPON COMPLETION OF THE SURFACE IMPROVEMENTS, THE EXCAVATION CONTRACTOR SHALL RESPREAD A MINIMUM SIX INCH LAYER OF TOPSOIL ON ALL DISTURBED AREAS.

<u>PAVEMENT</u>

- THE AGGREGATE BASE COURSE MATERIAL SHALL BE INSPECTED AND PROOF-ROLLED BY THE CONTRACTOR AND WITNESSED BY THE OWNER PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE BINDER COURSE. PROOF ROLL SHALL BE DONE WITH A FULL LEGALLY LOADED SIX-WHEEL OPERATED BY THE CONTRACTOR. SAID TRUCK SHALL BE LOADED WITH CRUSHED STONE. 48 HOURS NOTICE MUST BE GIVEN TO THE OWNER PRIOR TO PROOF ROLL. ANY UNSTABLE AREAS ENCOUNTERED SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE OWNER.
- 2. AFTER THE BINDER COURSE HAS BEEN PROOF ROLLED AND REPAIRED WHERE REQUIRED AND PRIOR TO PLACING THE SURFACE COURSE, THE BINDER COURSE SHALL BE SURFACE TESTED BY THE CONTRACTOR. ANY VARIATIONS IN THE SURFACE OF THE BINDER COURSE EXCEEDING ONE HALF INCH (½") SHALL BE CORRECTED BY THE REMOVAL AND REPLACEMENT OF ANY SUB-STANDARD AREAS OR THE CONSTRUCTION OF CORRECTIVE LEVELING BINDER AT THE DIRECTION OF THE OWNER. THE OWNER SHALL BE NOTIFIED NO LESS THAN FORTY-EIGHT (48) HOURS BEFORE THE SURFACE TESTING AND SHALL RECEIVE WRITTEN TEST RESULTS BEFORE THE SURFACE COURSE CAN BE CONSTRUCTED.
- 3. AFTER INSTALLATION OF THE BINDER COURSE, AND UPON THE COMPLETION OF INSPECTION OF SAME AND APPROVAL BY THE OWNER, THE PAVEMENT SHALL BE CLEANED, PRIMED AND THE SURFACE COURSE LAID. ALL DAMAGED AREAS IN THE BINDER OR BASE SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER, PRIOR TO LAYING THE SURFACE COURSE. THE PAVING CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND MANPOWER IS NECESSARY, INCLUDING THE USE OF POWER BROOMS, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. EQUIPMENT AND MANPOWER FOR CLEANING SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.
- 4. THREE-QUARTER INCH ($rac{3}{4}$ ") THICK PREMOLDED FIBER EXPANSION JOINTS WITH $rac{3}{4}$ " x 18" PLAIN ROUND STEEL DOWEL BARS SHALL BE INSTALLED AT INTERVALS MEETING CITY OF AURORA SPECIFICATIONS AND AT ALL P.C.'S, P.T.'S, CURB RETURNS, AND AT THE END OF EACH POUR. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. THREE-QUARTER INCH $(\frac{3}{4}")$ THICK FIBRE EXPANSION JOINTS SHALL BE USED IN EVERY CASE WHERE THE SIDEWALK COINCIDES WITH THE CURB AND GUTTER. CONTRACTION JOINTS SHALL BE PROVIDED AT TEN FOOT (10') (MAXIMUM) INTERVALS IN THE CURB AND CUT 2" DEEP. THE COST OF THESE JOINTS SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT. THE GRANULAR CURB BASE SHALL BE A MINIMUM OF FOUR (4) INCHES OF BASE COURSE MATERIAL TO ALLOW FOR PROPER SUBGRADE DRAINAGE. COMPACTED CURB SUBGRADE SHALL BE SHAPED PARALLEL TO THE CURB FLOW LINE AND POSITIVELY DRAINED TO THE INLETS AND CATCH BASINS. ALL ROADWAYS SHALL BE CONSTRUCTED ON A SELECT COMPACTED SUBGRADE, GRADED PARALLEL TO THE FINISH SURFACE.
- 5. ALL CONCRETE CURB AND GUTTER AND SIDEWALK SHALL BE CURED WITH W. R. MEADOWS CS-309 OR APPROVED EQUAL.
- 6. ALL CONCRETE CURB AND GUTTER AND SIDEWALK SHALL BE SEALED WITH W. R. MEADOWS TIAH ACRYLIC CONCRETE SEALER OR APPROVED EQUAL, IMMEDIATELY AFTER SEVEN (7) DAYS OF CURING AT A RATE OF 300 S. F. PER GALLON UTILIZING A SPRAY APPLICATION. THE SURFACE MUST BE THOROUGHLY CLEAN AND DRY FOR APPLICATION.
- ALL PERMANENT TYPE PAVEMENTS OR OTHER PERMANENT IMPROVEMENTS WHICH ABUT THE PROPOSED IMPROVEMENT, SHALL BE SAWED AND REMOVED AS NEEDED TO ACHIEVE A SUITABLE JOINT. ALL ITEMS SO REMOVED SHALL BE REPLACED WITH SIMILAR CONSTRUCTION MATERIALS TO THEIR ORIGINAL CONDITION OR BETTER. PAYMENT FOR SAWING SHALL BE INCIDENTAL TO THE CONSTRUCTION OF THESE IMPROVEMENTS.
- 8. IT SHALL BE THE PAVING CONTRACTOR'S RESPONSIBILITY TO PROVIDE FINAL ADJUSTMENT ON STRUCTURE FRAMES WHICH ARE LAYING WITHIN THE LIMITS OF THE PAVEMENT (INCLUDING CURB AND GUTTER) PRIOR TO BEGINNING PAVEMENT OPERATIONS. ALL FRAMES LAYING OUTSIDE OF THE PAVEMENT SHALL BE ADJUSTED TO FINISH GRADE BY THE UNDERGROUND CONTRACTOR. PAVEMENT LIMITS SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE PAVING CONTRACT.
- 9. PAVEMENT MARKINGS SHALL BE 4" WIDE, YELLOW PAINT PAVEMENT MARKINGS, UNLESS NOTED OTHERWISE.

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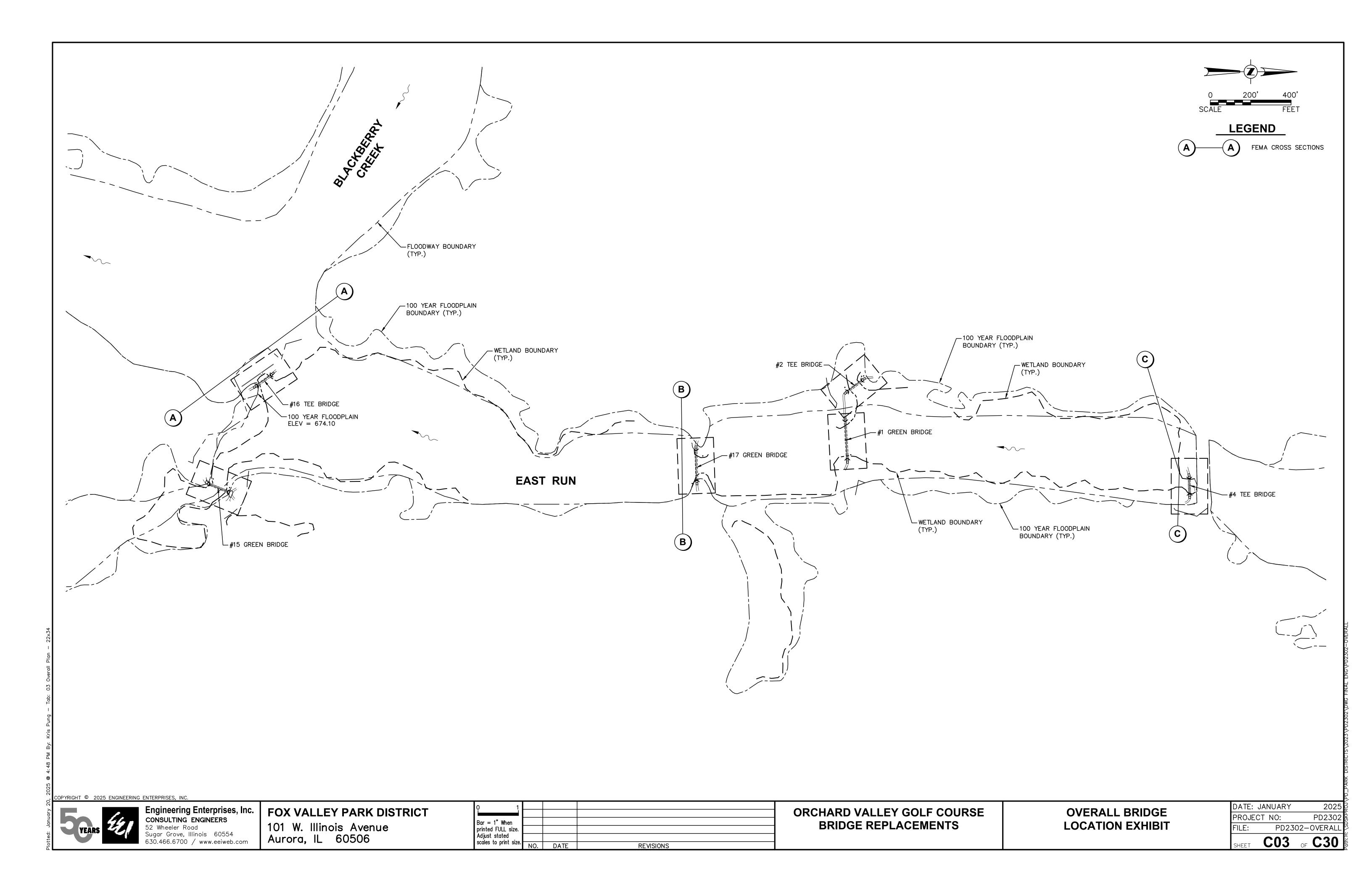
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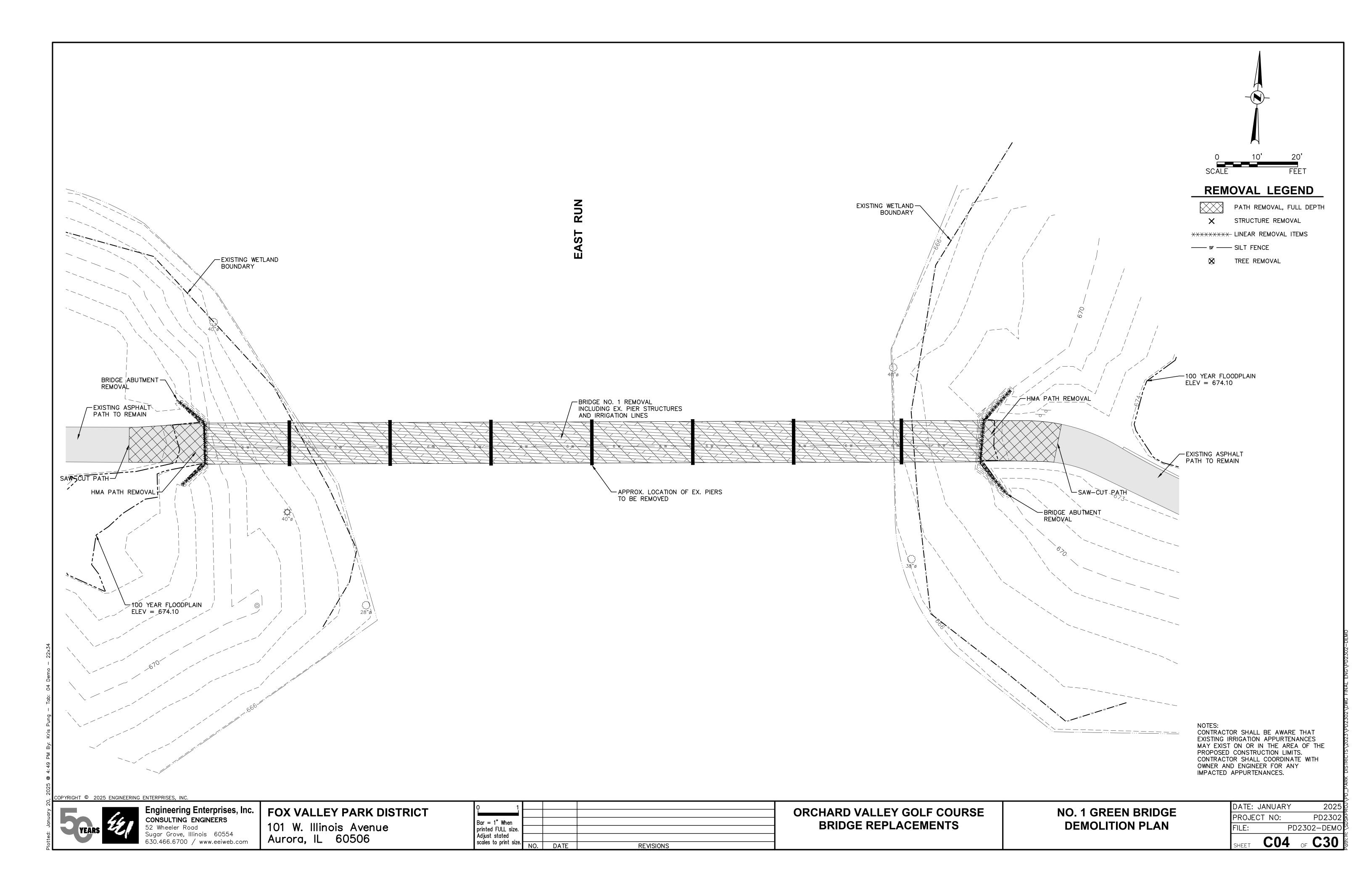
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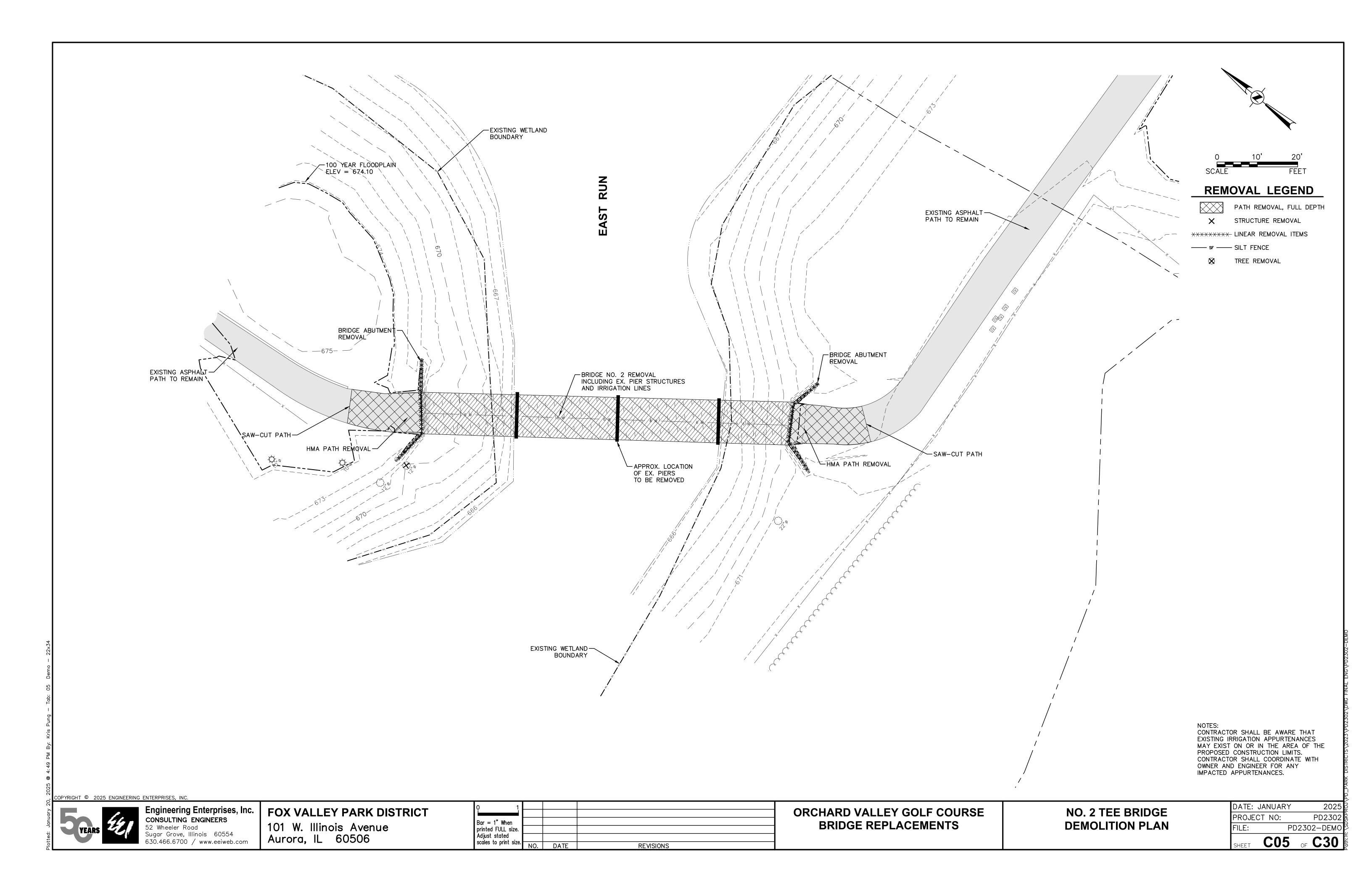
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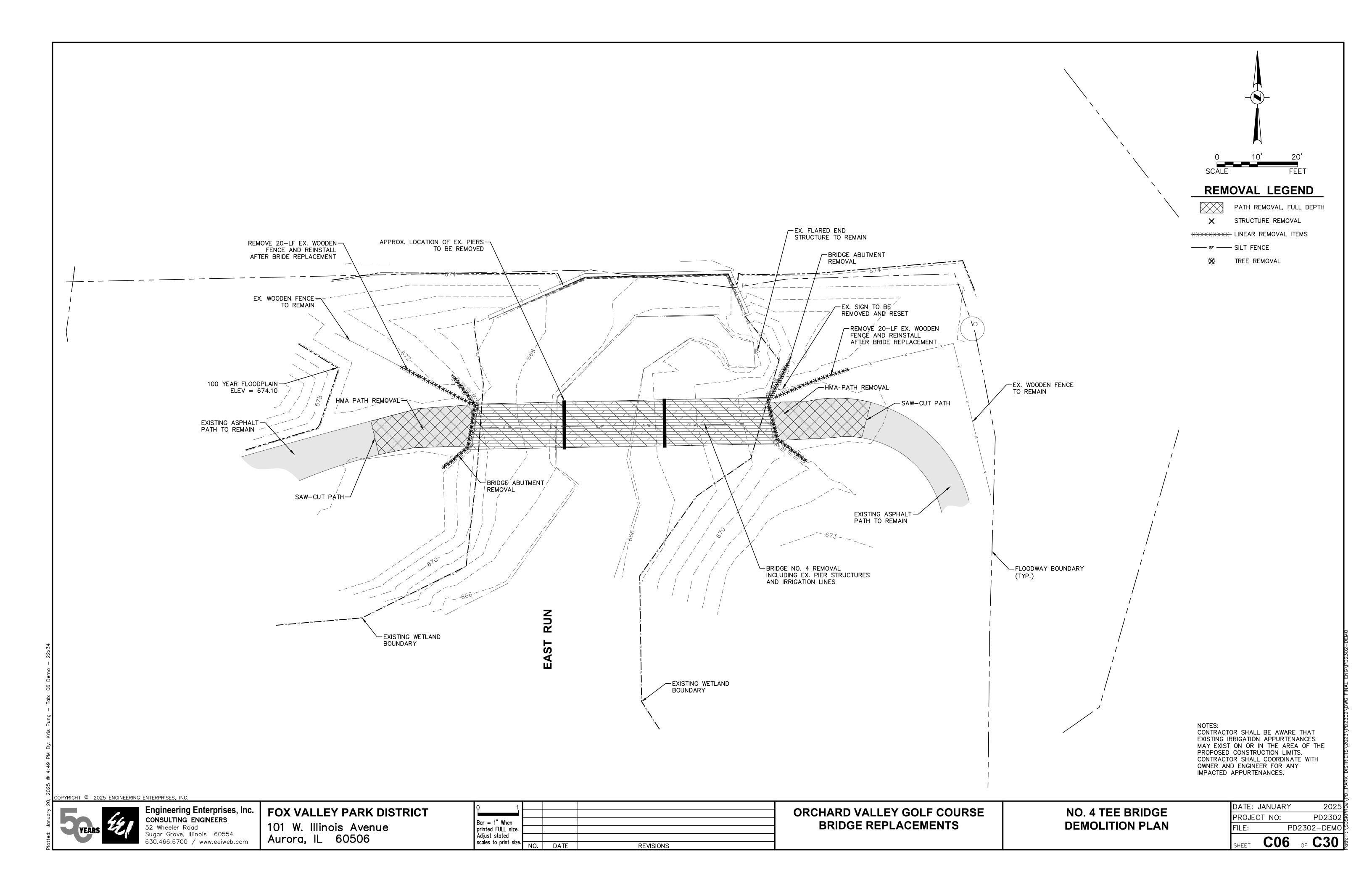
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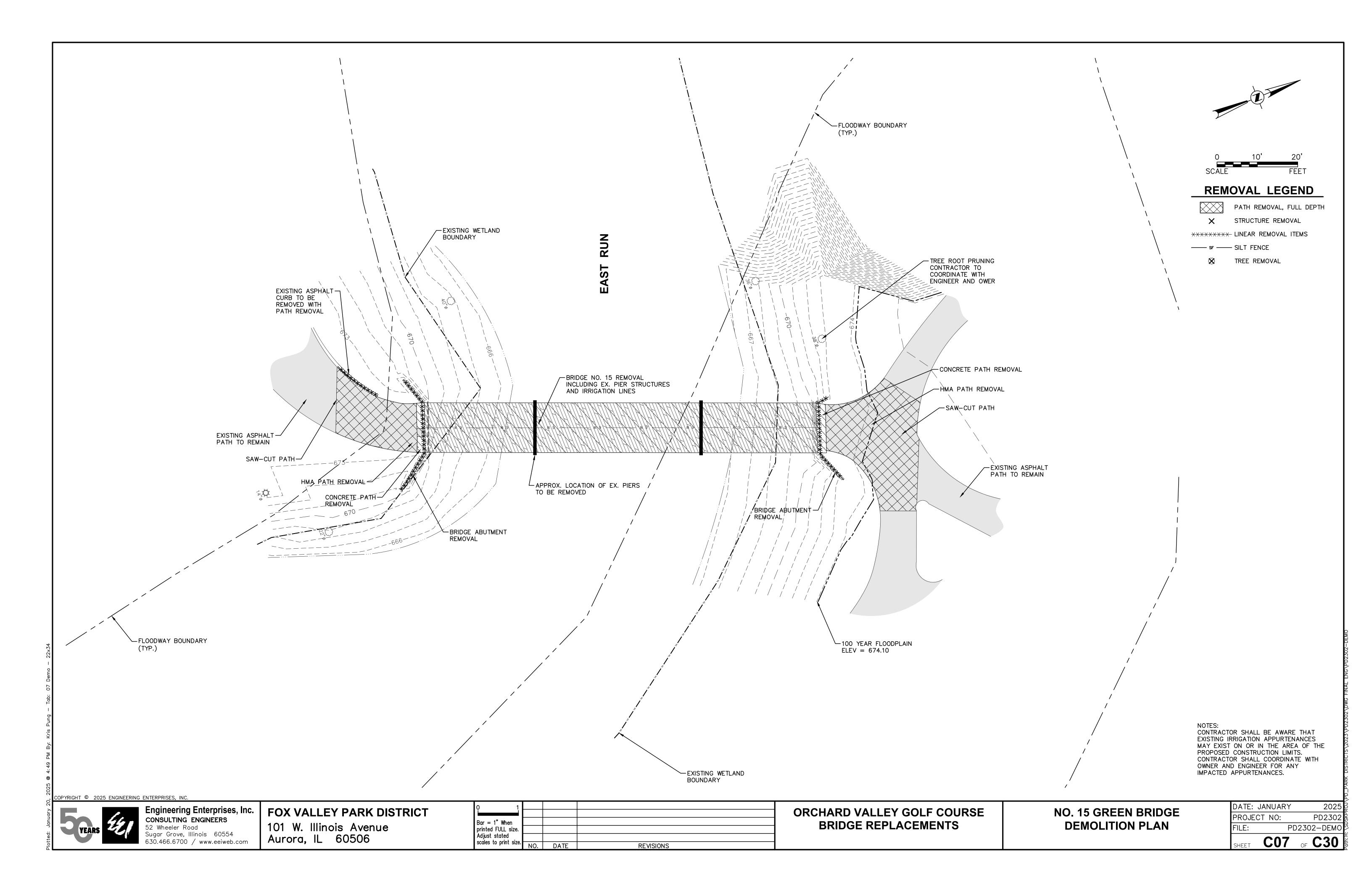
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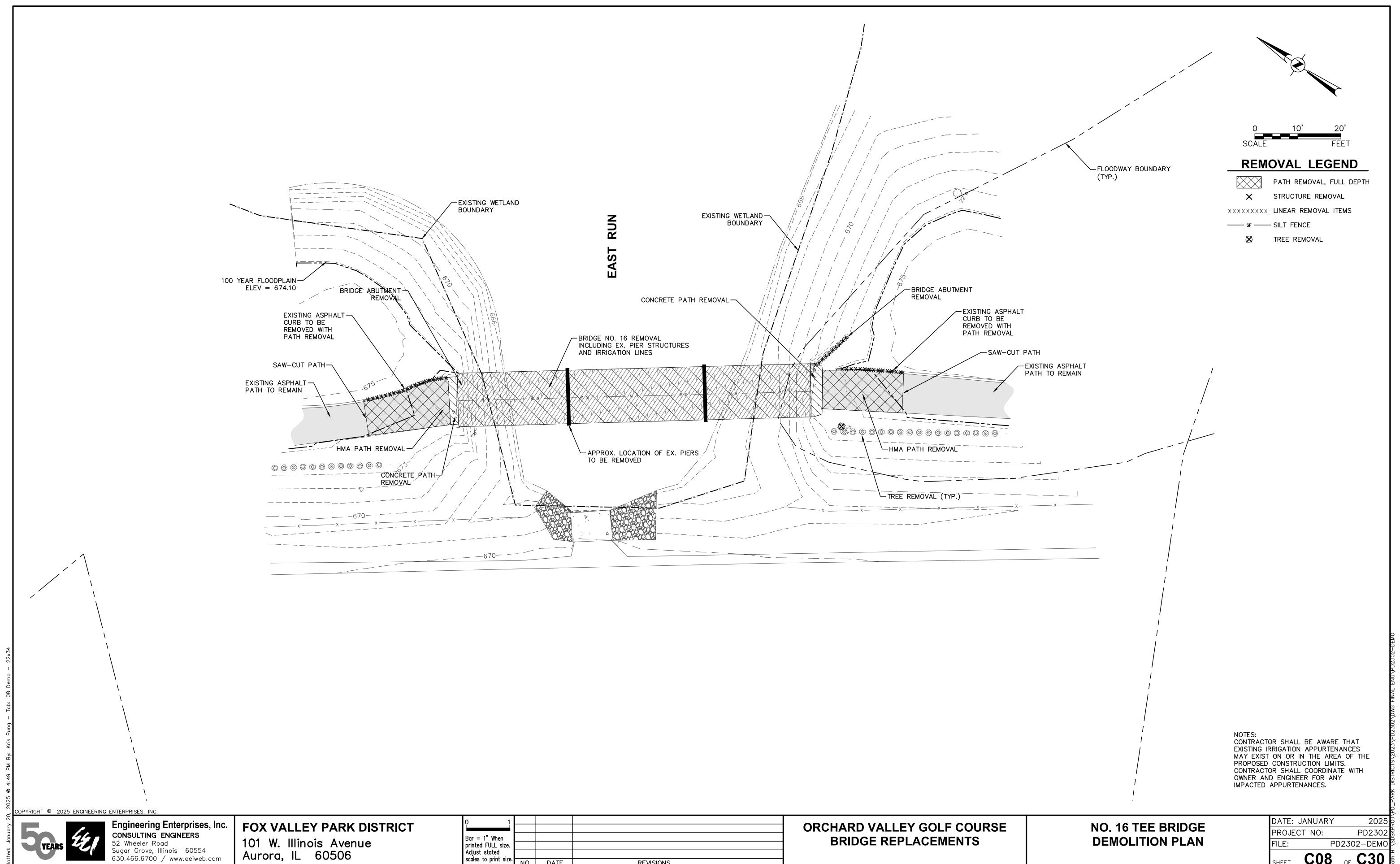








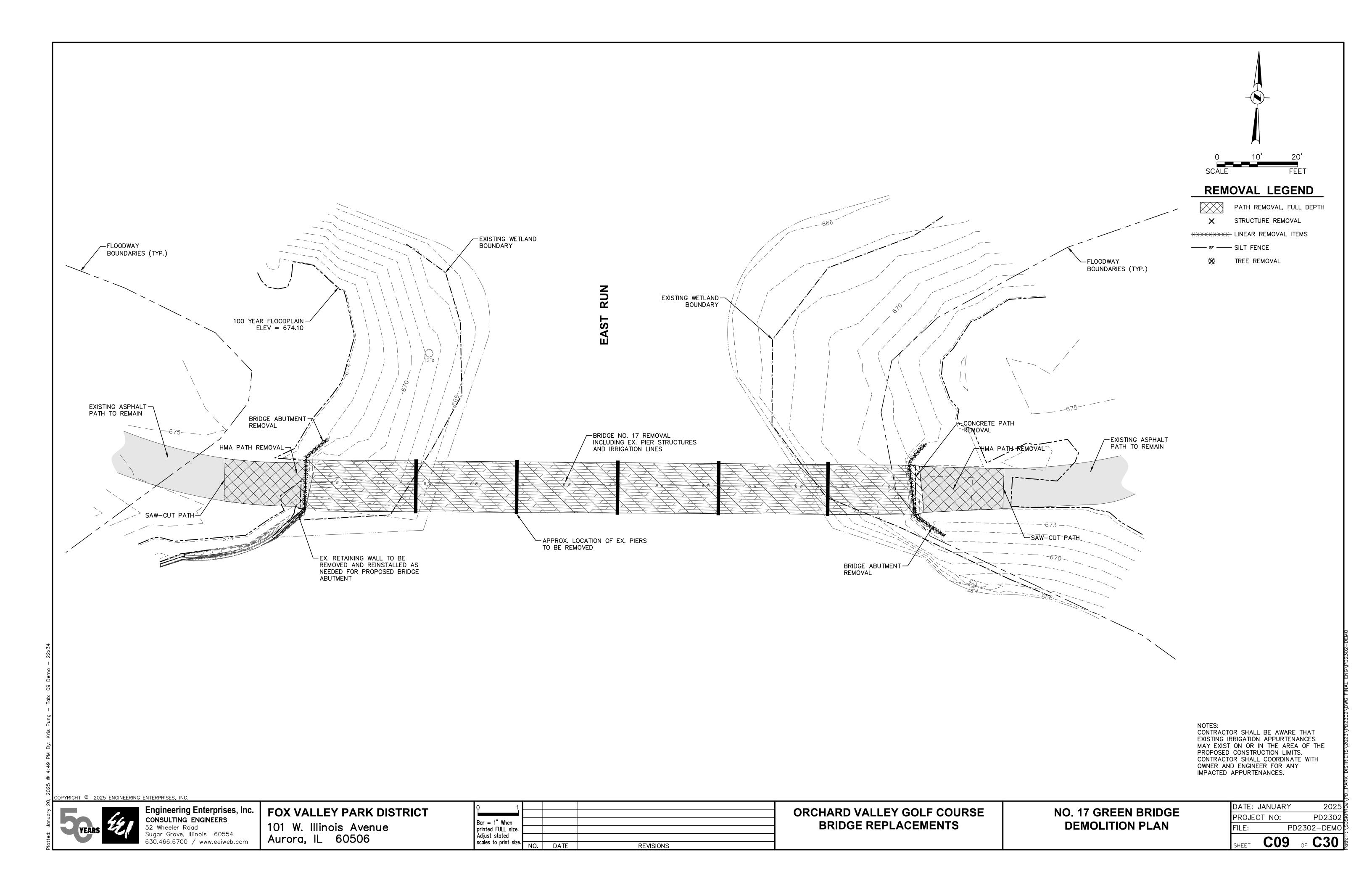


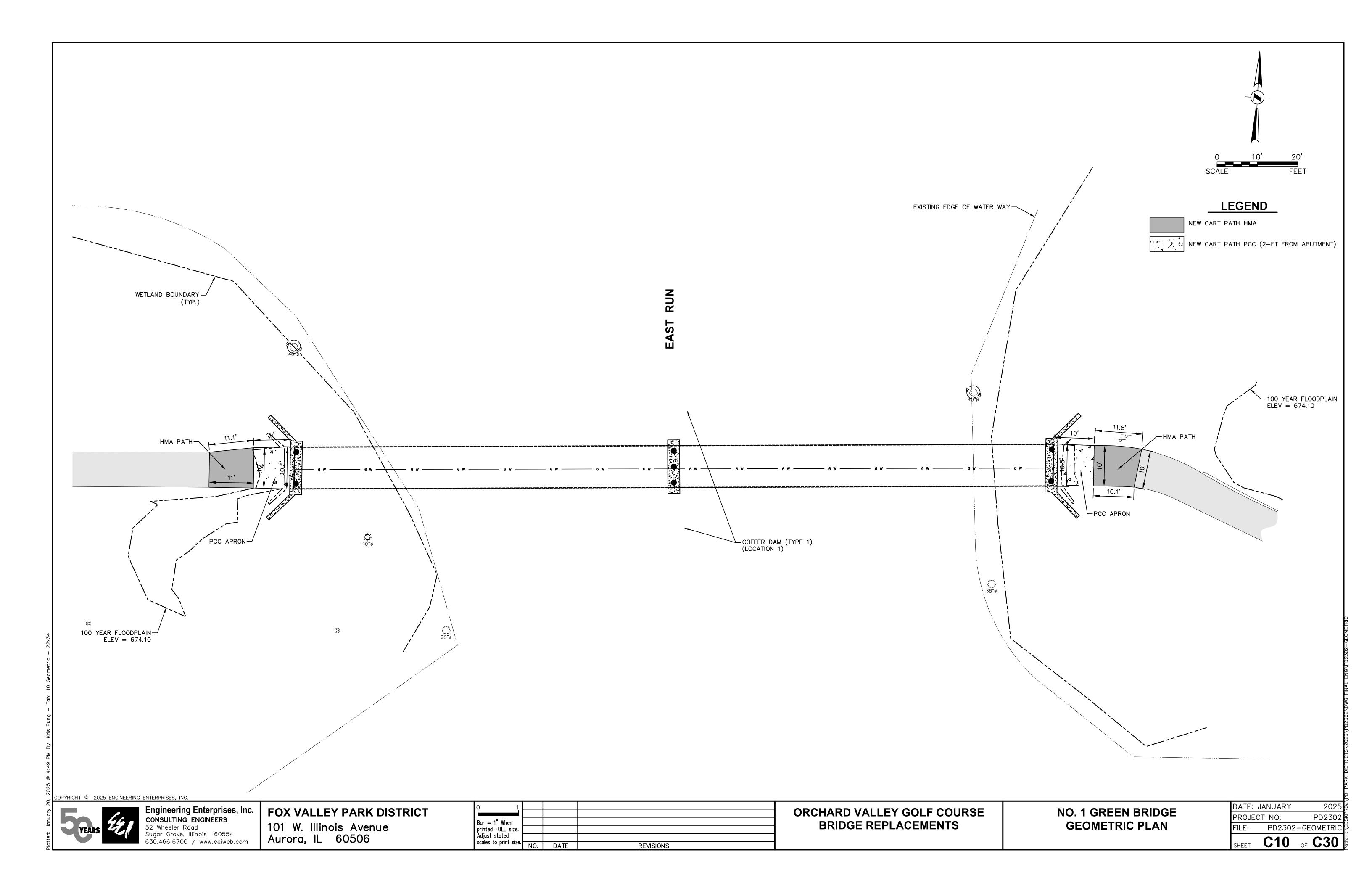


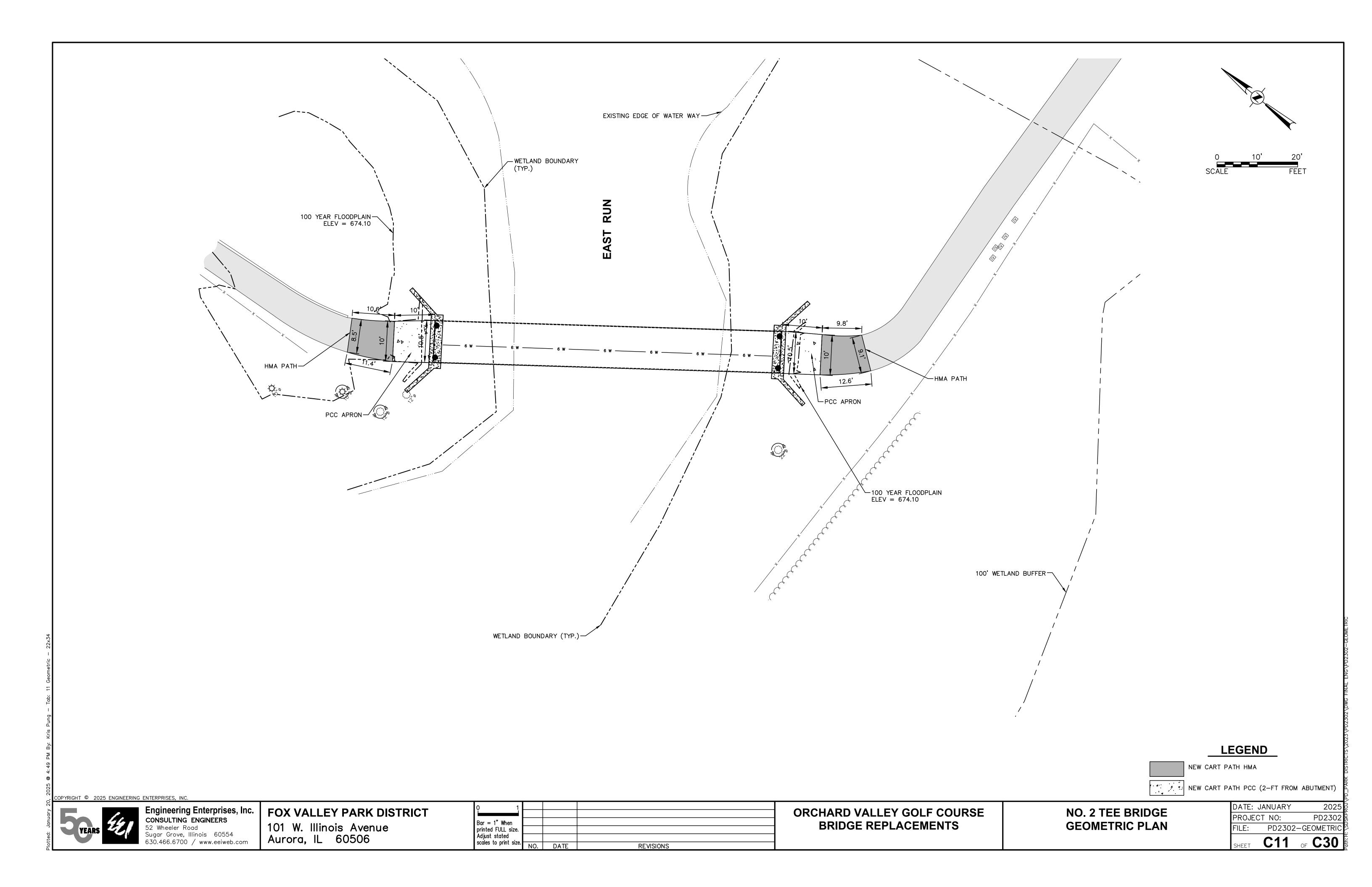
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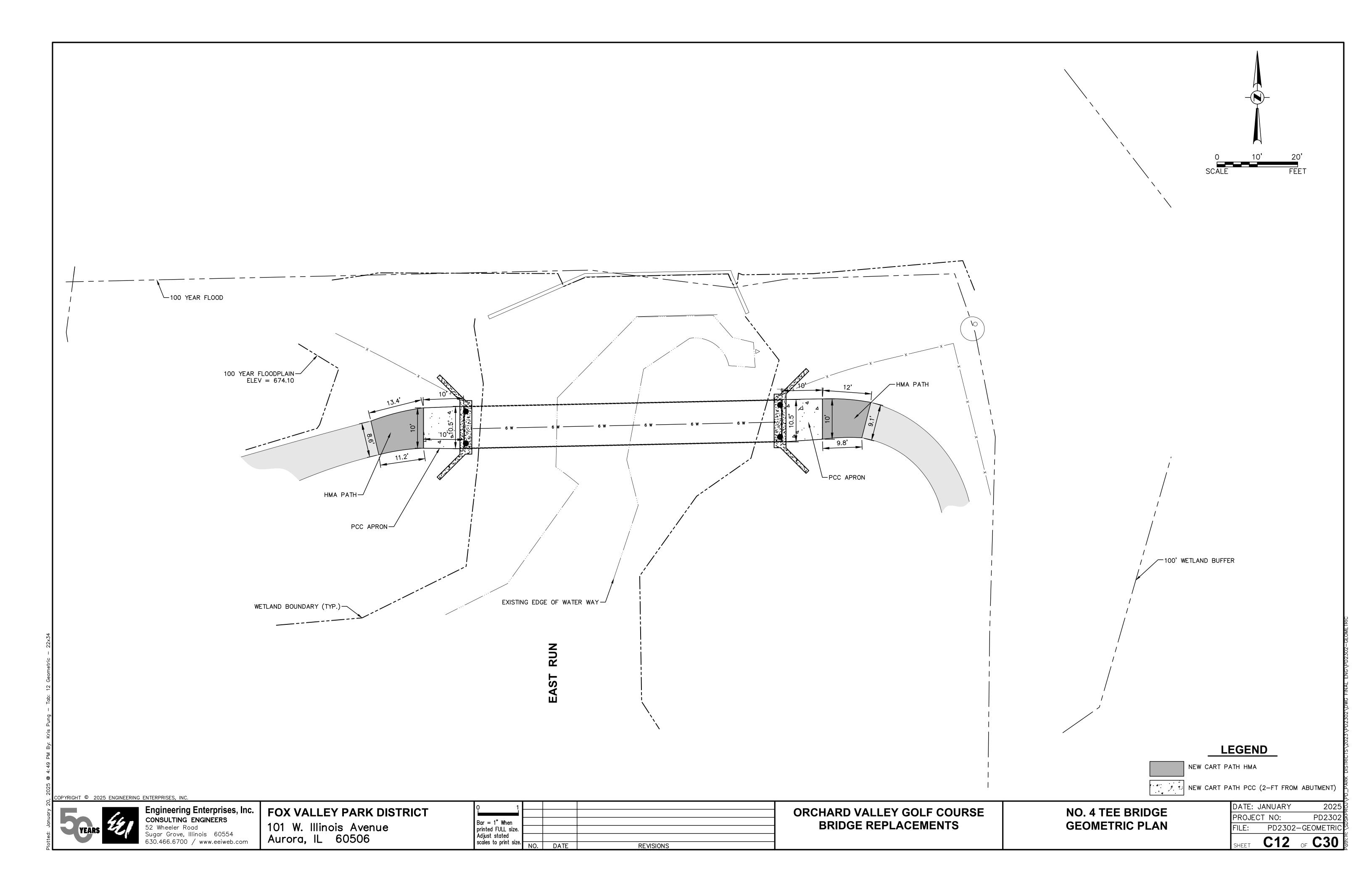
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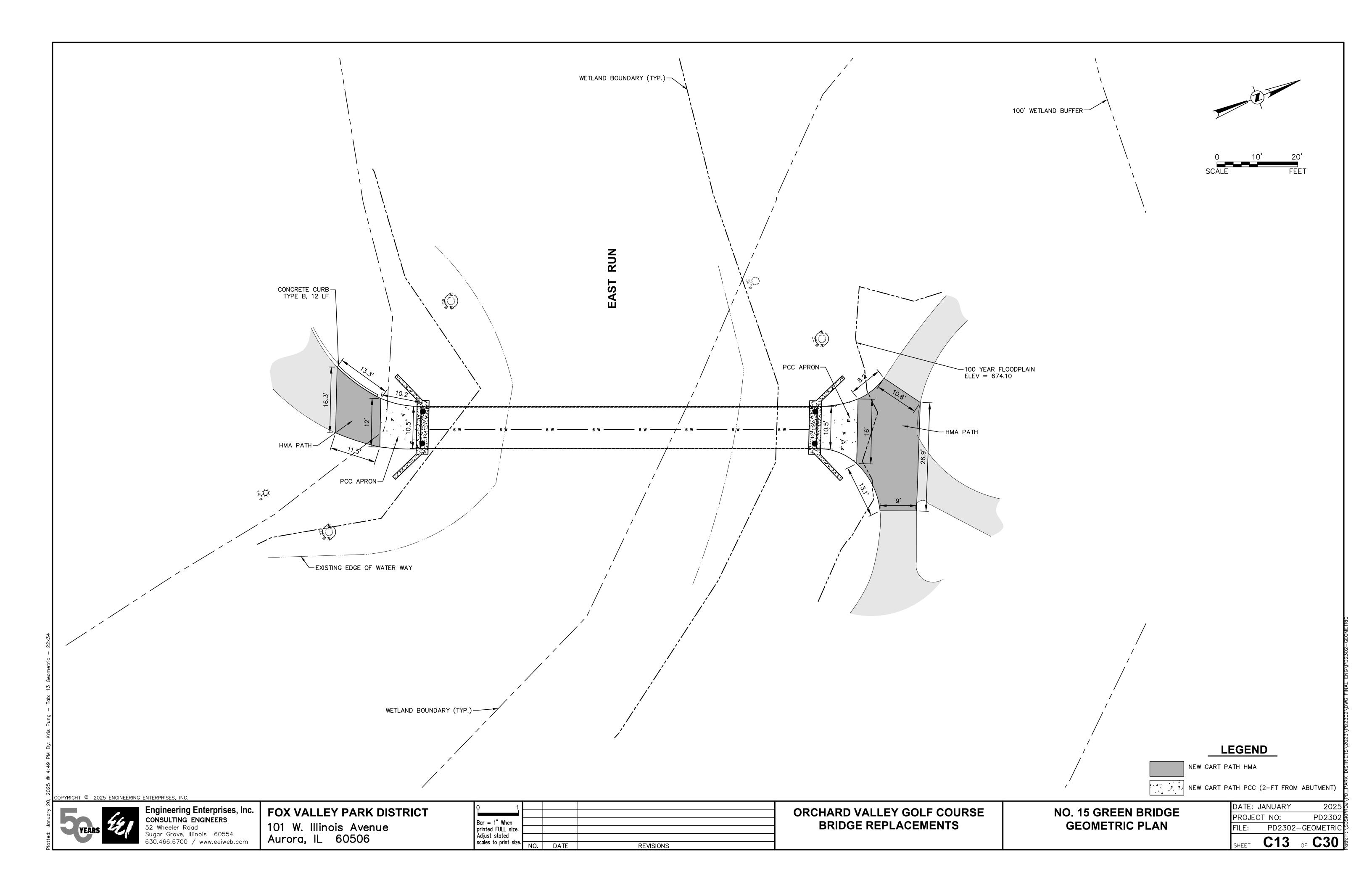
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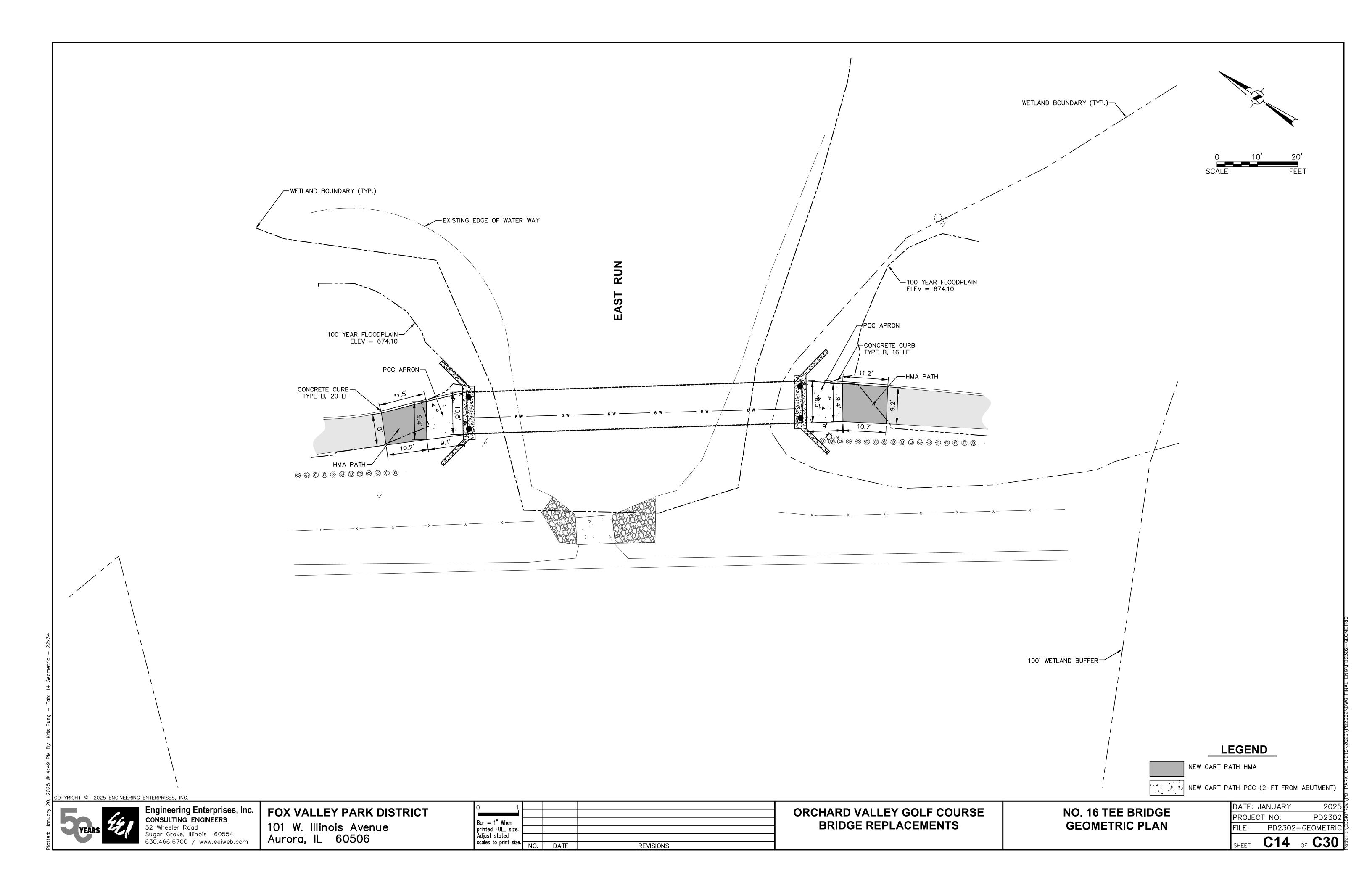


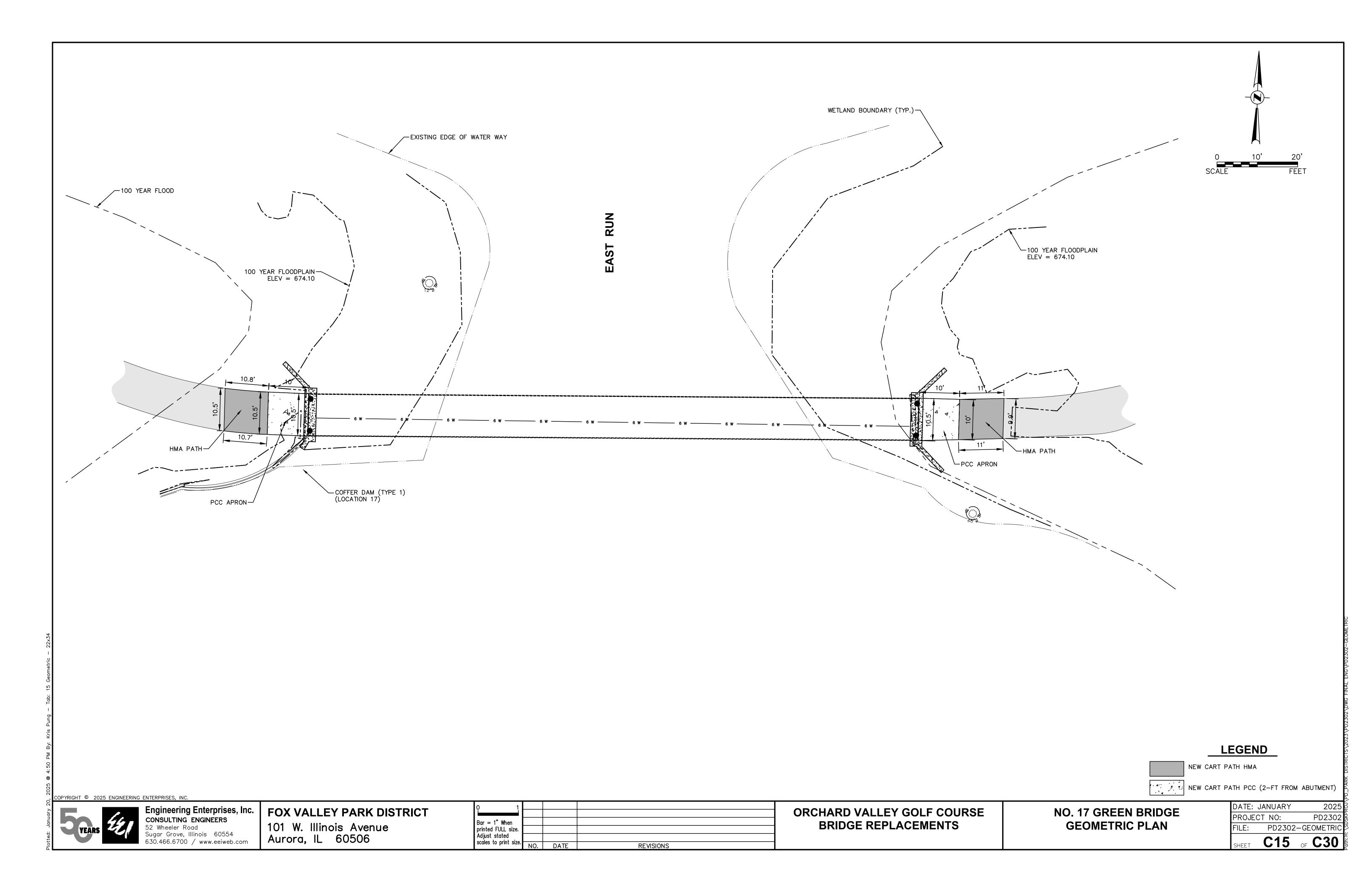


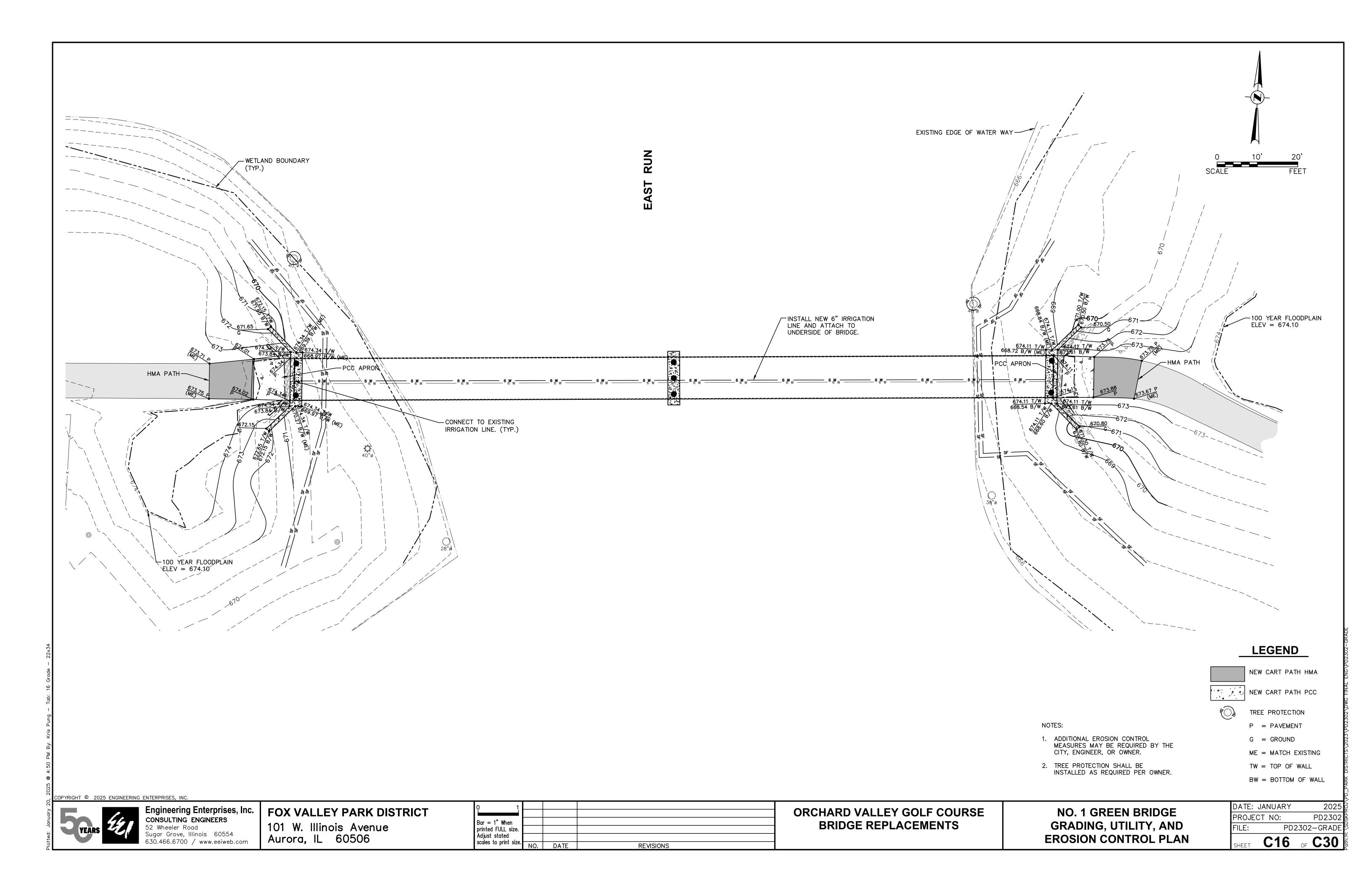


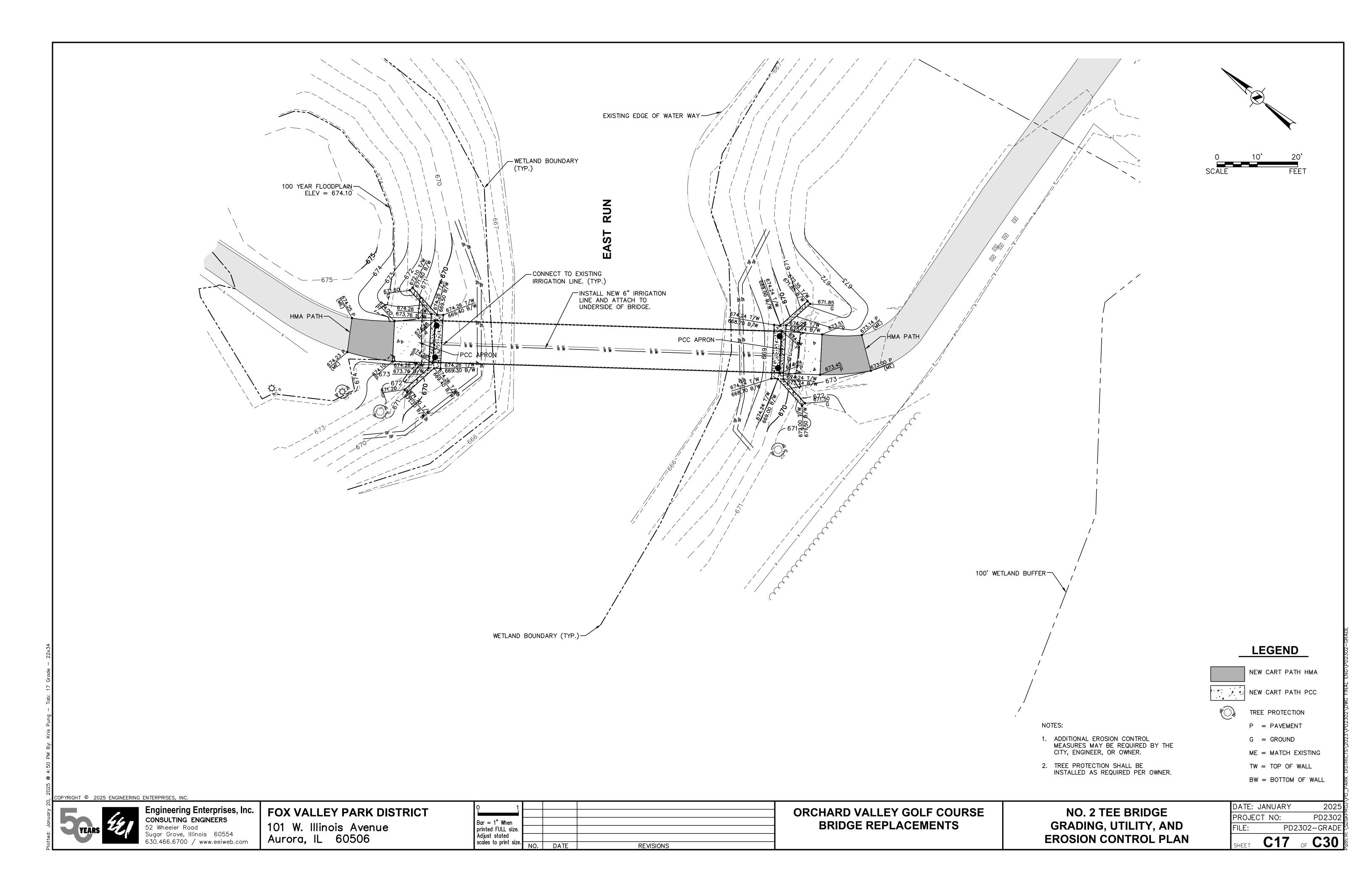


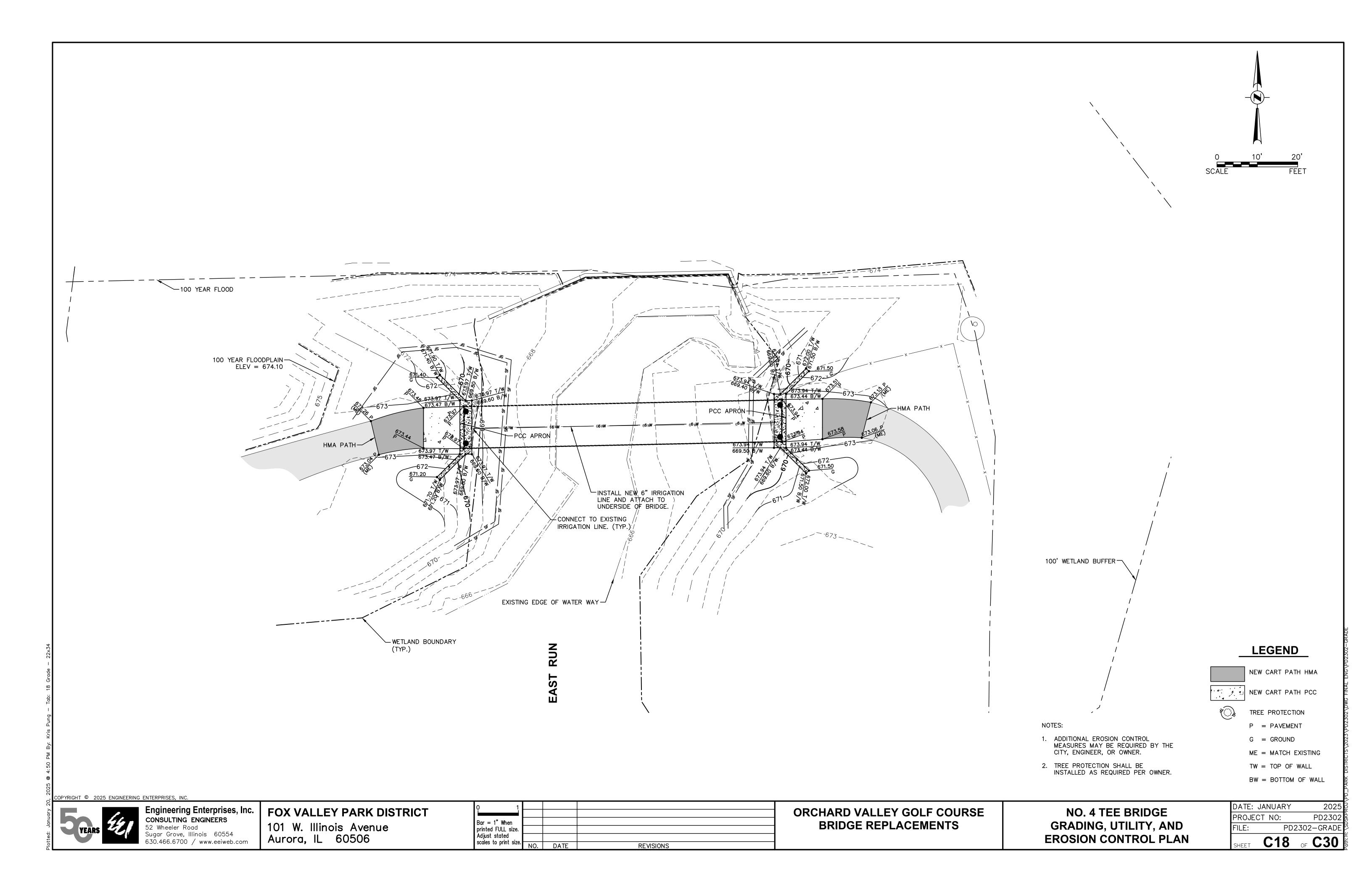


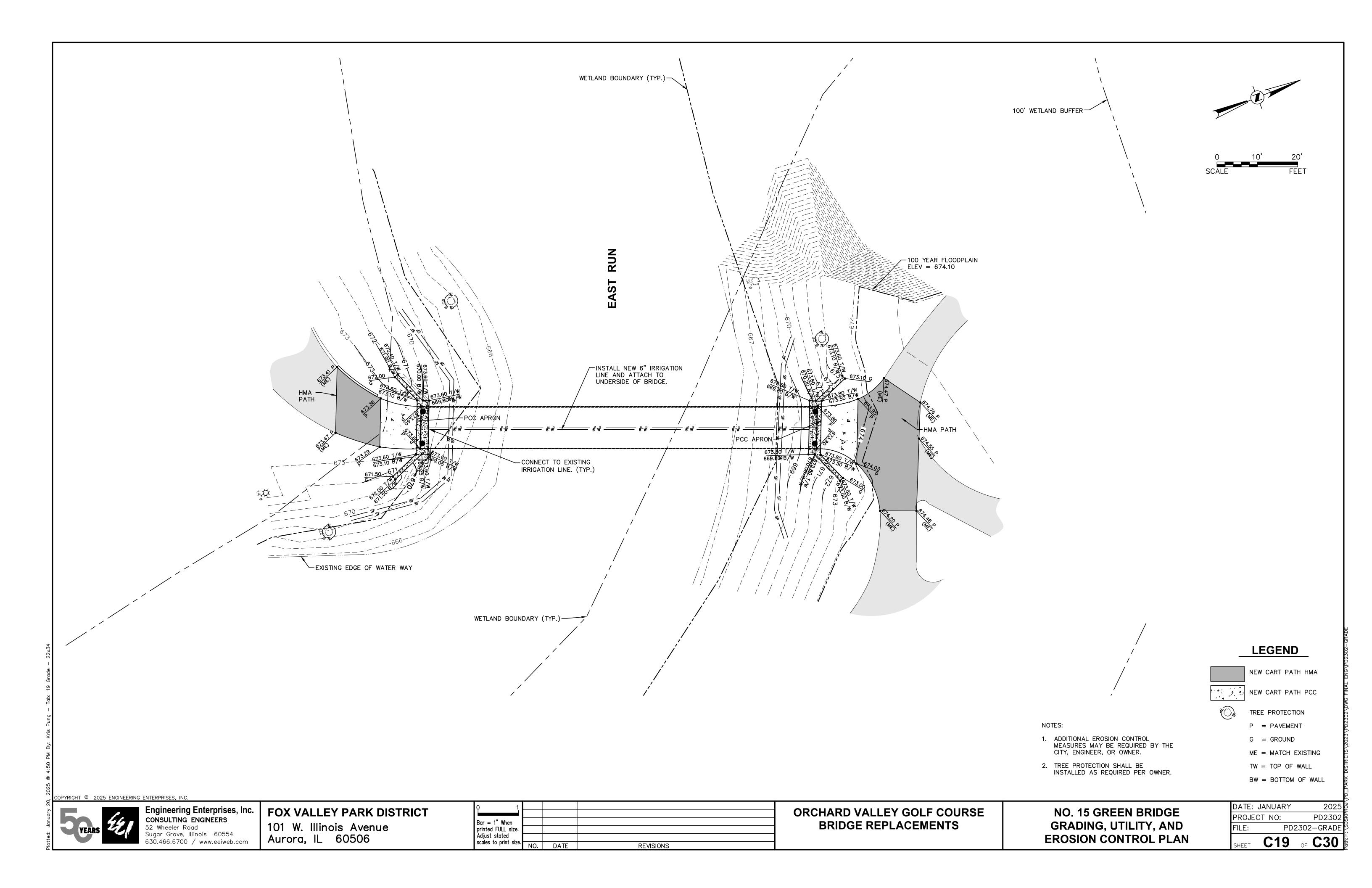


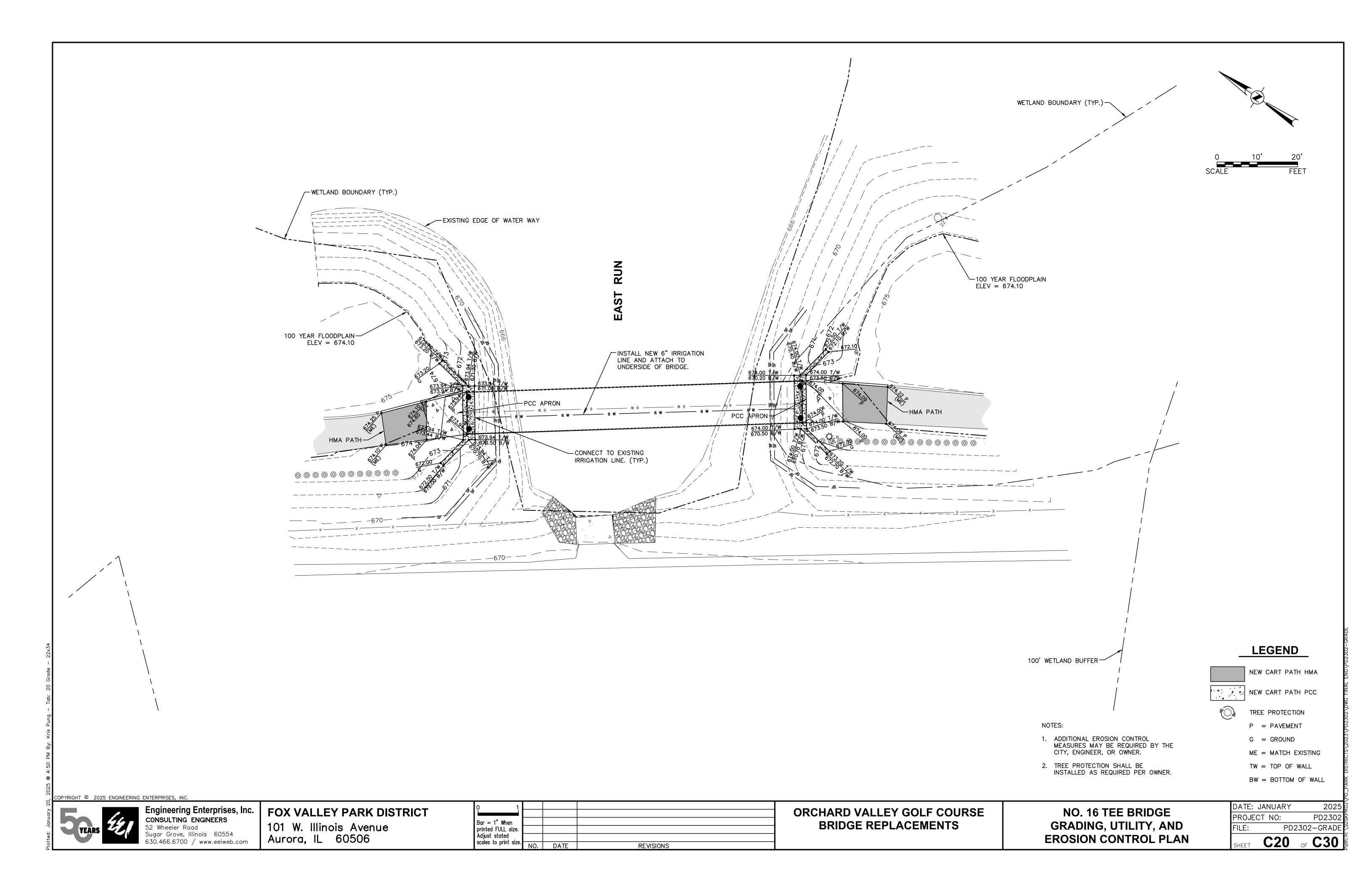


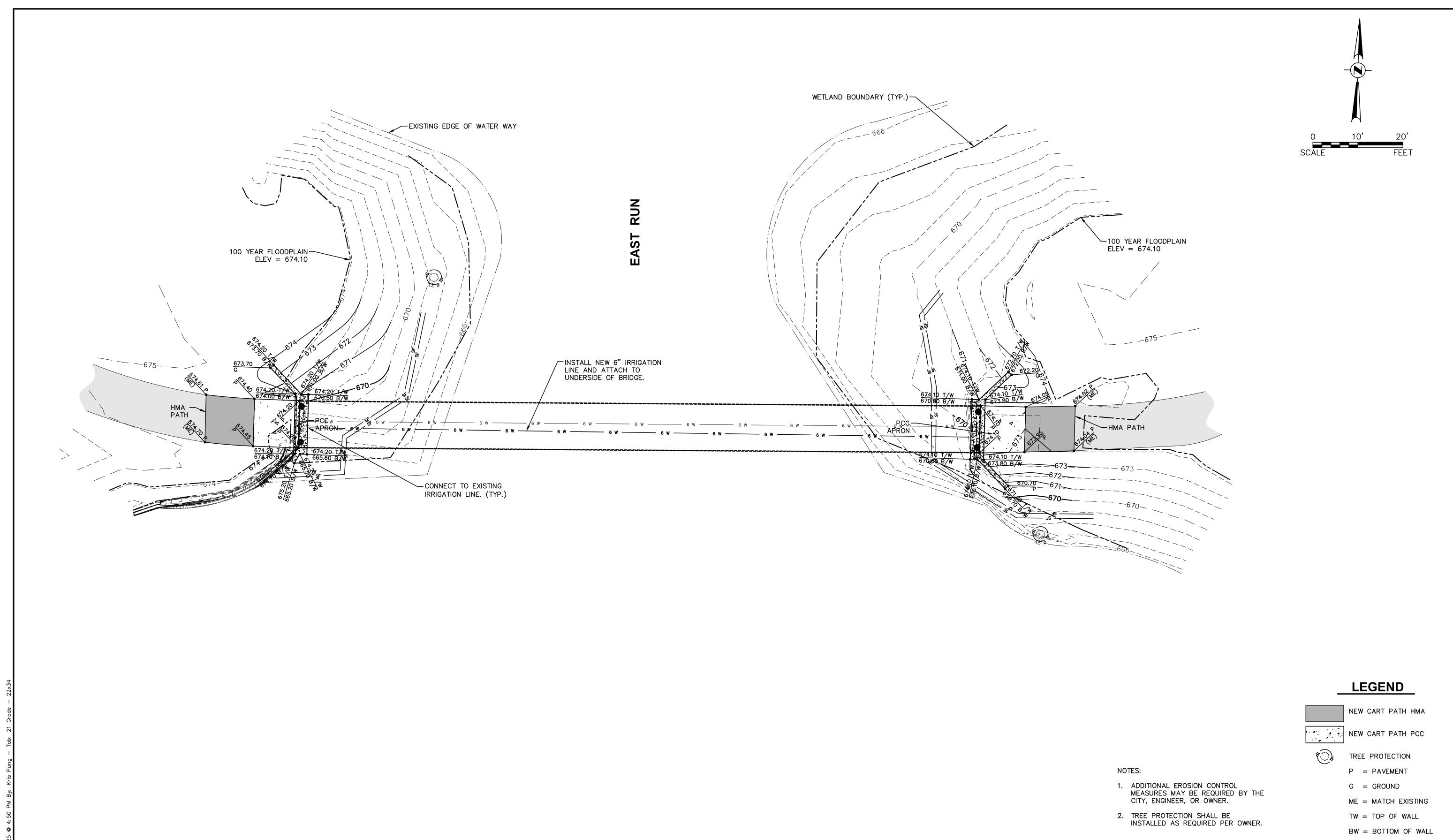












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NO. DATE REVISIONS

ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

NO. 17 GREEN BRIDGE GRADING, UTILITY, AND EROSION CONTROL PLAN

DATE: JANUA	RY 2025
PROJECT NO:	PD2302
FILE:	PD2302-GRADE

ET C21 OF C30

STORMWATER POLLUTION PREVENTION PLAN

A COPY OF THIS PLAN, ALONG WITH ALL INSPECTION REPORTS, WILL BE KEPT AT THE SITE AT ALL TIMES. THE PERMITEE SHALL RETAIN COPIES OF STORMWATER POLLUTION PREVENTION PLANS AND ALL REPORTS AND NOTICES REQUIRED BY THIS PERMIT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THE PERMIT COVERAGE EXPIRES OR IS TERMINATED.

SITE DESCRIPTION:

PROJECT NAME AND LOCATION:
ORCHARD VALLEY GOLF COURSE, BRIDGE REPLACEMENTS,
AURORA, KANE COUNTY, IL.
PROJECT DESCRIPTION:

REMOVAL AND REPLACEMENT OF EXISTING GOLF CART BRIDGES WITH NEW METAL TRUSS BRIDGES.

TOTAL AREA DISTURBED = 0.40 ACRES

RUNOFF COEFFICIENT OF SITE AFTER CONSTRUCTION = NOT CHANGED FROM EXISTING

SOILS:

RECEIVING WATERS: BLACKBERRT CREEK, FOX RIVER

298A-BEECHER SILT LOAM, 0.40 AC,

EXISTING SITE CONDITIONS: GOLF COURSE.

ADJACENT/OFFSITE AREAS: FULLY DEVELOPED RESIDENTIAL DISTRICTS AND PARKS.

REFER TO IMPROVEMENT PLANS FOR ADDITIONAL SITE INFORMATION.

EROSION AND SEDIMENT CONTROLS

REFER TO THE IMPROVEMENT PLANS FOR ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

STABILIZATION PRACTICES:

ANY AREAS WITHIN OR ADJACENT TO THE SITE PERIMETER THAT HAVE BEEN DISTURBED DURING THE COURSE OF CONSTRUCTION WILL BE STABILIZED PRIOR TO PROJECT COMPLETION.

STRUCTURAL PRACTICES:

SILT FENCE SHALL BE INSTALLED ALONG THE DOWNSTREAM PERIMETER OF THE SITE AS DIRECTED ON THE IMPROVEMENT PLANS.

DOUBLE ROW SILT FENCE SHALL BE INSTALLED
ADJACENT TO ANY EXISTING WETLANDS PRIOR TO
ANY GROUND DISTURBING ACTIVITIES.
TREE PROTECTION SHALL BE INSTALLED FOR TREES
ADJACENT TO ANY GROUND DISTURBING ACTIVITIES.

STORM WATER MANAGEMENT

REFER TO THE IMPROVEMENT PLANS FOR ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS AND THE STORMWATER MANAGEMENT CALCULATIONS INCLUDED IN THE KANE COUNTY STORMWATER PERMIT APPLICATION FOR ADDITIONAL INFORMATION

RUNOFF:

THE SITE IS URBAN.

VELOCITY DISSIPATION

DETENTION:

NONE.

THERE WILL BE NO POINT SOURCE FLOWS EXITING THE SITE OVERLAND.

WASTE DISPOSAL

ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE SITE FOR DISPOSAL IN PERMITTED DISPOSAL FACILITIES. THE PROJECT SITE WILL BE KEPT CLEAR OF ALL HUMAN AND CONSTRUCTION DEBRIS. NO BUILDING MATERIALS, GAS OR OIL SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE. A SECURELY LIDDED DUMPSTER WILL BE PROVIDED FOR STANDARD SOLID WASTE.

HAZARDOUS WASTE WILL BE DISPOSED OF AS SPECIFIED BY THE CITY OF AURORA, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, OR THE MANUFACTURER OF THE MATERIAL, WHICH EVER IS STRICTER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL HAZARDOUS WASTE PRODUCED AS A PART OF THIS CONSTRUCTION PROJECT.

SANITARY WASTE WILL BE COLLECTED IN PORTABLE UNITS AND DRAINED AS SPECIFIED BY THE CITY OF AURORA AND THE FOX METRO WATER RECLAMATION DISTRICT.

ANY SPILLED OIL, GAS, OR OTHER CONSTRUCTION MATERIAL WILL BE CONTAINED AND CLEANED IMMEDIATELY.
CONTAMINATED SOIL WILL BE DISPOSED OF IN AN APPROVED MANNER AT A LICENSED LANDFILL.

A SINGLE CONCRETE WASHOUT AREA WILL BE DESIGNATED BY THE CONTRACTOR FOR USE DURING THE DURATION OF THE PROJECT. CONCRETE WASHOUT SHOULD BE CONTAINED AT ALL TIMES. WASHOUT MATERIAL SHOULD NOT BE ALLOWED TO ENTER STORM SEWER OR LEACH INTO THE SOIL UNDER ANY CIRCUMSTANCES. ANY WASTE SHOULD BE DISPOSED OF PROPERLY AN THE LOCATION OF THE WASHOUT SHOULD BE DESIGNATED WITH PROPER SIGNAGE.

OTHER REQUIREMENTS

THE CITY OF AURORA SUBDIVISION REGULATIONS AND THE KANE COUNTY STORMWATER MANAGEMENT ORDINANCE WILL GOVERN ALL EROSION CONTROL AND STORMWATER MANAGEMENT OPERATIONS.

THE KANE DUPAGE SOIL AND WATER CONSERVATION DISTRICT WILL INSPECT THE EROSION CONTROL MEASURES IF REQUIRED.

STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF THE STABILIZATION WORK IN THE AREA.

NO FUEL OR OIL WILL BE STORED ON-SITE WITHOUT PROPER CONTAINMENT AND WRITTEN PERMISSION FROM THE CITY OF AURORA.

THE CONTRACTOR WILL PREVENT OFF—SITE TRACKING OF SEDIMENTS. IF THE STABILIZED CONSTRUCTION ENTRANCE IS NOT SUFFICIENT, FURTHER MEASURES MUST BE IMPLEMENTED. ANY SEDIMENT LEFT ON THE PUBLIC ROADWAY WILL BE CLEANED OFF EVERY NIGHT.

DUST CONTROL, IF DEEMED NECESSARY BY THE CITY ENGINEER, WILL BE DONE BY MEANS OF A WATER TRUCK SPRAYING WATER ON THE SURFACE OF THE SITE.

STOCKPILES OF SOIL OR OTHER BUILDING MATERIALS SHOULD NOT BE LOCATED IN AREAS WITH HIGH POTENTIAL FOR CONTRIBUTION SEDIMENTS TO STORMWATER FACILITIES.

NON-STORMWATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORMWATER DISCHARGES WILL OCCUR FROM THIS SITE DURING THE CONSTRUCTION PERIOD:

- WATER FROM WATER MAIN AND FIRE HYDRANT FLUSHING.
 PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED)
- UNCONTAMINATED GROUND AND SURFACE WATER FROM DEWATERING EXCAVATIONS AND DETENTION BASINS
- DUST CONTROL WATER

SCHEDULE OF CONSTRUCTION

- 1. INSTALL SILT FENCE AND EROSION CONTROL MEASURES.
- 2. PAVEMENT, TREE, AND MISC. REMOVAL
- 3. EARTH EXCAVATION FOR BRIDGE FOUNDATIONS AND ABUTMENTS.
- 4. CONSTRUCT ALL BRIDGE FOUNDATIONS AND ABUTMENTS.
- 5. INSTALL PREFABRICATED BRIDGES.
- 6. INSTALL CONCRETE AND ASPHALT PAVEMENT.
- 7. COMPLETE FINAL EARTHWORK GRADING AND TOPSOIL RESPREAD.
- 8. INSTALL PERMANENT SEEDING MEASURES ON FINISHED GRADE AREAS.

MAINTENANCE AND INSPECTION PROCEDURES

THE GENERAL CONTRACTOR FOR THIS PROJECT IS RESPONSIBLE FOR MAINTAINING THE EROSION AND SEDIMENT CONTROL MEASURES IN GOOD AND EFFECTIVE OPERATING CONDITIONS.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL REGULAR INSPECTIONS REQUIRED BY THE NPDES GENERAL PERMIT #2 INCLUDING RECORDING AND KEEPING A RECORD OF EACH INSPECTION. THIS PROCESS WILL CONTINUE UNTIL FINAL STABILIZATION IS ACHIEVED AND A NOTICE OF TERMINATION IS RECEIVED BY THE OWNER. INSPECTIONS WILL BE PERFORMED AND RECORDED BY QUALIFIED INDIVIDUALS TRAINED BY THE GENERAL CONTRACTOR AT LEAST ONCE EVERY WEEK AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER.

MAINTENANCE AND INSPECTION PROCEDURES (CONT.)

DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

BASED ON THE RESULTS OF THE INSPECTIONS, MODIFICATIONS NECESSARY SHALL BE IMPLEMENTED WITHIN 7 DAYS OF THE INSPECTION.

ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. ANY NECESSARY REPAIRS WILL BE INITIATED IMMEDIATELY.

SEDIMENT BUILDUP WILL BE REMOVED FROM SILT FENCES WHEN IT HAS REACHED 1/3 THE HEIGHT OF THE FABRIC.

SEDIMENT BUILDUP WILL BE REMOVED FROM OTHER EROSION CONTROLS AS NEEDED TO MAINTAIN STORMWATER FLOW THROUGH THE SITE AND AVOID SEDIMENT FROM BYPASSING THE EROSION CONTROLS.

EROSION CONTROL MEASURES WILL BE REPAIRED, MAINTAINED, OR INCREASED AT THE DIRECTION OF THE KANE/DUPAGE SOIL AND WATER CONSERVATION DISTRICT, THE CITY OF AURORA OR THE SCHOOL DISTRICT'S ENGINEER.

A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. THE REPORT SHALL SUMMARIZE THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORMWATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN TO SOLVE ANY PROBLEMS OBSERVED. THE INSPECTION REPORT SHALL BE SIGNED BY A QUALIFIED INDIVIDUAL PER NPDES GENERAL PERMIT NO. 2.

INSPECTION REPORTS SHALL BE RETAINED AS A PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS AFTER FINAL STABILIZATION AND A NOTICE OF DISCONTINUATION HAS BEEN SUBMITTED TO THE DEPARTMENT.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS A PART OF THIS CERTIFICATION.

GENERAL CONTRACTOR

COMPANY NAME

COMPANY ADDRESS

COMPANY PHONE NUMBER

PRINTED NAME AND TITLE

SIGNATURE

DATE

SUB-CONTRACTOR #1

SUB-CONTRACTORS RESPONSIBILITY

COMPANY NAME

COMPANY ADDRESS

COMPANY PHONE NUMBER

PRINTED NAME AND TITLE

SIGNATURE

USE ADDITIONAL SHEETS FOR ADDITIONAL SUB-CONTRACTORS. EACH SHEET WILL HAVE THE PROJECT NAME AND LOCATION AS DESCRIBED IN THE SITE DESCRIPTION ON THIS SHEET. EACH ADDITIONAL SUB-CONTRACTOR WILL PROVIDE THEIR RESPONSIBILITY, COMPANY NAME, ADDRESS AND PHONE NUMBER, PRINTED NAME AND TITLE, SIGNATURE AND DATE. THIS INFORMATION WILL BE KEPT WITH THIS PLAN.

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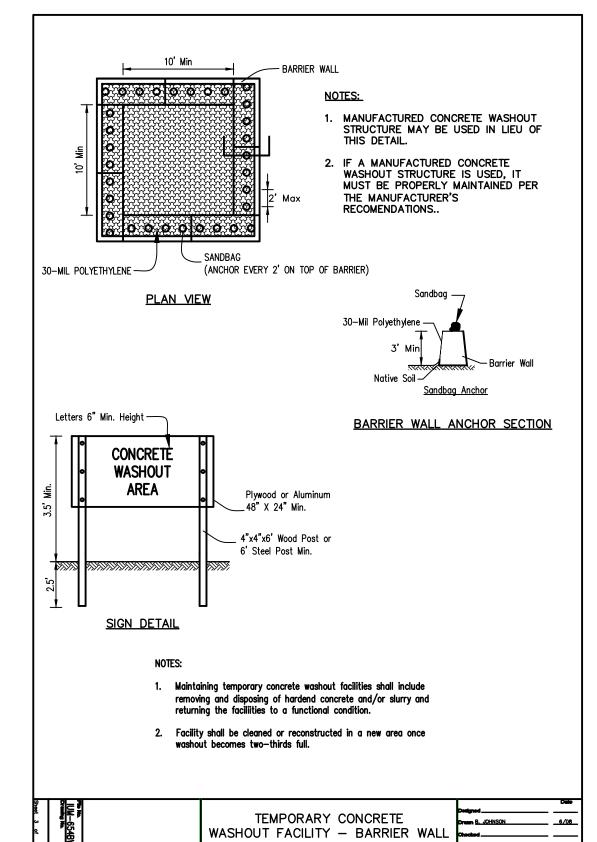
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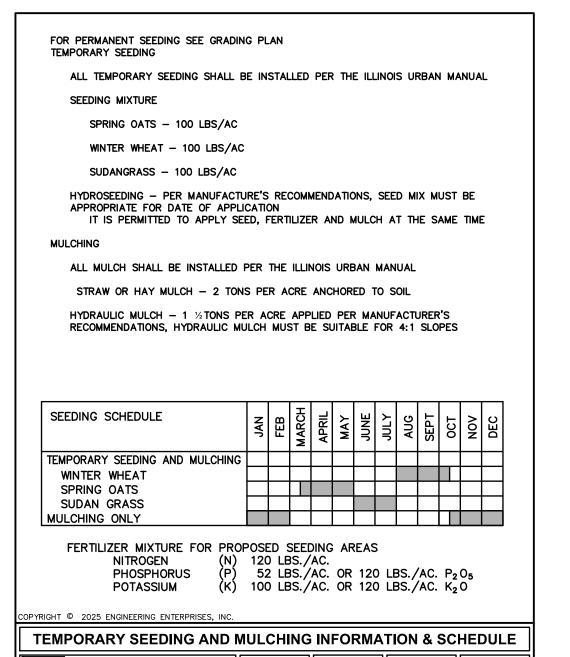
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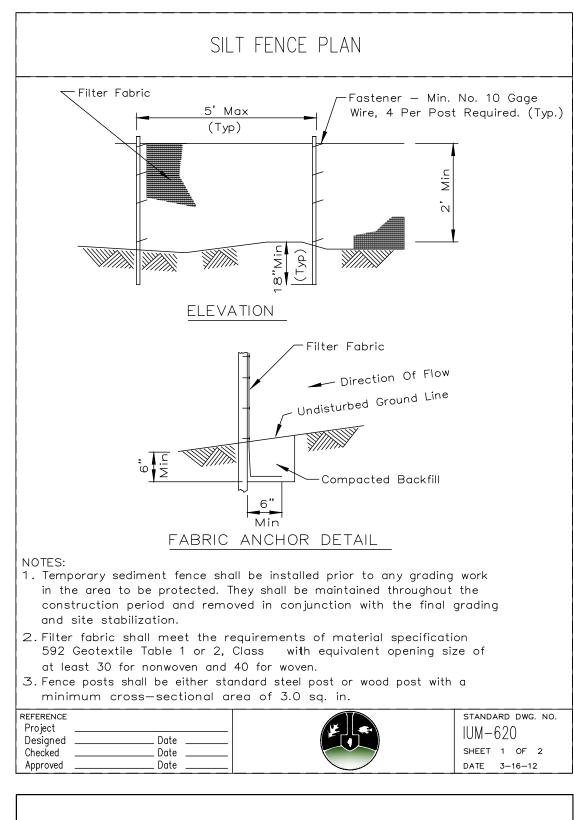
ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

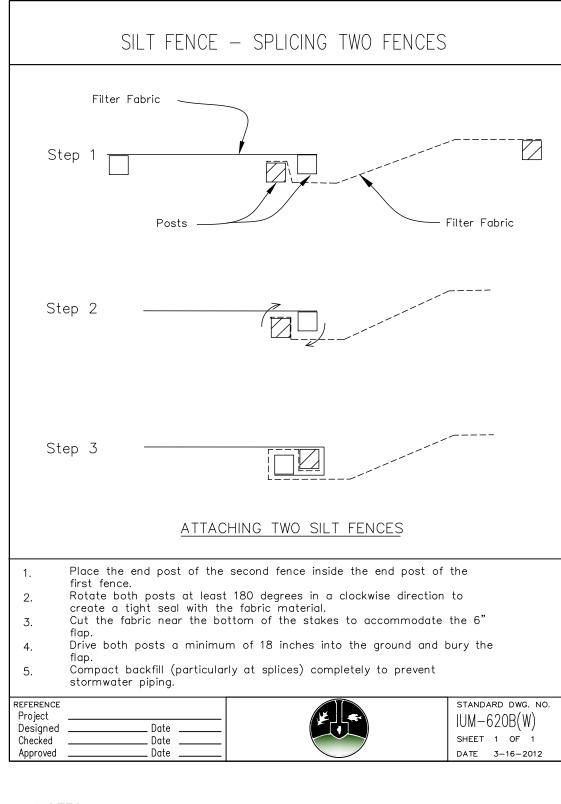
STORMWATER POLLUTION PREVENTION PLAN

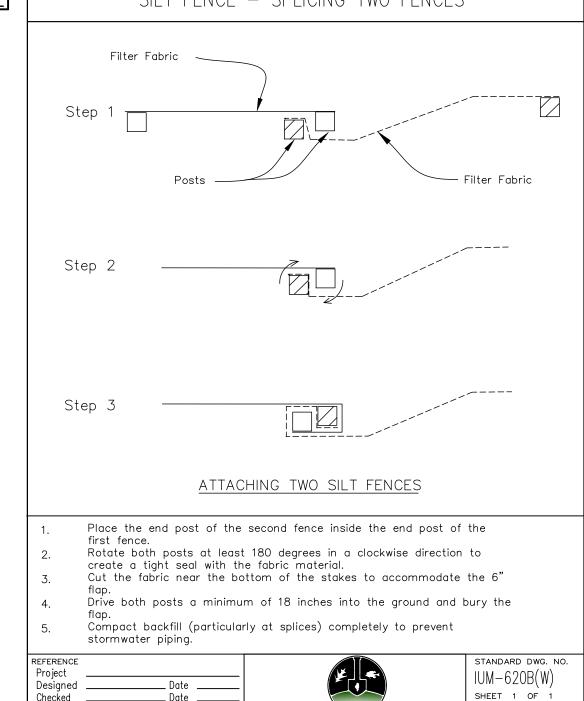
DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302—COVER
SHEET C22 OF C30



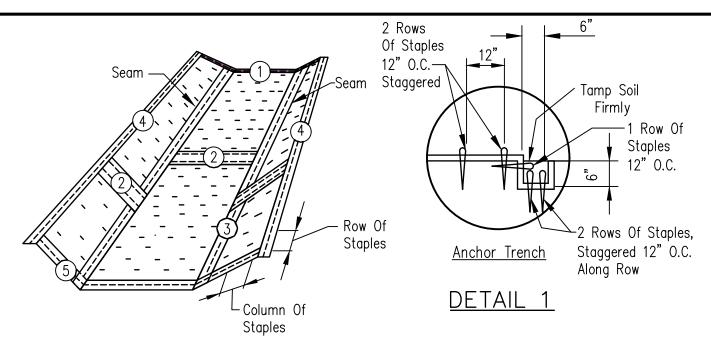




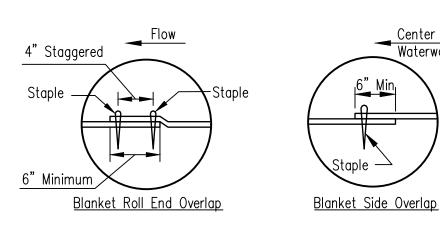




- 1. INLET FILTERS SHALL BE EMPTIED ON A MONTHLY BASIS.
- 2. DEBRIS FROM INLET FILTERS SHALL BE DISPOSED OF IN A LANDFILL.
- 3. INLET FILTERS SHALL REMAIN IN PLACE FOR THE DURATION OF THE CONSTRUCTION AND SHALL BECOME PROPERTY OF THE CITY OF AURORA.

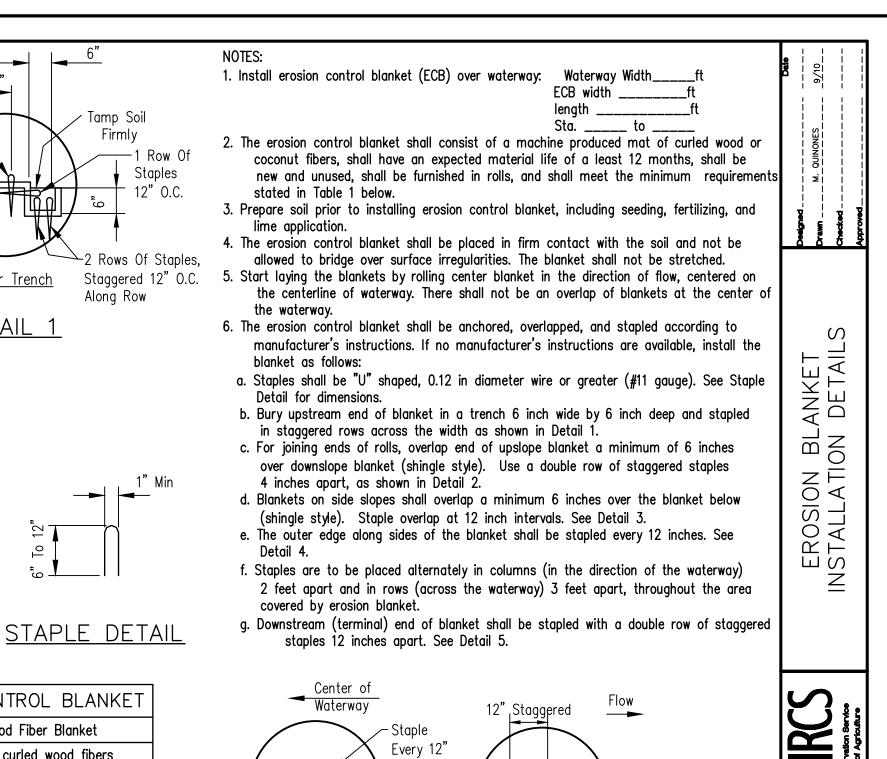


Waterway



DETAIL 3 DETAIL 2

TABLE 1. MINIMU	M REQUIREMENTS FOR EROS	ION CONTROL BLANKET
	Coconut Blanket	Wood Fiber Blanket
Type of Fiber	100% coconut fibers	100% curled wood fibers
Weight, lbs/sq. yd	0.50	0.63
Fiber Length	N/A 80% of fibers > 6 in.	
Fiber Dimensions	N/A	0.021 in. x 0.042 in.
	Optional — Top and bottom of blanket may be covered with a max. 5/8" x 5/8" opening size netting, bound to the mat on max. 1.5" centers.	Optional — Top and bottom of blanket may be covered with a max. 5/8" x 5/8" opening size netting

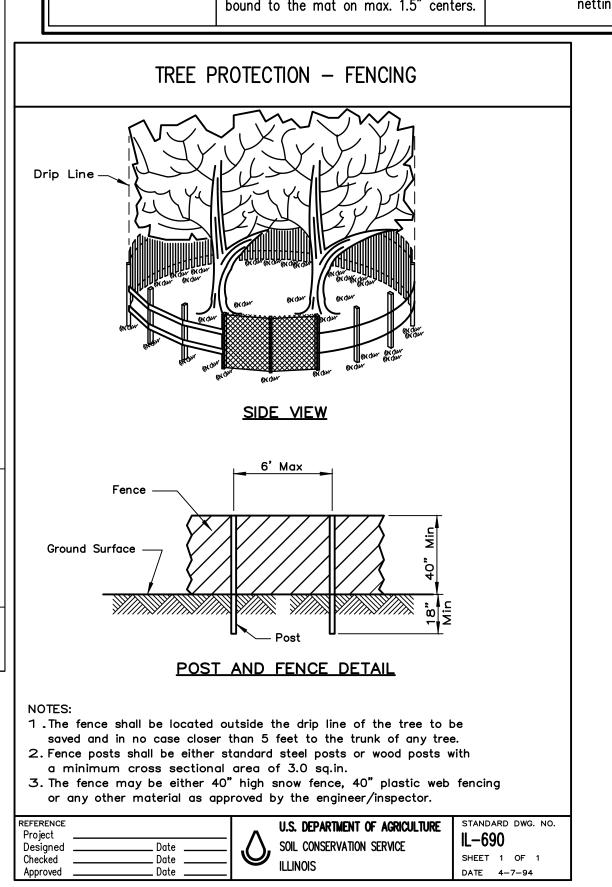


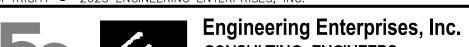
<u>Terminal End</u>

DETAIL 5

Blanket Side Edge

DETAIL 4





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ORCHARD VALLEY GOLF COURSE **BRIDGE REPLACEMENTS**

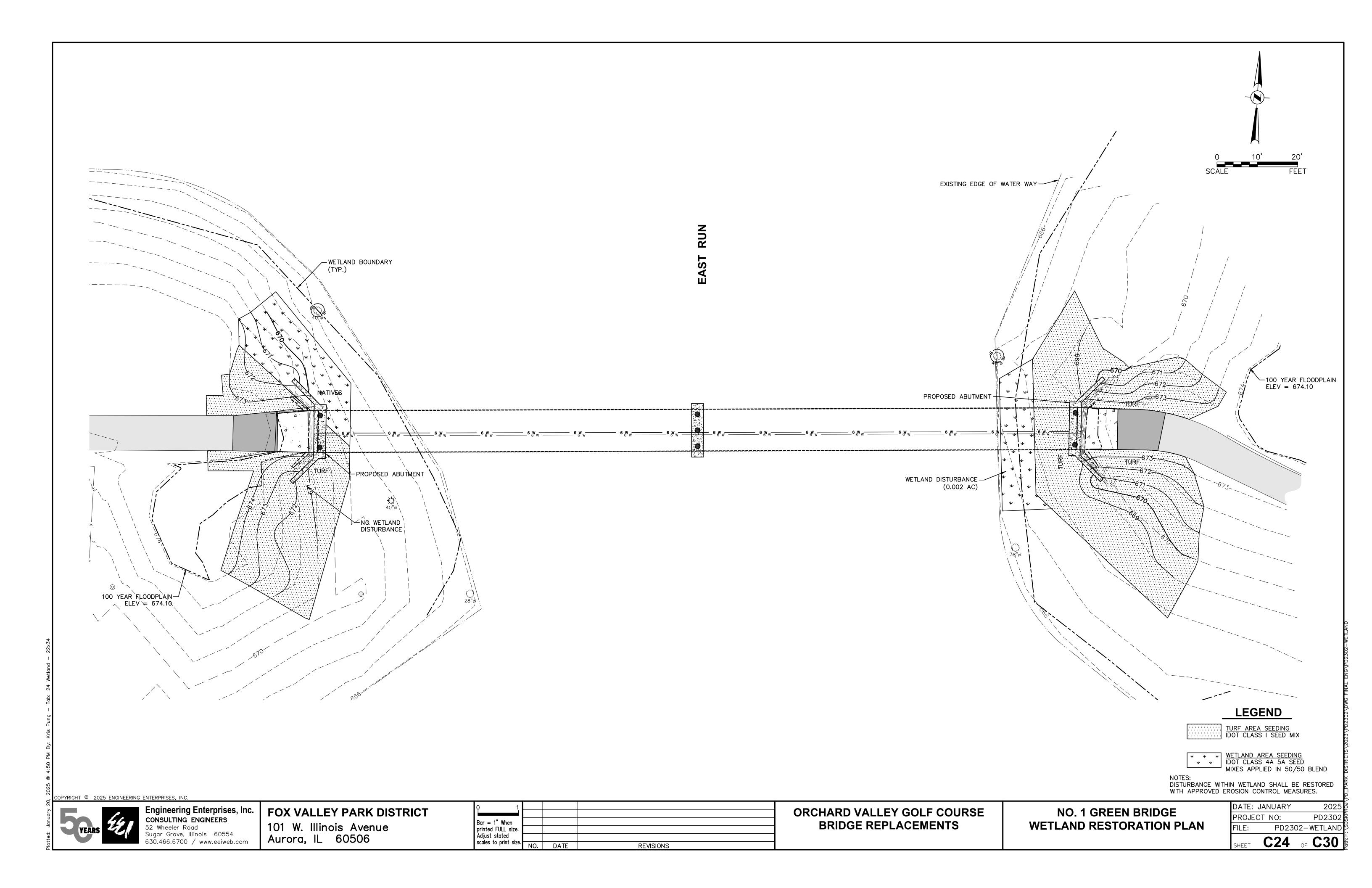
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PROJECT NO:	PD2302
FILE: PD2	2302-COVER
SHEET C23	of C30

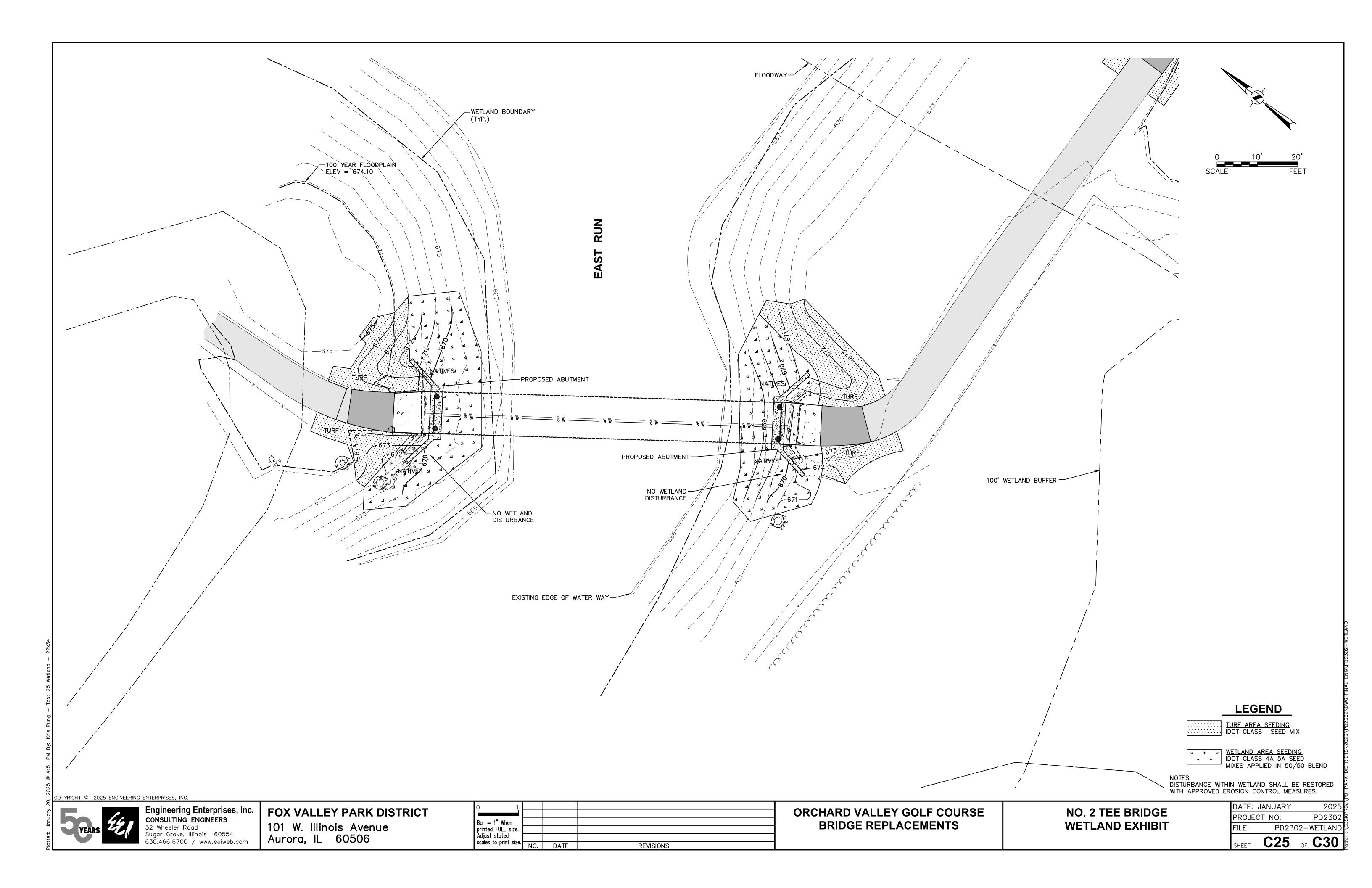
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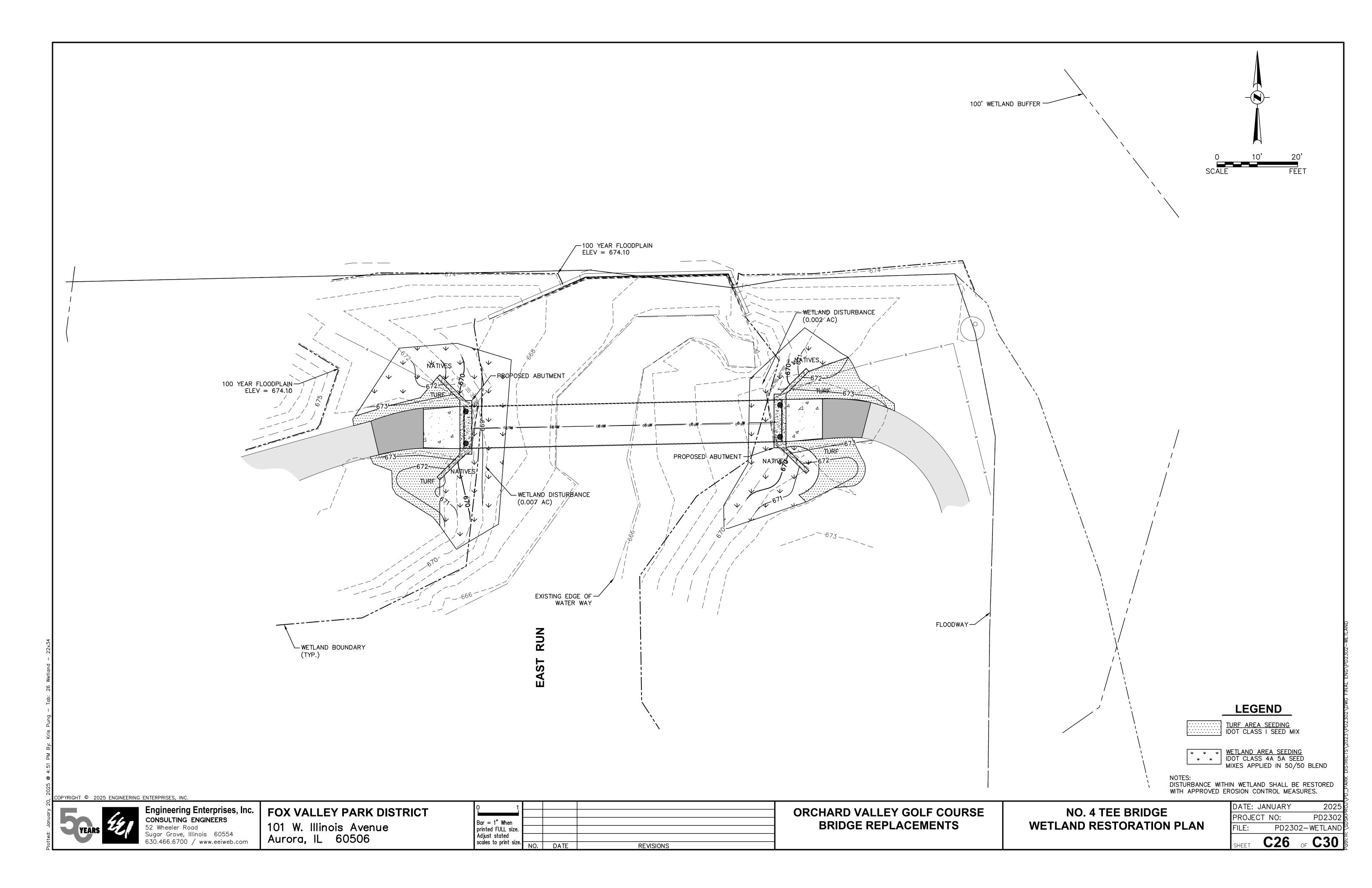
STORMWATER POLLUTION **PREVENTION PLAN DETAILS**

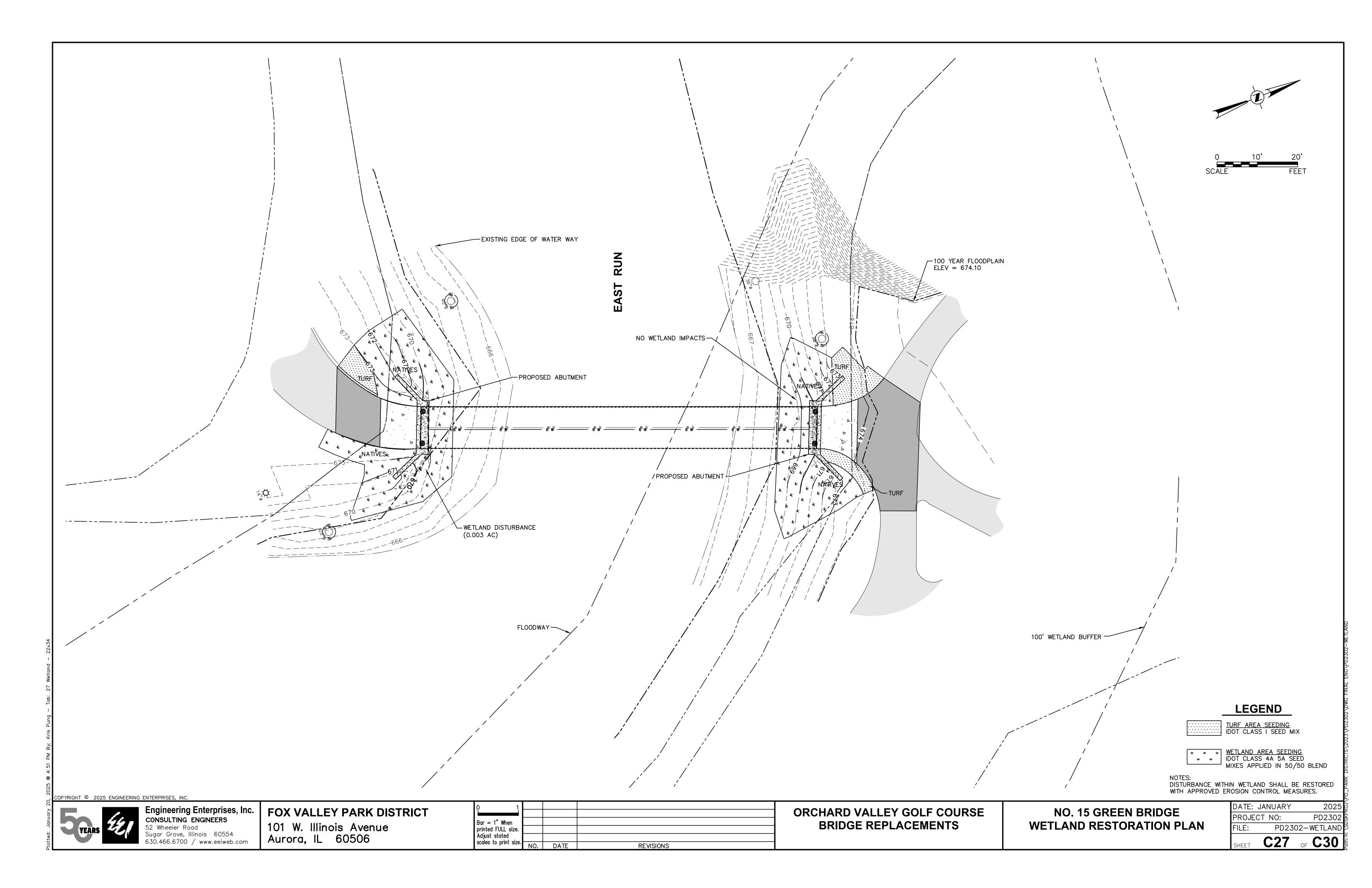
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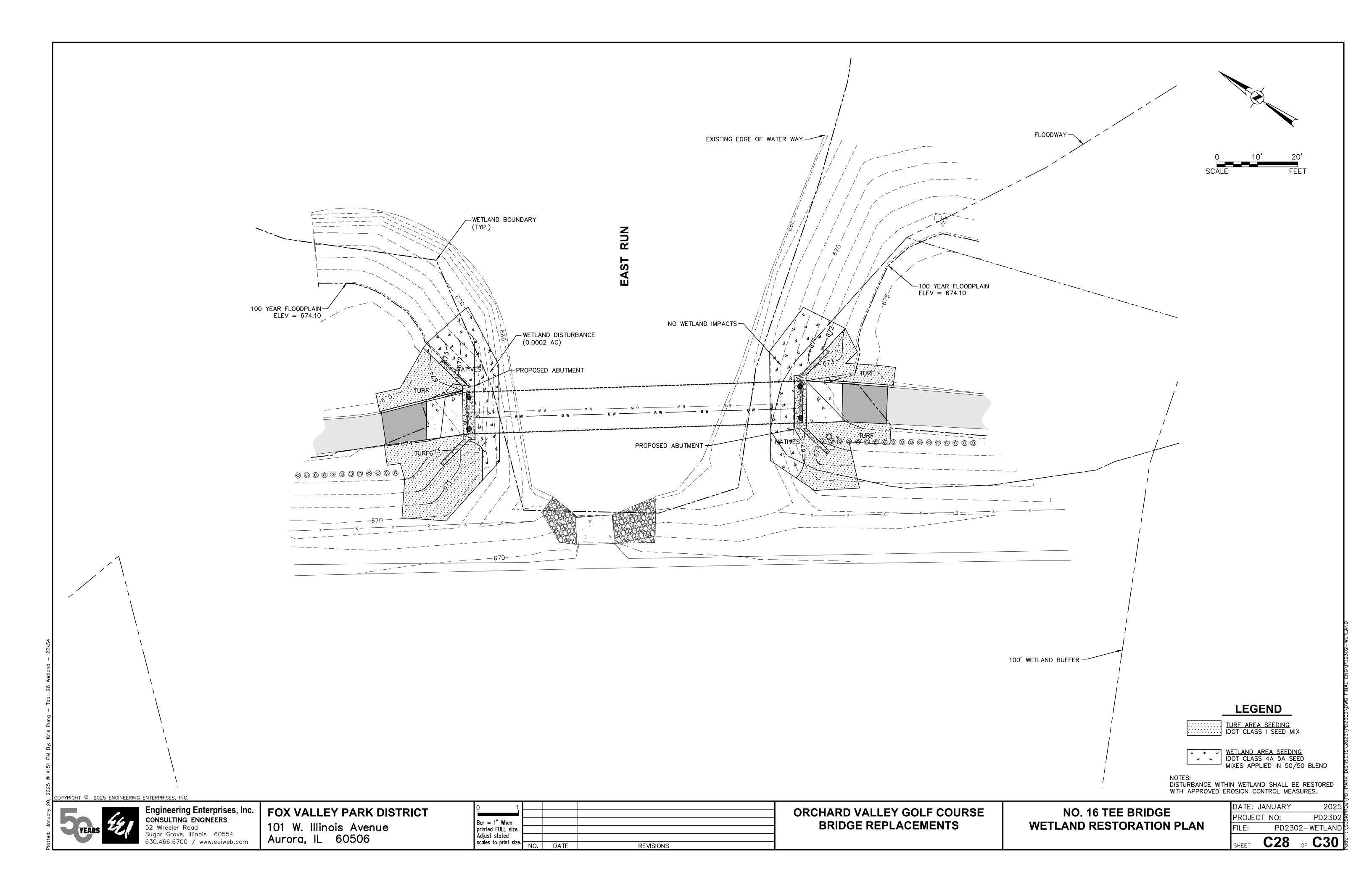
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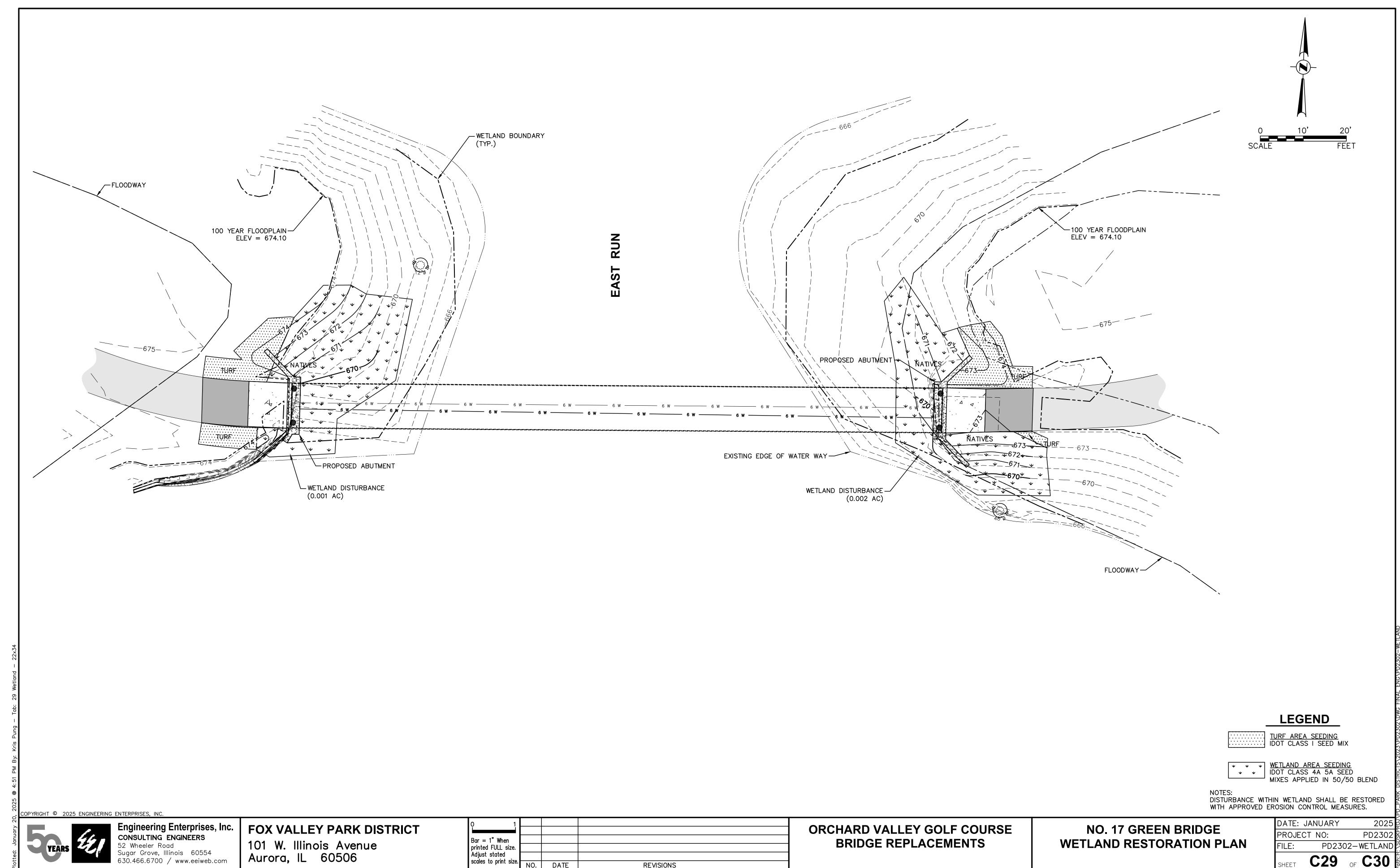










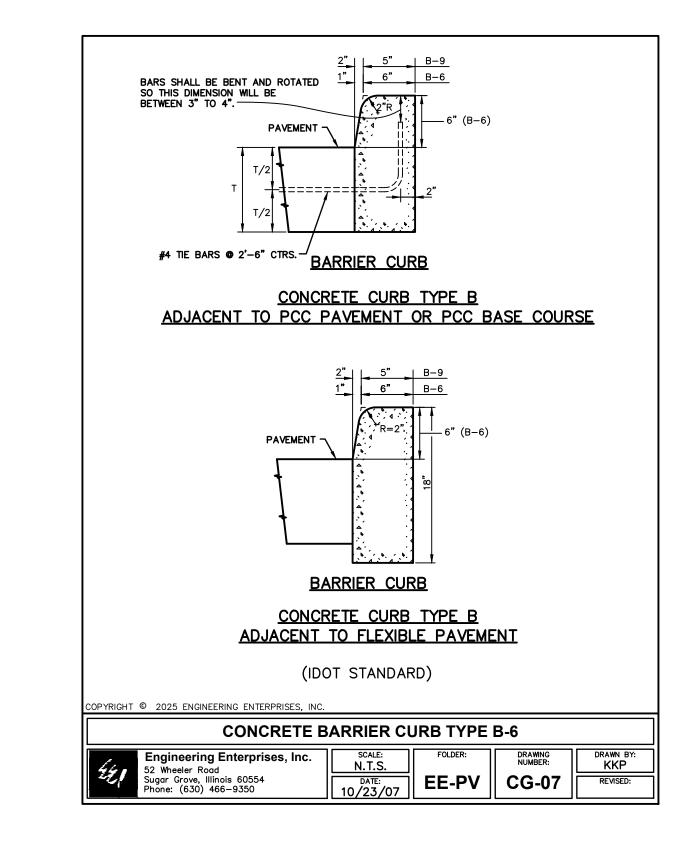


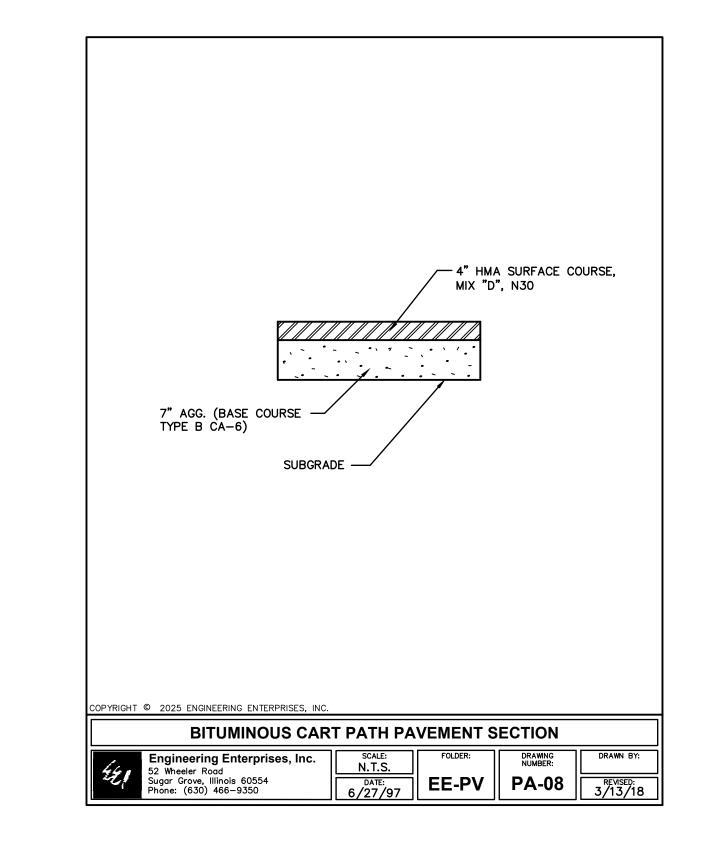
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	FILE:	PD23	02-WETLAND
DATE: JANUARY 2025	PROJEC	T NO:	PD2302
	DATE: 0	ANUARY	2025





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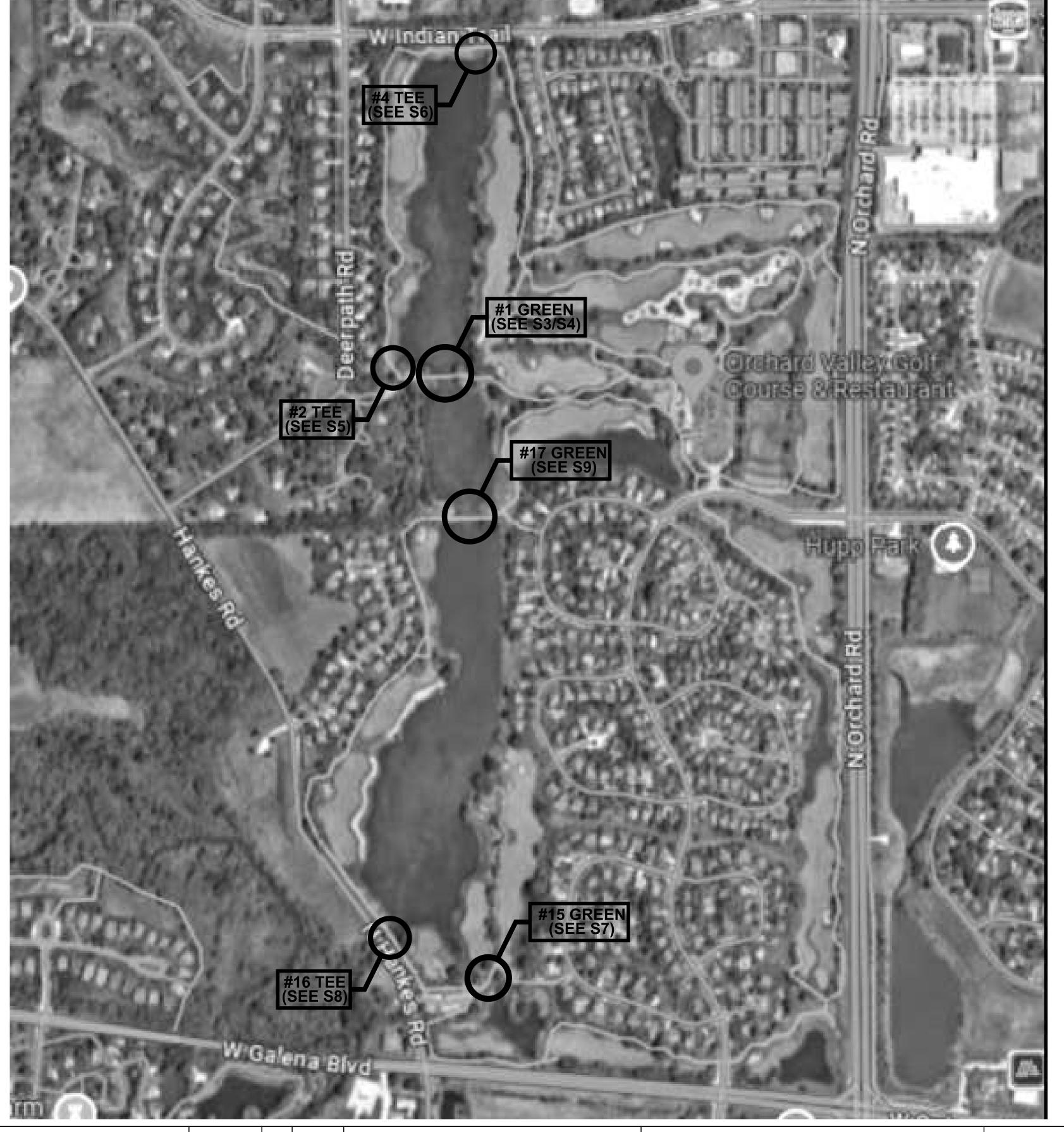
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ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

TYPICAL DETAILS

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DATE: JA	ANUARY	2025
PROJECT	NO:	PD2302
FILE:	PD.	2302-COVER
SHEET	C30	of C30



TRUE NORTH



RUNDE ENGINEERING, INC. Structural Engineers

OVERALL PROJECT

Copyright, 2025 Runde Engineering, Inc. Professional Design Firm #184-004461 DATE: PROJECT NO:

BRIDGE LOCATIONS

Engineering Enterprises, Inc.
CONSULTING ENGINEERS
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NO. DATE REVISIONS

ORCHARD VALLEY GOLF COURSE

BRIDGE REPLACEMENTS

FILENPD - ORCHARD SI BRIDGE SITE PLAN S1 of 13

APPLICABLE CODES AND STANDARDS:

1.	
ACI 318	ACI 318 AMERICAN CONCRETE INSTITUTE, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," 2014 EDITION
ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES," 2016 EDITION
AISC 360	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS," 2016 EDITION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS [ASTM INTERNATIONAL]
AWS A2.4	AMERICAN WELDING SOCIETY, "STANDARD SYMBOLS FOR WELDING, BRAZING, AND NONDESTRUCTIVE EVALUATION," 2012 EDITION
AWS D1.1	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - STEEL," 2015 EDITION
AWS D1.3	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - SHEET STEEL," 2018 EDITION
RCSC	RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS," 2014 EDITION

MISCELLANEOUS NOTES:

- THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.
- 2. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY AT ANY SIMILAR SITUATION ELSEWHERE ON THE JOB EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.
- 3. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED BY THE CONTRACTOR DURING ERECTION TO SAFELY RESIST ALL WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR FINAL "IN-PLACE" LOADS ONLY.
- 4. THE ANCHOR BOLTS FOR BEAM BRG' PLATES SHALL BE FURNISHED BY THE STEEL FABRICATOR AND LOCATED BY THE CONCRETE CONTRACTOR OR GENERAL CONTRACTOR.
- 5. ALL PIPE SLEEVES ARE FURNISHED BY AND LOCATED BY THE SITE MECHANICAL AND ELECTRICAL CONTRACTORS AND BE SET BY THE GENERAL CONTRACTOR.

CONCRETE NOTES:

- CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
- 2. NO WORK SHALL BEGIN WITHOUT CONTRACTOR, A/E REVIEW OF SHOP DRAWINGS AND MIX DESIGN.
- 3. MATERIAL PROPERTIES ALL NORMAL WEIGHT CONCRETE (145 pcf) SHALL HAVE THE FOLLOWING MATERIAL PROPERTIES AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH AS FOLLOWS:

	F'c PSI @ 28 DAYS	MAX. W/C RATIO	MAX. SLUMP INCHES	TOTAL AIR CONTENT
CONCRETE WALLS	4,000	0.50	4-6	N.A.
CONCRETE PADS	4,000	0.55	5-7	3%
EXTR'R CONC. SLAB	4,500	Ø.45	4	7%
ALL OTHER N.S. GROUT	4,000 8,000	<i>0.</i> 45	4 8	5% N.A.

*PRIOR TO ADDING SUPERPLASTICIZER

CALCIUM CHLORIDE AND/OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE ALLOWED IN CONCRETE.

ALL CONCRETE SUBJECT TO EXTERIOR EXPOSURE SHALL BE AIR ENTRAINED 6% TO 8% MIN.

- 4. ALL CONCRETE SHALL BE CURED PROPERLY PRIOR TO THE REMOVAL OF FORMS.
- PROVIDE CORNER BARS OF SAME SIZE AND SPACING AS HORIZONTAL WALL REINFORCEMENT. DEFORMED BAR ANCHORS ASTM A496, Fy = 70 ksi. HEADED ANCHOR STUDS ASTM A108,
- 6. PROVIDE HORIZONTAL CONSTRUCTION JOINTS IN EXPOSED CONCRETE
- 1. UNLESS NOTED OTHERWISE, PROVIDE LAP SPLICES OF AT LEAST 48 BAR DIAMETERS FOR ALL REINFORCEMENT. ADDITIONAL LAP SPLICES REQUIRED FOR CONSTRUCTION SHALL BE 48 BAR DIAM.
- 8. UNLESS NOTED OTHERWISE, PROVIDE THE FOLLOWING MINIMUM CLEAR CONCRETE COVER FOR REINFORCING BARS AS SHOWN

CONCRETE EXPOSED TO EARTH OR WEATHER: SURFACES NOT FORMED BOTTOM OF FOOTINGS SURFACES FORMED ALL OTHER SURFACES CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLABS (BOTTOM) SLABS (TOP) WALLS (INTERIOR SURFACE)

- ALL OTHER SURFACES 9. CONC. REINF. SHOP DRAWINGS SHALL INCLUDE PLANS SHOWING ALL ACCESSORY BARS, ETC., FOR SUPPORT OF TOP AND BOTTOM REINFORCING. SPACE CHAIRS AT 4'-0" MAXIMUM± SUPPORT BARS
- 10. CONCRETE REINF. SHALL BE PLACED ACCORDING TO THE CRSI MANUAL "RECOMMENDED FOR PLACING REINF. BARS" PROVIDE ADEQUATE BOLSTERS, HI-CHAIRS SUPPORT BARS, ETC. TO MAINTAIN SPECIFIED PROVIDE CONTINUOUS *4 SPACER BARS IN WALLS AND SLABS TO SUPPORT DOWELS.
- II. ALL FIELD BENDING OF REINFORCING SHALL BE DONE COLD. HEATING OF BARS IN THE FIELD IS NOT PERMITTED.
- 12. NO ALUMINUM OF ANY TYPE SHALL BE ALLOWED IN THE CONCRETE WORK UNLESS COATED TO PREVENT ALUMINUM/CONCRETE REACTION. MAXIMUM O.D. OF EMBEDDED CONDUIT SHALL BE NO LARGER THAN ONE-THIRD OF THE SLAB THICKNESS.

FOUNDATION NOTES:

- PILES SHALL BEAR ON UNDISTURBED SOIL WHEREVER POSSIBLE. DESIGN SOIL BEARING PRESSURE PER REPORT.
- 2. PILES SHALL BEAR AT THE ELEVATIONS REQUIRED. IF OVER-DRIVING OCCURS, OR THE EXISTING SITE IS BELOW THE INDICATED DRIVING ELEVATIONS, DRIVE PILES UNTIL RESISTANCE ACHIEVED.
- 3. SOILS INFORMATION TAKEN FROM REPORT PREPARED BY RUBINO ENGINEERING, INC. (RUBINO REPORT G24.053 DATED AUGUST 23, 2024)
- 4. FILL AND/OR BACKFILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM PERCENTAGES OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557:

FILL UNDER APPROACH SLABS/FOOTINGS AVOID COMPACTING COHESIVE SOILS AT MOISTURE CONTENTS ON THE WET SIDE OF OPTIMUM.

5. NO FOOTINGS OR SLABS SHALL BE PLACED ONTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE

STRUCTURAL STEEL NOTES:

- 1. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36, Fy = 36 KSI UNLESS NOTED OTHERWISE. STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500 GRADE B. Fu = 46 KSI. STRUCTURAL PIPE SHALL CONFORM TO ASTM A-53, TYPE E OR S. WIDE FLANGE SECTIONS SHALL CONFORM TO ASTM A-992, Fy = 50 KSI.
- 2. STRUCTURAL STEEL DETAILS, FABRICATION, AND ERECTION SHALL CONFORM TO THE NINTH EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION" UNLESS OTHERWISE SHOWN OR NOTED.
- 3. WELDING ELECTRODES SHALL CONFORM TO ASTM 233 CLASS ETØ SERIES.
- 4. BOLTS SHALL BE 3/4" DIAMETER, ASTM A-325 N UNLESS OTHERWISE REQ'D. 5. SHOP CONNECTIONS MAY BE WELDED UNLESS OTHERWISE INDICATED. WELDS SHALL BE DESIGNED TO BE FULLY EQUIVALENT IN STRENGTH TO STANDARD BOLTED CONNECTIONS.
- 6. UNLESS OTHERWISE NOTED, ALL WELDS SHALL BE CONTINUOUS 1/4" FILLET WELDS MINIMUM OR UNLESS OTHERWISE REQ'D.
- BURNING OF HOLES AND CUTS IN STRUCTURAL STEEL IN THE FIELD SHALL NOT BE PERMITTED, EXCEPT BY WRITTEN PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
- 8. ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC INCLUDING SUPPLEMENTS.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES, INCLUDING, BUT NOT LIMITED TO, TEMPERATURE DIFFERENTIALS, ERECTION TOLERANCES, AND WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO REINFORCED CONCRETE WALLS BEAMS OR COLUMNS.
- 10. ALL ADDITIONAL STEEL REQUIRED BY THE CONTRACTOR FOR ERECTION PURPOSES AND SITE ACCESS OF STOCKPILED MATERIAL SHALL BE PROVIDED AT NO COST TO THE OWNER. ALL SUCH ADDITIONAL STEEL SHALL BE REMOVED BY THE CONTRACTOR UNLESS APPROVED BY THE OWNER IN WRITING.
- II. AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED SOIL, AND MUD IN ACCORDANCE WITH DIVISION I GENERAL REQUIREMENTS OF THE PROJECT SPECIFICATIONS OF THIS PROJECT. ERECTION TOLERANCES SHALL COMPLY WITH AISC.

GENERAL NOTES:

- ALL ELEVATIONS REFER TO TOP OF THE GROUND FLOOR SLAB-ON-GRADE AT ELEVATION +100'-0". REFER TO ARCHITECTURAL DRAWINGS FOR DATUM ELEVATION. (CIVIL FFE = +777.78')
- 2. ALL WORK SHALL CONFORM TO THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS.
- SHOP DRAWINGS PREPARED BY THE SUBCONTRACTORS, SUPPLIERS, ETC., SHALL BE REVIEWED BY THE ARCHITECT AND ENGINEER FOR CONFORMANCE WITH THE DESIGN CONCEPT ONLY.
- 4. THE CONTRACTOR SHALL INSPECT THE SITE AND SHALL VERIFY ALL DATA PERTAINING TO THE EXISTING CONDITIONS AND TO THEIR RELATION TO THE NEW WORK. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
- THE SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHOULD BE STUDIED BEFORE PROCEEDING WITH THE WORK.
- 6. NO WORK SHALL BE PERFORMED PRIOR TO SHOP DRAWING REVIEW.
- 1. FOR DETAILS AND DIMENSIONS NOT SHOWN, REFER TO THE ARCHITECTURAL DRAWINGS.
- 8. UNLESS NOTED OTHERWISE, ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE.
- 9. COORDINATION OF SIZES AND LOCATIONS OF OPENINGS FOR PIPES, DUCTS, ETC., SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR NO PIPES OR SLEEVES FOR MECHANICAL OR OTHER TRADES SHALL PASS THROUGH STRUCTURAL MEMBERS WITHOUT THE ARCHITECT'S/STRUCTURAL ENGINEERS APPROVAL
- 10. THE CONTRACTOR SHALL GIVE DUE CONSIDERATION TO ALL SAFETY RULES DICTATED BY CODE AND GOOD PRACTICE. TEMPORARY BRACING SHALL BE PROVIDED, WHERE NECESSARY TO INSURE THE STABILITY AND SAFETY OF THE STRUCTURE DURING ERECTION AND CONSTRUCTION. DESIGN AND CONSTRUCTION OF ALL TEMPORARY BRACING, SCAFFOLDING, SHORING, ETC. SHALL BE RESPONSIBILITY OF THE RESPECTIVE TRADE CONTRACTORS.

SHOP DRAWING NOTES:

- 1. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.
- 2. PRIOR TO SUBMITTALTO ENGINEER, THE GENERAL CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS AND MAKE ANY CORRECTIONS REQUIRED. THE GENERAL CONTRACTOR SHALL STAMP AND SIGN THE DRAWINGS THAT HE HAS REVIEWED THEM.
- 3. SHOP DRAWINGS PREPARED BY THE SUBCONTRACTORS, SUPPLIERS, ETC., SHALL BE REVIEWED BY THE ENGINEER FOR CONFORMANCE WITH THE DESIGN CONCEPT ONLY.
- 4. SHOP DRAWINGS SHALL BE FURNISHED FOR ALL STRUCTURAL COMPONENTS. ALL SUBMITTALS TO BE SENT VIA EMAIL USING PDF FORMATTING. REVIEW WILL TAKE (10) WORKING DAYS.

HOLLOW SHELL PILING NOTES:

- 1. ALL PILING SHALL BE 16" \$ A36 STEEL PILE
- 2. SEE "MS PILE DESIGN TABLE" FOR PILING CAPACITY REQUIREMENTS
- 3. DRIVE TEST PILES AT ABUTMENT LOCATIONS SHOWN TO AN ACTUAL TIP ELEVATION 1'-6" UP FROM BOTTOM OF ABUTMENT. TOP ELEVATION SHALL BE 5 FT. MIN. ABOVE CUT-OFF ELEVATION.
- 4. BASE BID TIP ELEVATION FOR ALL PRODUCTION PILING SHALL BE THE SAME AS FOR THE TEST PILES. TOP ELEVATION OF PRODUCTION PILING SHALL BE AT CUT-OFF ELEVATION.
- 5. PRIOR TO COMMENCING PILE OPERATIONS, THE CONTRACTOR SHALL SUBMIT A PILE LOCATION PLAN SHOWING THE LOCATION & DESIGNATION OF ALL PILES. ALL DETAIL RECORDS FOR INDIVIDUAL PILES SHALL BEAR AN IDENTIFICATION. PRIOR TO PILE DRIVING, SUBMIT DATA PERTAINING TO THE PILE DRIVING HAMMER AND RIG.
- 6. THE BASIS FOR ACCEPTANCE OF THE PRODUCTION PILING SHALL BE:
- A. THAT THE BLOW COUNT FOR THE LAST 10 FEET OF DRIVING SHALL BE NOT LESS THAN THE BLOW COUNT RECORDED FOR THE LAST 10 FEET OF DRIVING OF THE SUCCESSFULLY DRIVEN
- B. THAT THE PILING MEETS THE MINIMUM PENETRATION AND ANY OTHER PRODUCTION PILE DRIVING CRITERIA.
- 7. ALL PILING SHALL BE DRIVING TO A MAXIMUM TOLERANCE IN ANY DIRECTION OF THREE (3) INCHES PER PILE, WHERE AN INDIVIDUAL PILE IS DRIVEN OUT OF POSITION MORE THAN THREE (3) INCHES IN ANY DIRECTION AND/OR WHERE THE CENTER OF GRAVITY OF A PILE GROUP IS OUT OF POSITION MORE THAN TWO (2) INCHES, THE CONTRACTOR MAY BE REQUIRED TO DRIVE AN ADDITIONAL PILE OR PILES TO COMPENSATE FOR THE ECCENTRICITY OF THE PILE AND/OR PILE
- 8. ALL PILE OPERATIONS, INCLUDING TEST PILES, (LOAD TEST) AND PRODUCTION PILES SHALL BE DONE UNDER THE SUPERVISION OF AN INDEPENDENT TESTING LABORATORY, DIRECTED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ILLINOIS.
- 9. BASED UPON THE DRIVING RESULTS OF THE TEST PILES THE ENGINEER WILL SELECT ONE (1) OF THE TEST PILES TO BE SUBJECTED TO A LOAD TEST. COMPRESSION LOAD TEST SHALL BE IN ACCORDANCE WITH ASTM D 1143.
- 10. BASED UPON THE RESULTS OF THE TEST PILE DRIVING AND IN CONJUNCTION WITH THE PILE LOAD TEST RESULTS, THE ENGINEER WILL ESTABLISH THE PRODUCTION PILE DRIVING AND ACCEPTANCE
- 11. THE TESTING AGENCY SHALL RECORD RESULTS OF ALL PILES DRIVEN, GIVING PILE HAMMER USED, PILE SIZE, LENGTH AND DRIVING REGISTANCE FOR THE ENTIRE LENGTH OF THE PILE, RECORDED IN BLOWS PER FOOT. DRIVING RESULTS SHALL BE REPORTED TO THE ENGINEER ON A DAILY BASIS.
- 12. UPON COMPLETION OF ALL PILE DRIVING, THE CONTRACTOR SHALL FURNISH THE ENGINEER A SURVEY OF AS-DRIVEN PILE LOCATIONS. THE SURVEY SHALL INDICATE THE MISALIGNMENT OF EACH PILE IN TWO PERPENDICULAR DIRECTIONS, GIVEN IN INCHES, AND THE ACTUAL CUT-OFF ELEVATION OF EACH PILE.

MS PI	MS PILE DESIGN TABLE STEEL Fy=36 KS MS16' x 0.312 WAL					
BRIDGE PIER LOC'N (GREEN/TEE)	ESTIMATED DEPTH (PILE LENGTH)	ESTIMATED DEPTH (PILE TIP DEPTH -GRADE)	REQ'D BEARING (NOMINAL)	PILES REQ'D (PROD'T/TEST)		
#I GREEN BRIDGE	25'	-27' (BELOW GRADE)	110 KIPS/PILE	2 PRODUCTION 2 TEST PILES		
# GREEN(MID' PIER)	25'	-15' (BELOW GRADE)	115 KIPS/PILE	2 PRODUCTION 1 TEST PILE		
*2 TEE BRIDGE	23'	-25' (BELOW GRADE)	100 KIPS/PILE	2 PRODUCTION 2 TEST PILES		
*4 TEE BRIDGE	25'	-28' (BELOW GRADE)	90 KIPS/PILE	2 PRODUCTION 2 TEST PILES		
#15 GREEN BRIDGE	25'	-28' (BELOW GRADE)	110 KIPS/PILE	2 PRODUCTION 2 TEST PILES		
#16 TEE BRIDGE	18'	-20' (BELOW GRADE)	100 KIPS/PILE	2 PRODUCTION 2 TEST PILES		
#11 GREEN BRIDGE	28'	-30' (BELOW GRADE)	135 KIPS/PILE	2 PRODUCTION 2 TEST PILES		

SEAL: RUNDE 081-005534 EXPIRES: 11-30-2026

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SIGNED: 01-17-2025

Professional Design Firm #184-004461 DATE: PROJECT NO:

FILEMP.D - ORCHARD S2 LOADING & NOTES **S2**

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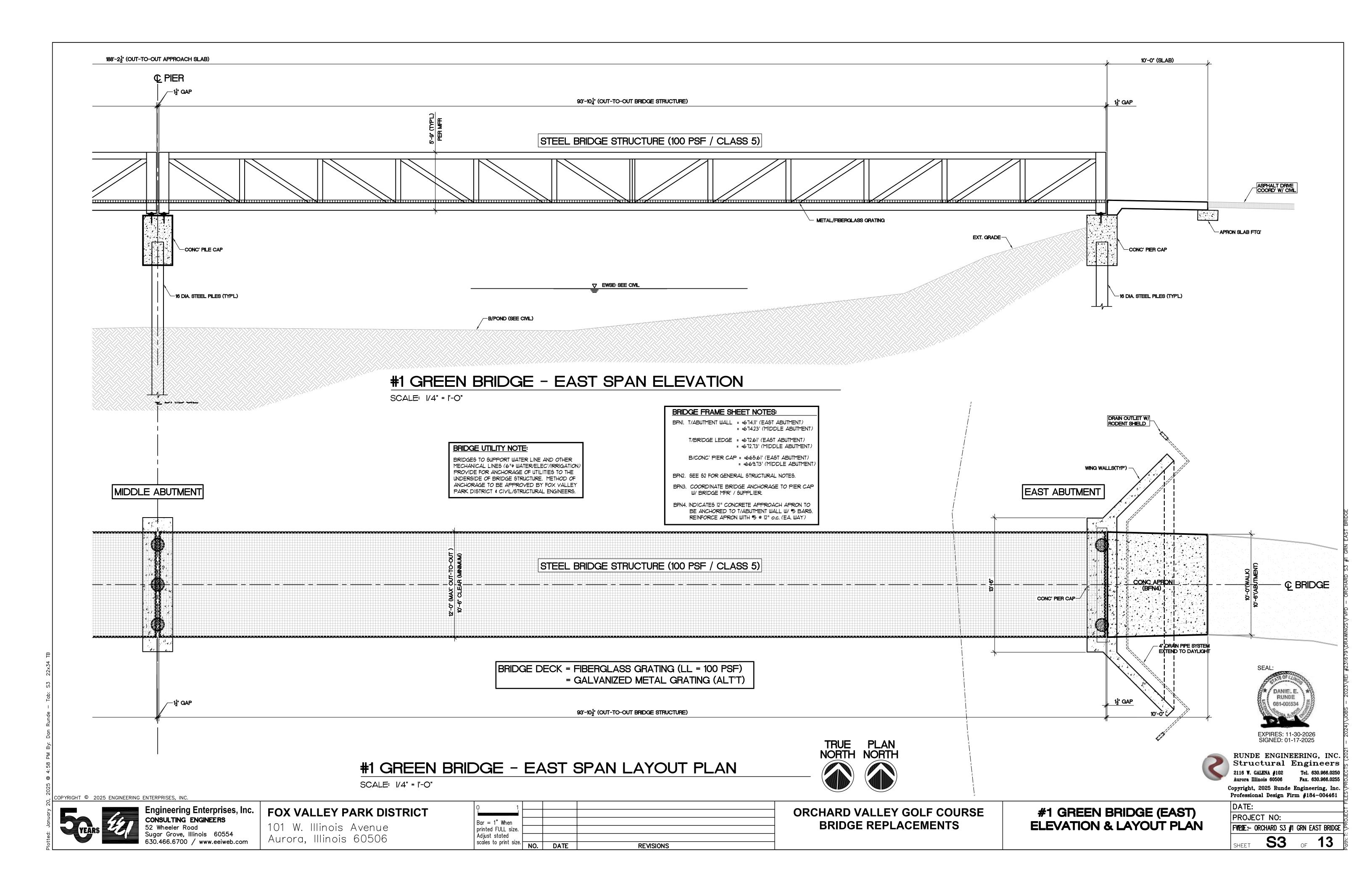
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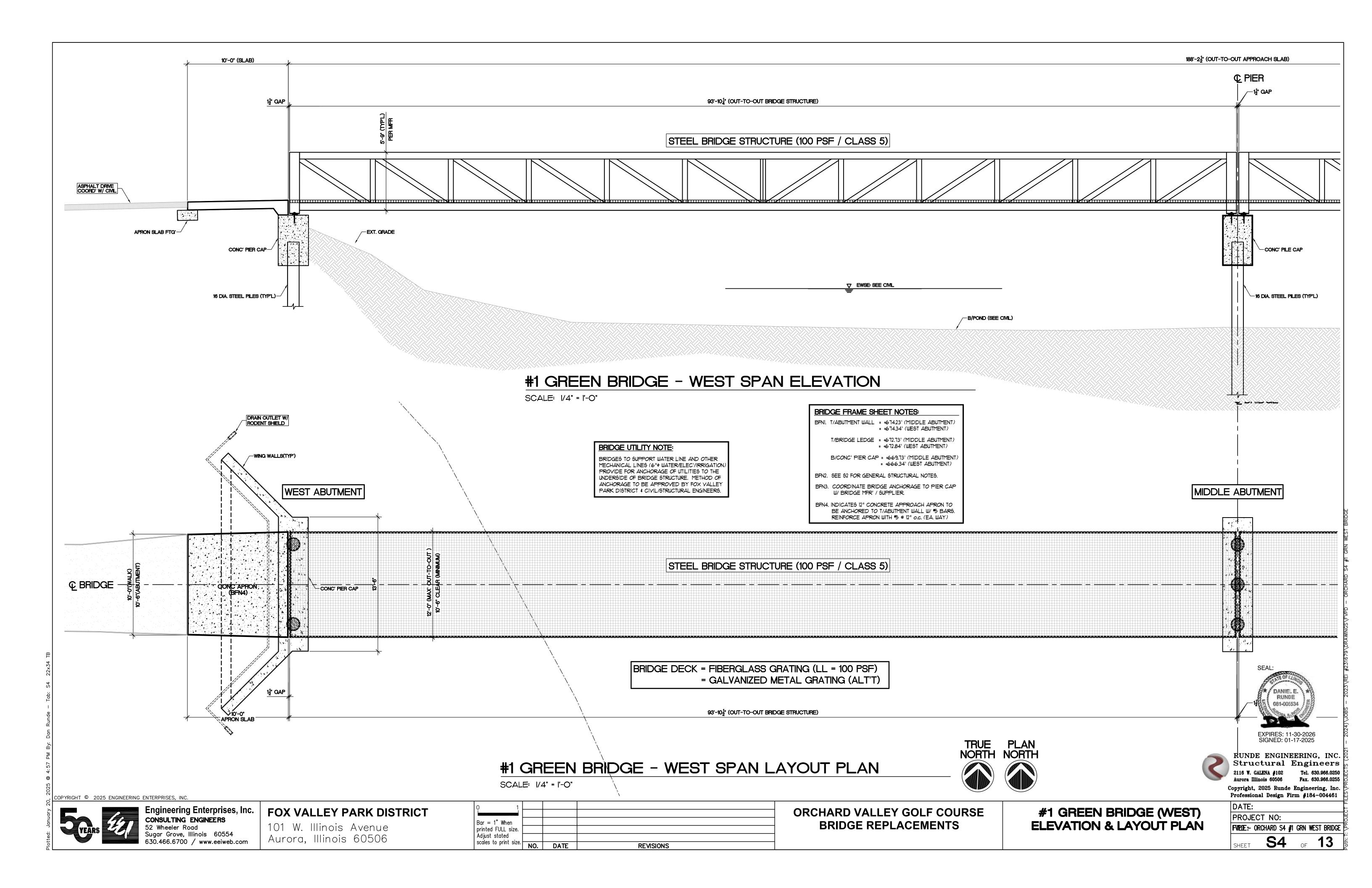
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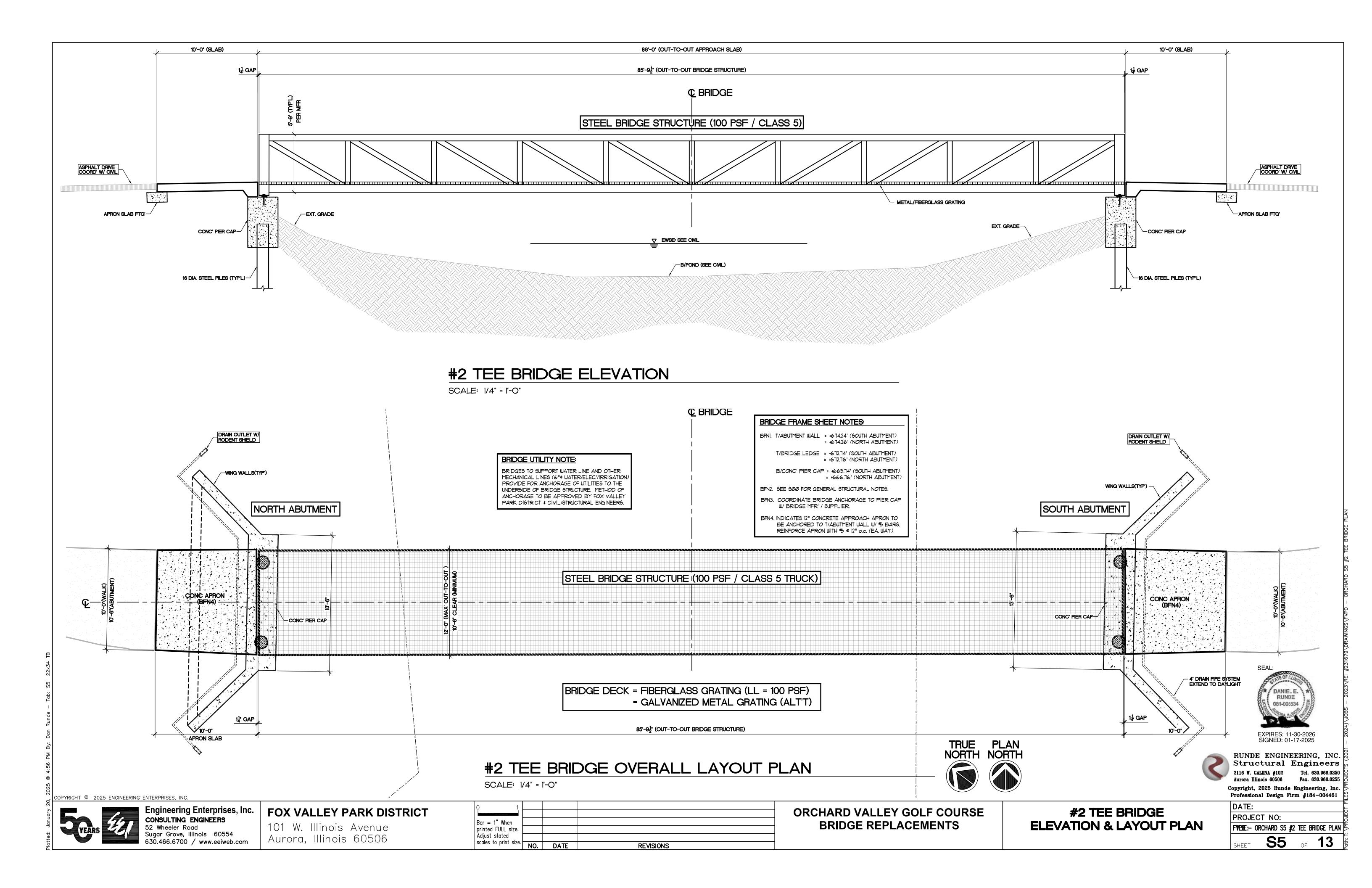
ORCHARD VALLEY GOLF COURSE **BRIDGE REPLACEMENTS**

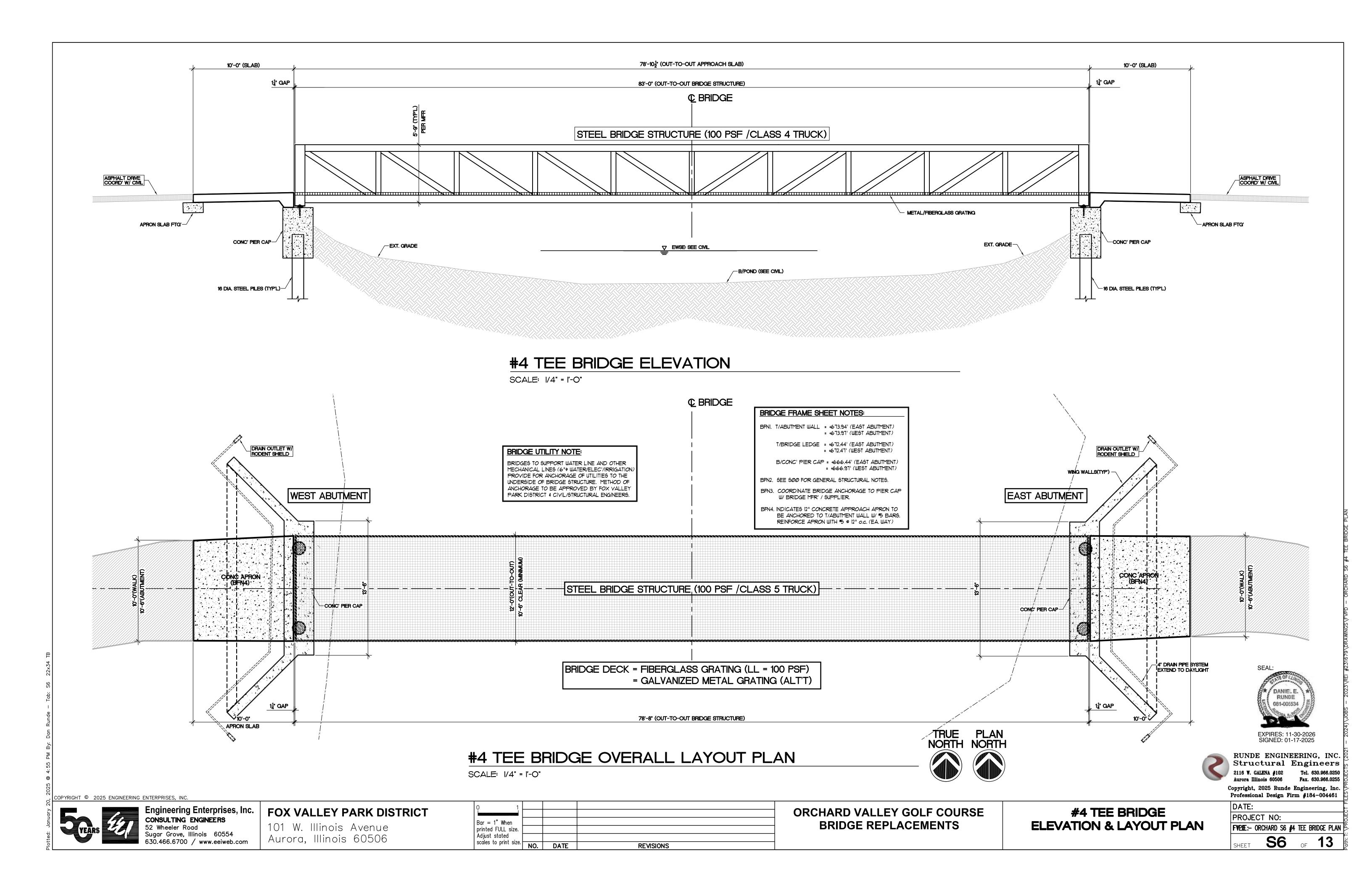
GENERAL STRUCTURAL LOADS AND NOTES

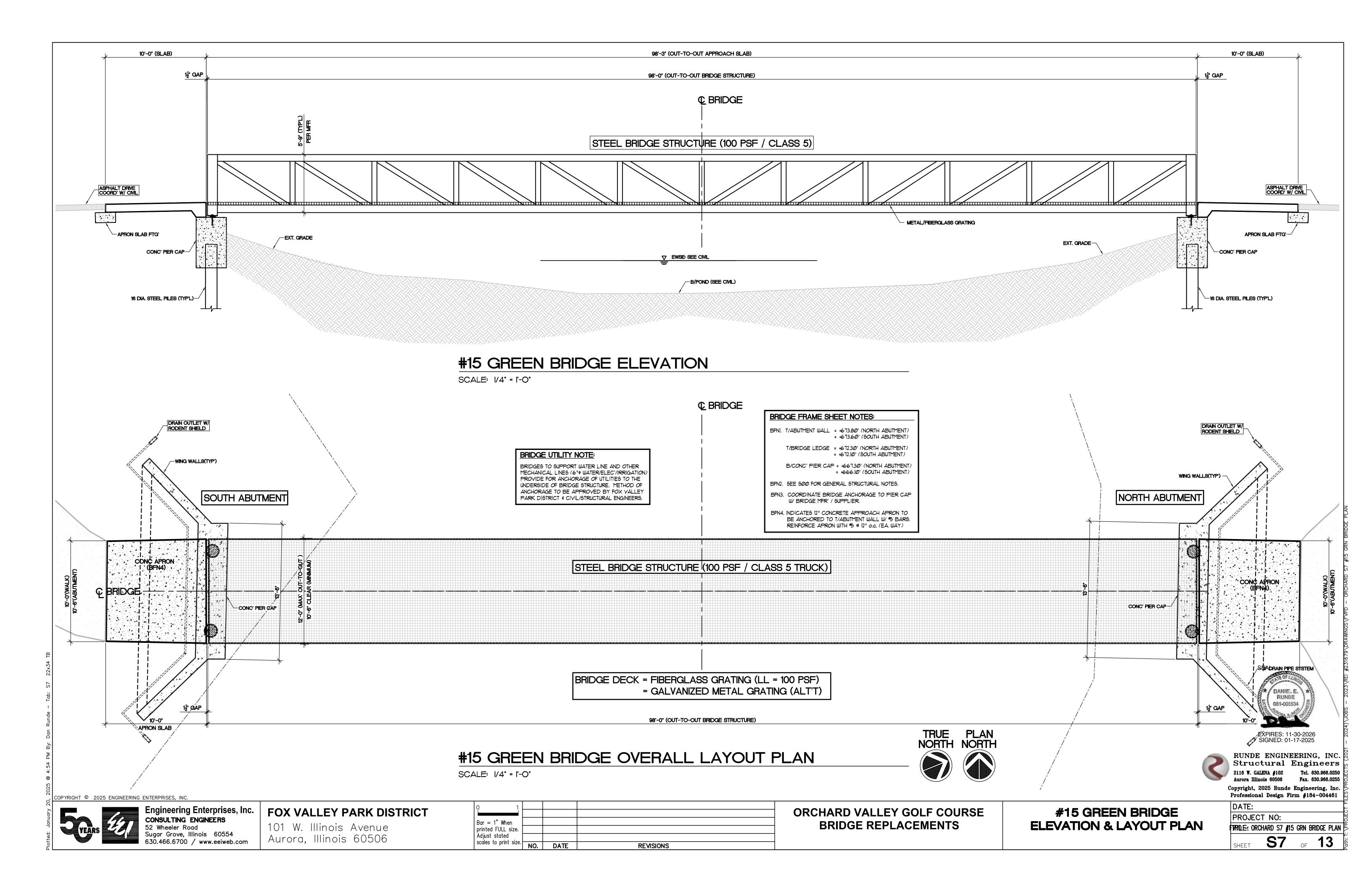
OF 13

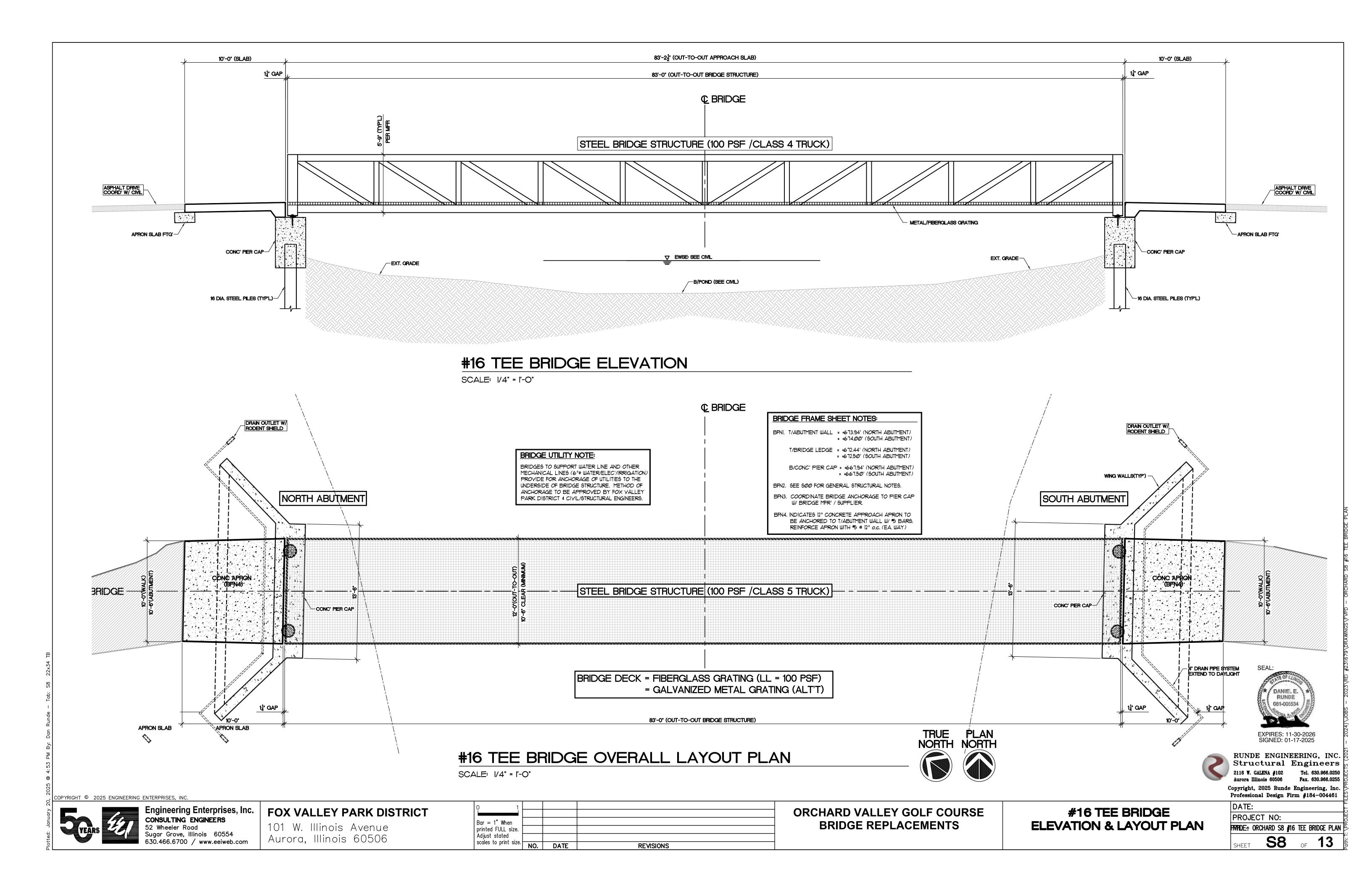


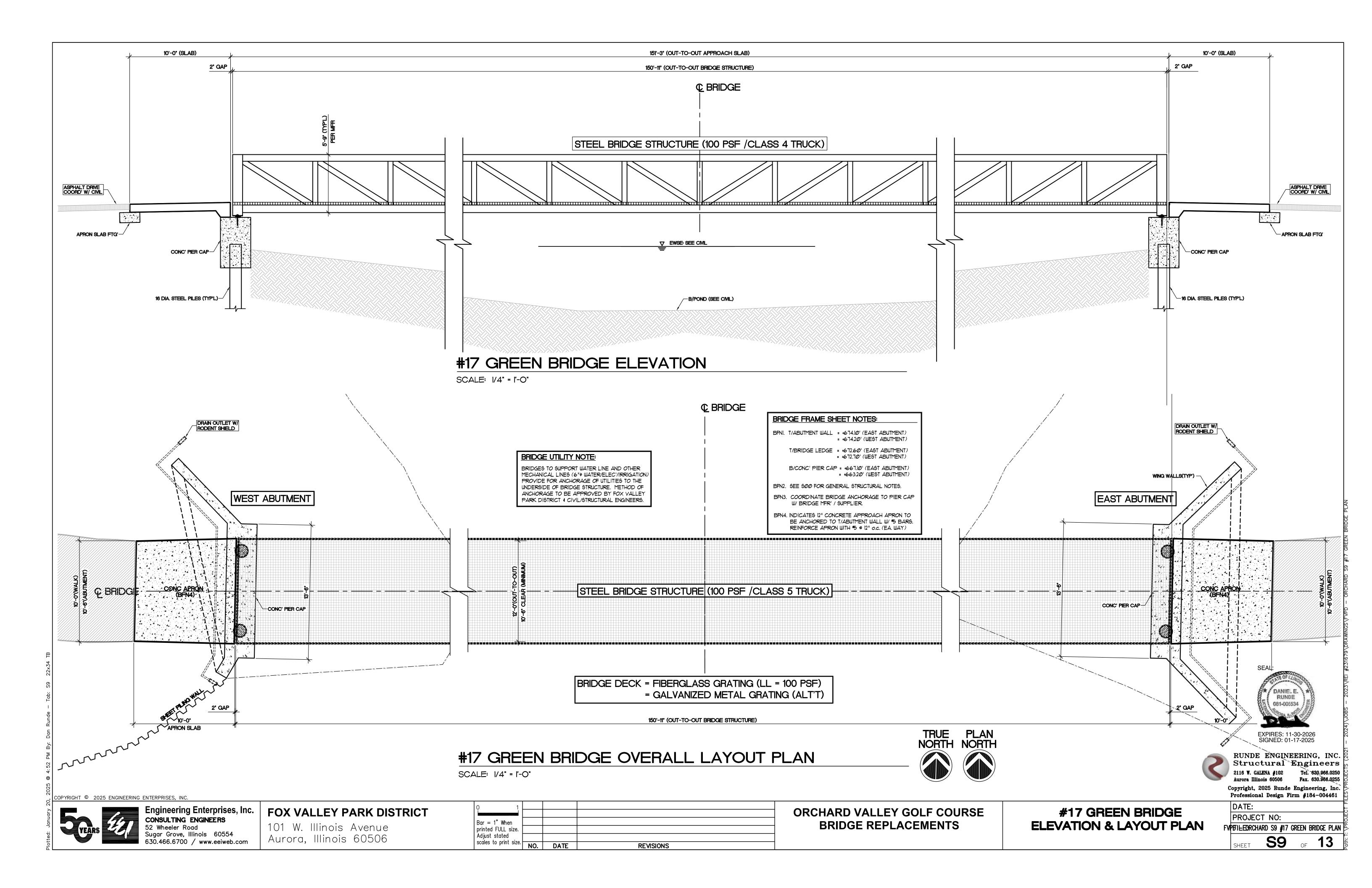


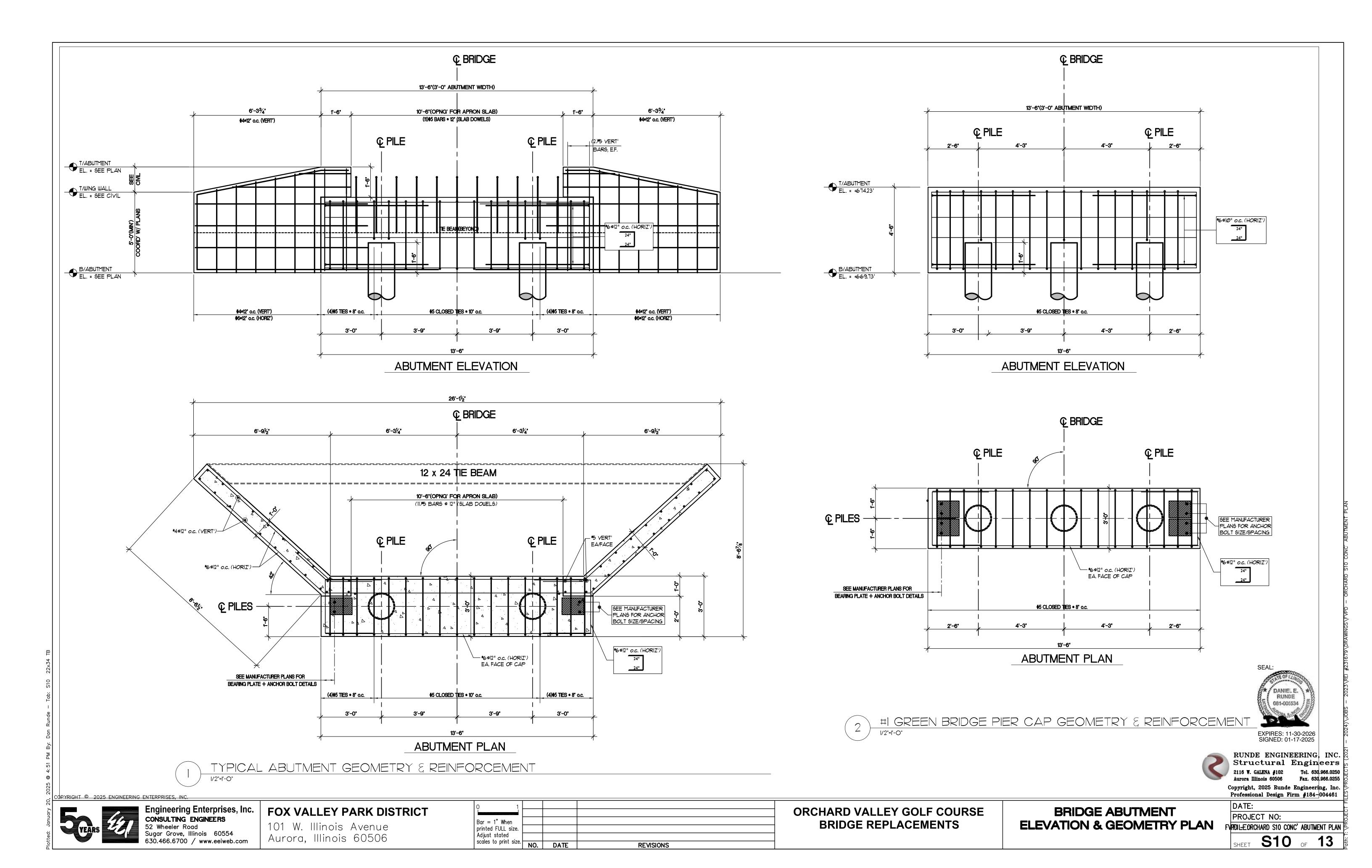


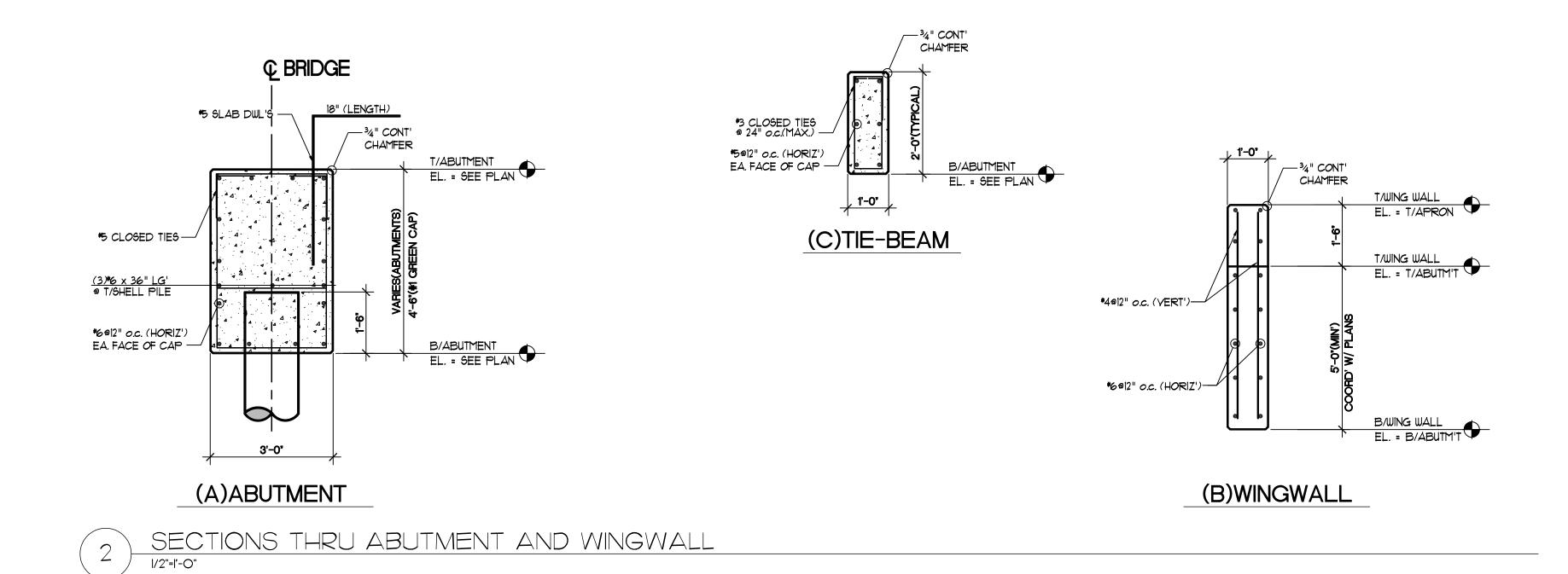




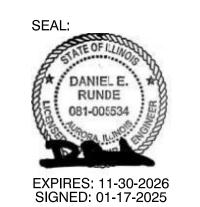








Q BRIDGE 6'-3½**"** 6'-9½" $\frac{2C}{511}$ € PILE © PILE SII W-WALL Q PILES -10'-6" GAP FOR APRON SLAB , 1'-6**'** WALL ABUTMENT PLAN



TYPICAL ABUTMENT GEOMETRY & WING WALL DIMENSIONS

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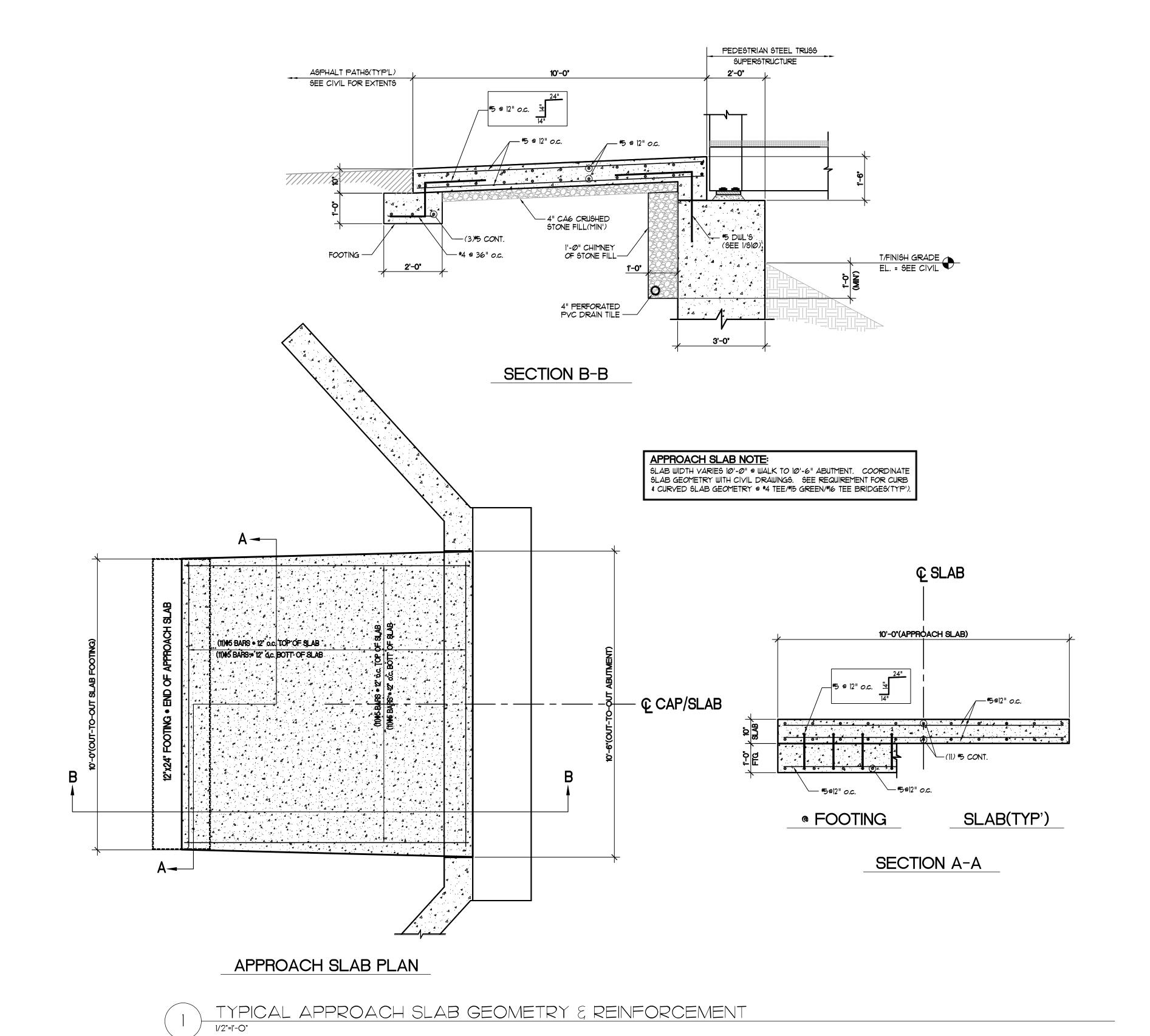
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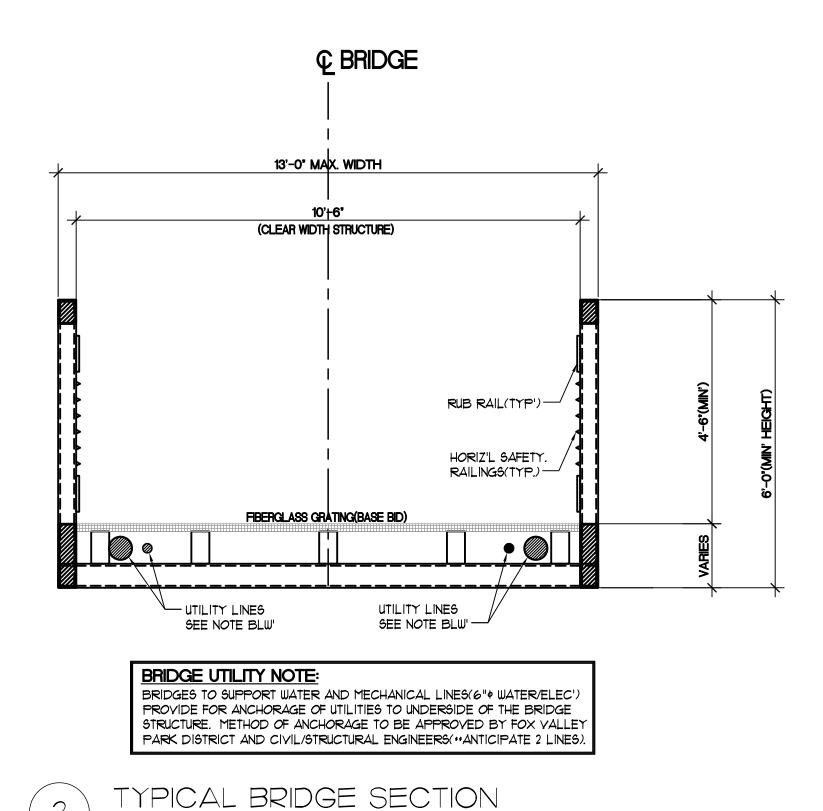
NO. DATE REVISIONS ORCHARD VALLEY GOLF COURSE **BRIDGE REPLACEMENTS**

BRIDGE ABUTMENT SECTIONS AND DETAILS

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EXPIRES: 11-30-2026 SIGNED: 01-17-2025



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APPROACH SLAB SECTIONS AND DETAILS DATE: PROJECT NO:

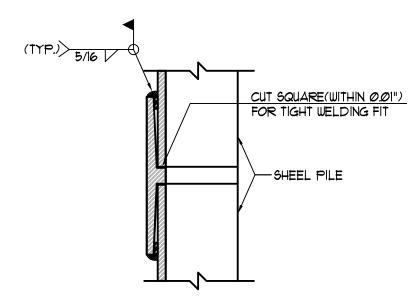
FVPD - ORCHARD S12 CONC' APPROACH SLAB DTL'S SHEET **S12** OF **13**

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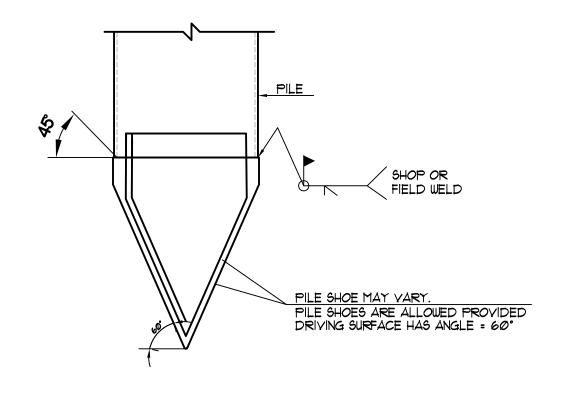
DESIGNATION WALL WEIGHT VOLUME (O.D.) "T" (LBS./FT./)(YD. 3/FT..
 PP16
 Ø.312"
 52.32
 Ø.Ø418

 PP16
 Ø.315"
 62.64
 Ø.Ø41Ø

METAL SHELL PILE TABLE

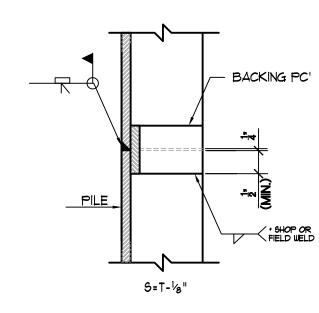


WELDED COMMERCIAL SPLICE



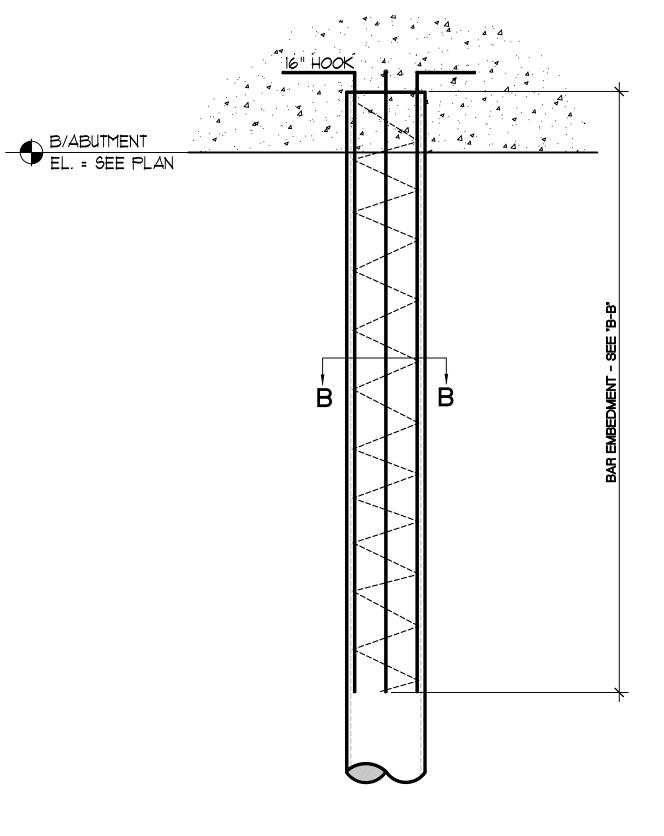
PILE SHOE ATTACHMENT

THE PILE SHOES SHALL BE CAST IN ONE PIECE STEEL ACCORDING TO EITHER ASTM A 148 GRADE 80-50 OR AASHTO M 103 GRADE 65-35.



COMPLETE PENETRATION WELD SPLICE

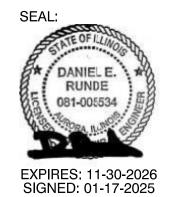
TYPICAL PILE CONNECTION & HARDWARE DETAILS



PILE REINFORCMT **ABUTMENTS** PP16: (13)#1 VERT' BARS (11'-6" LONG, TYP.) MIDDLE PILE CAP PP16: (13)#T VERT' BARS (18'-6" LONG) #4 CLOSED TIE--SHEEL PILE SECTION B-B

ELEVATION

TYPICAL PILE VERTICAL REINFORCEMENT DETAILS



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SHELL PILE HARDWARE & REINFORCEMENT FVPD FILERCHARD S13 SHELL PILE REINF'T DTL'S