ADDENDUM NO. 2

DATE: February 10, 2025

PROJECT: ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

FROM: Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554

TO: ALL BIDDERS OF RECORD

BIDS DUE: **February 13, 2025, 10:00 a.m., local time**

NOTE: This Addendum is hereby declared a part of the CONTRACT DOCUMENTS for the project designated above and in case of conflict, the following Addendum shall govern, Bidders shall state in their proposal that this addendum has been received and is reflected in the proposal submitted.

RESPONSE TO CONTRACTOR QUESTIONS

1. **Question 1**: *Will Orchard Valley Golf Course and walking paths be closed to the public during construction?*

   Response to Question 1: Yes.

2. **Question 2:** *What is the intent for the Contractor to access the bridge locations? Significant construction equipment, ready mix concrete trucks, and trucks delivering bridge truss sections will require access to each bridge abutment. How will access roads and restoration be compensated?*

   Response to Question 2: Per Addendum 2, the Contractor will be required to submit an access plan. The access roads will be paid for with a new bid item called “TEMPORARY ACCESS ROADS”. There is also a new special provision explaining the requirements of the access roads. Restoration for the access roads will be completed by others.

3. **Question 3:** *Who is responsible for Quality Control testing?*

   Response to Question 3: The Contractor will be responsible for Quality Control testing. Periodic Quality Assurance testing will be performed by the Owner.

4. **Question 4:** SP-3 Construction Staking states that construction staking and layout will be provided by EEI. Will this include the record drawings as detailed in General Notes and Construction Specifications 26?

   Response to Question 4: Yes. The record drawings will be completed by EEI.

5. **Question 5**: Has any of the bridge truss manufacturers been contacted about lead time for shop drawing and fabrication of the 6 truss bridges. Previous experience is a minimum of 4-6 weeks on shop drawings and 22-24 weeks on fabrication and delivery of the truss bridges. These lead times will vary based on selected bridge manufacturers. Have the bridge lead times been factored into the October 17, 2025 completion date.

Response to Question 5: Bridge lead times are to be confirmed by the manufacturer. Additional bridge manufacturers have been added to the approved list to provide options for Contractors to secure bridges in a timely manner. The completion date has been factored into the lead times.

6. **Question 6:** *Can bills of materials for each structure be provided for Item 29 Concrete Structures and Item 30 Reinforcement bars?*

   Response to Question 6: These line items have quantities that closely represent the amount needed for the project. Any variance in the quantity would be covered by the unit price in the bid.

7. **Question 7:** *Can Item 21 TEST PILE METAL SHELL and Item 22 Driving Piles be performed to IDOT Standard Specifications, Design Manual, procedures and methods as opposed to what is detailed on Page S2 of 13 in the Hollow Shell Piling Notes. Methods detailed on Page S2 of 13 in the Hollow Shell Piling Notes are not local industry standard practice and lacks clarity, the Contractors that will provide pricing for this project typically drive piling according to IDOT Standards, Design Manual, and procedures with the Owners Rep/Engineer typically providing determination of bearing, pile record keeping and furnished lengths. The cost of the Independent Testing Laboratory, directed by a Professional Engineer (Hollow Shell Piling Note 8) and the Compression Load Test according to ASTM D 1143 (Hollow Shell Piling Note 9) will add several hundred thousand dollars to the contract time that can be avoided by following IDOT Standards, Design Manual, and methods.*

   Response to Question 7: Following IDOT Standards is acceptable. In lieu of using a test pile, driving piles to refusal is an acceptable alternate.

8. **Question 8:** What concrete mix shall be used to fill the shell piles. IDOT typically use a drilled shaft mix.

   Response to Question 8: IDOT class DS mix shall be used. (4,000 psi) Please refer to sheet S2 for mix design information.

9. **Question 9**: *The provided Structure Geotechnical Report by Rubino Engineering, Inc. dated 8/23/24 on page 6 states that conical points for the shell piles are recommended at borings BSB-02 through BSB-07 due to soil conditions. Will conical points be required and will a pay item be added if required?*

   Response to Question 9: Conical points will be required for each driven pile. This should be included with the pile installation.

10. **Question 10:** *Are the Typical Pile Vertical Reinforcement Bars as detailed on sheet S13 of 13 included in the Item 29 Reinforcement Bars item quantity?*

    Response to Question 2: Per Addendum 1, Item 30 Reinforcement Bars was increased to include the Typical Pile Vertical Reinforcement Bars.

11. **Question 11:** *Is there a site access plan for this project? Is site restoration outside of work items on the Contractor or the Park District.*

    Response to Question 11: Please see response to Question 2 above.

12. **Question 12:** Is there a phasing plan?

    Response to Question 12: No. The course will be closed during construction.

13. **Question 13**: *Would FRP plank decking be a suitable option in lieu of FRP grate decking? FRP planking may prove to be a more cost-effective option given the heavier vehicle wheel loads and compatibility with steel truss frame. Additionally, given these are golf course bridges, I could see the grate decking damaging golf shoes.*

    Response to Question 13: Yes. FRP decking is listed as an alternate bid to the base bid decking.

14. **Question 14:** *Is the concrete backwall height adjustable? I see issues trying to get a 151' bridge and an 83' bridge to have the same depth-of-section and backwall height.*

    Response to Question 14: Yes. See sheet S12.

15. **Question 15:** *Are there any requirements on the type of irrigation pipe?*

    Response to Question 15: The irrigation pipe shall be HDPE DR-11 with fused joints.

16. **Question 16:** Is there any control wire and/or power wire that needs to be installed for the irrigation system? If so, what type is to be installed?

    Response to Question 16: Not that we are aware of.

17. **Question 17**: *Will expansion joints be needed? The expansion joints can be very costly or inexpensive.*

    Response to Question 17: Yes. At each end and in the middle an expansion joint will be required.

18. **Question 18:** *Will we be responsible for the shutdown of the irrigation line.*

    Response to Question 18: No.

19. **Question 19:** *Will the irrigation line be shutdown completely during the construction?*

    Response to Question 19: Yes.

20. **Question 20:** Will any temporary capping of the irrigation line be required.

    Response to Question 20: No. The golf course contractor will be connecting irrigation lines from the bridges into the main system at the time of installation.

21. **Question 21**: *Are there any requirements on the type of pipe hangers to be used.*

    Response to Question 21: No. The type of pipe hanger needs to be compatible with the pipe material, size, and bridge deck. The pipe hangers need to be spaced according to the manufacturers specifications.

22. **Question 22:** *Will a separate, stand alone Builder Risk Policy for this project be required.*

    Response to Question 22: Yes. Insurance will be required per SP-8 of the special provisions.

PROJECT MANUAL

23. The Bid Schedule shall be replaced with the attached revised Bid Schedule. The following items were revised or added.

    a. Bid item 13 “WATER IRRIGATION LINES, 6-INCH” has been revised and is now called “WATER IRRIGATION LINE, HDPE DR-11, 6 INCH”.

    b. Bid item 37 “TEMPORARY ACCESS ROAD” was added.

    c. Bid item 38 “COMMUNICATION CONDUIT, HDPE DR-11, 2 INCH” was added.

    d. Bid item 39 “WATER IRRIGATION LINE, HDPE DR-11, 4 INCH” was added.

    e. Bid item 40 “WATER IRRIGATION LINE, HDPE DR-11, 6 INCH” was added.

    f. Bid item 41 “WATER IRRIGATION LINE, HDPE DR-11, 8 INCH” was added.

    g. Bid item 42 “WATER IRRIGATION LINE, HDPE DR-11, 10 INCH” was added.

    h. Bid item 43 “SCHEDULE 80 PVC SLEEVE, 8 INCH” was added.

    i. Bid item 44 “SCHEDULE 80 PVC SLEEVE, 10 INCH” was added.

    j. Bid item 45 “SCHEDULE 80 PVC SLEEVE, 12 INCH” was added.

    k. Bid item 46 “SCHEDULE 80 PVC SLEEVE, 16 INCH” was added.

    l. Alternative Bid item 7 “PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 1” was added.

    m. Alternative Bid item 8 “PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 2” was added.

    n. Alternative Bid item 9 “PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 4” was added.

    o. Alternative Bid item 10 “PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 15” was added.

    p. Alternative Bid item 11 “PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 16” was added.

    q. Alternative Bid item 12 “PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 17” was added.

24. The special provision “PREFAB TRUSS BRIDGE” has been revised. The special provision will now include additional alternate manufacturers. Please see below for the revised specification:

SP-21 PREFAB TRUSS BRIDGE

The bridges to be installed for the bridge replacement project shall be prefabricated metal truss bridges with fiberglass decking. The bridge shall be a Pratt style truss bridge, and the preferred manufacturer is Contech. Additional alternative manufacturers besides the ones listed herein can be

submitted for review and approval. The list of approved alternative manufacturers are TrueNorth Steel, Wheeler Bridges, Algonquin Bridge, Bridge Brothers, Pioneer Bridge, Art Thureson Inc, and Big R Bridge. Refer to the Structural Engineering plans by Runde Engineering for bridge dimensions and details. A galvanized metal deck bridge option shall be provided as an alternate for consideration.

This item shall include full installation of the prefabricated metal truss bridge on the bridge abutments and all required bridge work to fully complete the installation for use.

As part of the bid submittal, the contractor shall also submit a construction access plan to each of the bridges for review and approval by the Park District. The Park District reserves the right to reject a Contractor's bid based on the access plan.

This work shall be paid for at the contract unit price for the specified location for PREFAB TRUSS BRIDGE. Price shall include all costs associated with procuring and furnishing the prefabricated bridge to the site, materials, installation, equipment, traffic control (if needed), and labor necessary to complete this work.

25. The special provision "TEMPORARY ACCESS ROAD" has been added to the project manual. Please see below for the additional specification.

SP-26 TEMPORARY ACCESS ROAD

This work shall consist of installing an 8" thick CS-01 or approved equal with non-woven geotextile fabric temporary access road of the width required by the contractor to mobilize equipment for the construction of the proposed bridges. Any stone pad areas needed for equipment at the bridges shall be included with this pay item.

The temporary stone access roads shall be installed per an access plan as provided by the contractor and approved by the Park District and include the location of any equipment pads. The temporary access plan shall be reviewed and approved by the Park District prior to any construction. Any changes to the access plan requested by the Park District shall be coordinated with the contractor to determine an agreeable access plan.

Prior to installation of the geotextile fabric, existing topsoil shall be excavated up to a depth of 8 inches and placed in a windrow immediately adjacent to the excavation as required to keep soils onsite and as coordinated with the Park District. The removal and disposal of the temporary stone access road and geotextile fabric at the end of construction shall be included in this pay item. Topsoil fill, grading, and restoration of the temporary access road areas shall be completed by others.

This work will be paid for at the contract unit price per square yard for TEMPORARY ACCESS ROAD which price shall include all labor, materials, and equipment necessary to complete and remove the work item. A nominal quantity has been included in the bid tab to set a unit price for the purposes of equal bidding.

PLANS

26. Civil plan sheets C16, C17, C18, C19, C20, and C21 have been revised for additional water line information and based on contractor questions. Structural plan sheets S2, S10, S11, and S12 have been revised based on contractor questions. All revised sheets are included with this addendum.

END OF ADDENDUM NO. 2

BID SCHEDULE

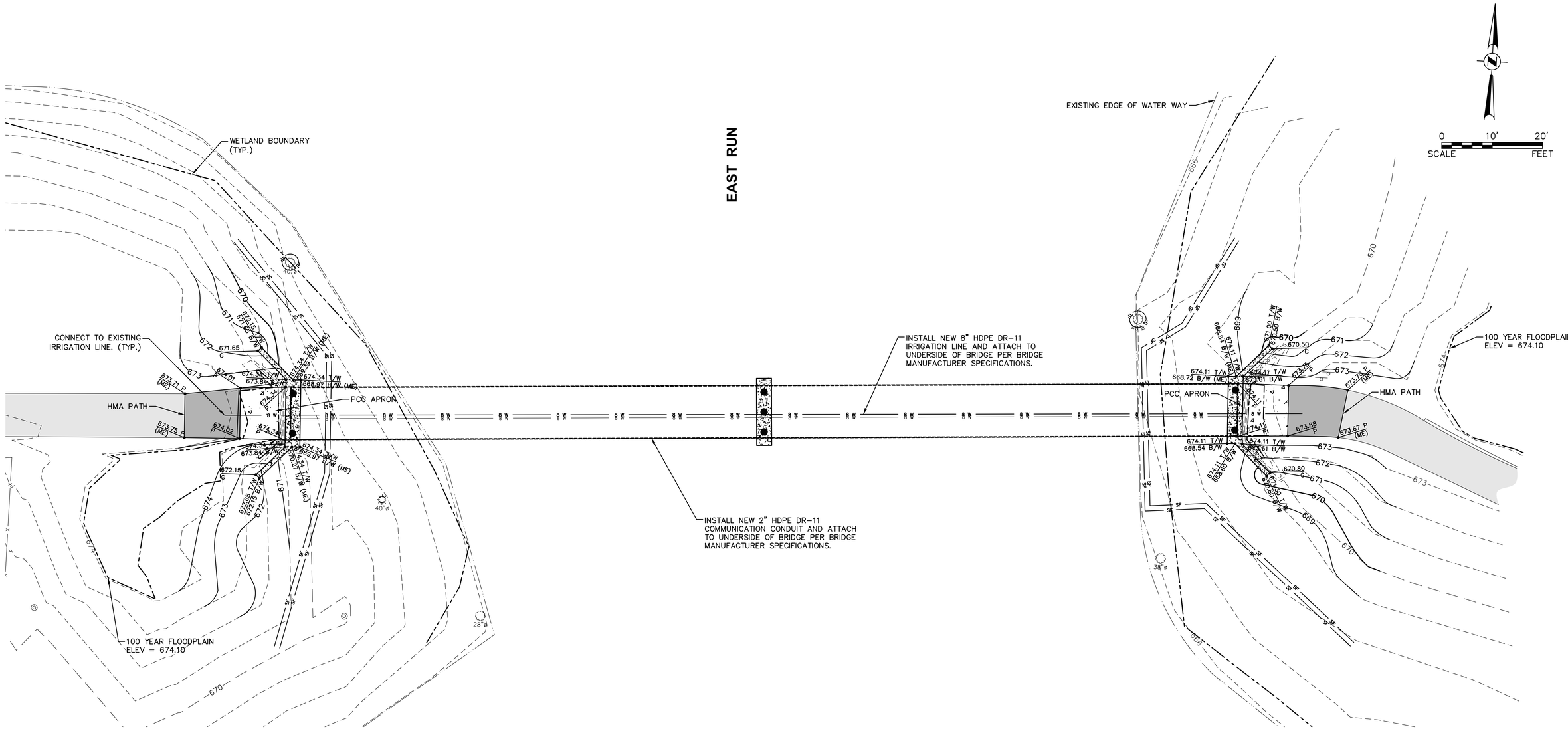
BASE BID

ITEM NO.	ITEM	UNIT	QUANTITY		UNIT PRICE		AMOUNT
1	PERIMETER EROSION BARRIER	FOOT	1,734	$		$	
2	CONCRETE WASHOUT	EACH	1	$		$	
3	EARTH EXCAVATION	CY	473	$		$	
4	TREE REMOVAL (6 TO 15 UN ITS DIAMETER)	UNIT	24	$		$	
5	TREE TRUNK PROTECTION	EACH	10	$		$	
6	TREE ROOT PRUNING	EACH	5	$		$	
7	REMOVE, SALVAGE, AND REINSTALL EXISTING SIGN	EACH	2	$		$	
8	GOLF CART PATH PAVEMENT REMOVAL	SY	314	$		$	
9	AGGREGATE BASE COURSE, TYPE B 7 INCH	SY	164	$		$	
10	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N30, 4 INCH	SY	164	$		$	
11	CONCRETE CURB TYPE B	LF	30	$		$	
12	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	430	$		$	
13	WATER IRRIGATION LINE, HDPE DR-11, 6 INCH	FOOT	230	$		$	
14	CONNECT TO EXISTING IRRIGATION WATER LINE	EACH	12	$		$	
15	SPECIAL SEEDING, TOPSOIL AND EXCELSIOR BLANKET, TURF GRASS	SY	685	$		$	
16	SPECIAL SEEDING, TOPSOIL AND EXCELSIOR BLANKET, NATIVES	SY	790	$		$	
17	FENCE REMOVAL AND REINSTALLATION	LF	45	$		$	
18	COFFER DAM (TYPE 1) (LOCATION 1)	EACH	1	$		$	
19	COFFER DAM (TYPE 1) (LOCATION 17)	EACH	1	$		$	
20	FURNISHING METAL SHELL PILES, 16" x 0.312"	FOOT	810	$		$	
21	TEST PILE METAL SHELL	EACH	13	$		$	
22	DRIVING PILES	FOOT	810	$		$	
23	REMOVAL OF EXISTING STRUCTURE NO. 1	EACH	1	$		$	
24	REMOVAL OF EXISTING STRUCTURE NO. 2	EACH	1	$		$	
25	REMOVAL OF EXISTING STRUCTURE NO. 4	EACH	1	$		$	
26	REMOVAL OF EXISTING STRUCTURE NO. 15	EACH	1	$		$	
27	REMOVAL OF EXISTING STRUCTURE NO. 16	EACH	1	$		$	
28	REMOVAL OF EXISTING STRUCTURE NO. 17	EACH	1	$		$	
29	CONCRETE STRUCTURES	CY	294	$		$	
30	REINFORCEMENT BARS	POUND	30,400	$		$	
31	PREFAB TRUSS BRIDGE NO. 1	EACH	1	$		$	
32	PREFAB TRUSS BRIDGE NO. 2	EACH	1	$		$	
33	PREFAB TRUSS BRIDGE NO. 4	EACH	1	$		$	
34	PREFAB TRUSS BRIDGE NO. 15	EACH	1	$		$	
35	PREFAB TRUSS BRIDGE NO. 16	EACH	1	$		$	
36	PREFAB TRUSS BRIDGE NO. 17	EACH	1	$		$	
37	MOBILIZATION	LSUM	1	$		$	
38	TEMPORARY ACCESS ROAD	SY	6,000	$		$	
39	COMMUNICATION CONDUIT, HDPE DR-11, 2 INCH	LF	700	$		$	
40	WATER IRRIGATION LINE, HDPE DR-11, 4 INCH	LF	104	$		$	
41	WATER IRRIGATION LINE, HDPE DR-11, 8 INCH	LF	324	$		$	
42	WATER IRRIGATION LINE, HDPE DR-11, 10 INCH	LF	176	$		$	
43	SCHEDULE 80 PVC SLEEVE, 8-INCH	LF	30	$		$	
44	SCHEDULE 80 PVC SLEEVE, 10-INCH	LF	60	$		$	
45	SCHEDULE 80 PVC SLEEVE, 12-INCH	LF	60	$		$	
46	SCHEDULE 80 PVC SLEEVE, 16-INCH	LF	30	$		$	

BASE BID TOTAL $ _____

ALTERNATE BID

	ALTERNATE BID ITEMS SHALL BE USED IN PLACE OF THE CORRESPONDING BASE BID ITEM						
1	PREFAB TRUSS BRIDGE WITH METAL DECK NO. 1	EACH	1	$		$	
2	PREFAB TRUSS BRIDGE WITH METAL DECK NO. 2	EACH	1	$		$	
3	PREFAB TRUSS BRIDGE WITH METAL DECK NO. 4	EACH	1	$		$	
4	PREFAB TRUSS BRIDGE WITH METAL DECK NO. 15	EACH	1	$		$	
5	PREFAB TRUSS BRIDGE WITH METAL DECK NO. 16	EACH	1	$		$	
6	PREFAB TRUSS BRIDGE WITH METAL DECK NO. 17	EACH	1	$		$	
7	PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 1	EACH	1	$		$	
8	PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 2	EACH	1	$		$	
9	PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 4	EACH	1	$		$	
10	PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 15	EACH	1	$		$	
11	PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 16	EACH	1	$		$	
12	PREFAB TRUSS BRIDGE WITH FRP PLANK DECK NO. 17	EACH	1	$		$	



LEGEND

- NEW CART PATH HMA
- NEW CART PATH PCC
- TREE PROTECTION
- P = PAVEMENT
- G = GROUND
- ME = MATCH EXISTING
- TW = TOP OF WALL
- BW = BOTTOM OF WALL

NOTES:

1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY, ENGINEER, OR OWNER.
2. TREE PROTECTION SHALL BE INSTALLED AS REQUIRED PER OWNER.

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CONSULTING ENGINEERS
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630.466.6700 / www.eeiweb.com

FOX VALLEY PARK DISTRICT
101 W. Illinois Avenue
Aurora, IL 60506

Bar = 1" When printed FULL size. Adjust stated scales to print size.

NO.	DATE	REVISIONS
1	2/10/25	REVISED PER ADDENDUM NO. 2

ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

NO. 1 GREEN BRIDGE GRADING, UTILITY, AND EROSION CONTROL PLAN

DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302-GRADE
SHEET **C16** OF **C30**

Plotted: February 10, 2025 @ 8:49 PM By: Curt Dettmann — Tab: 16 Grade — 22x34

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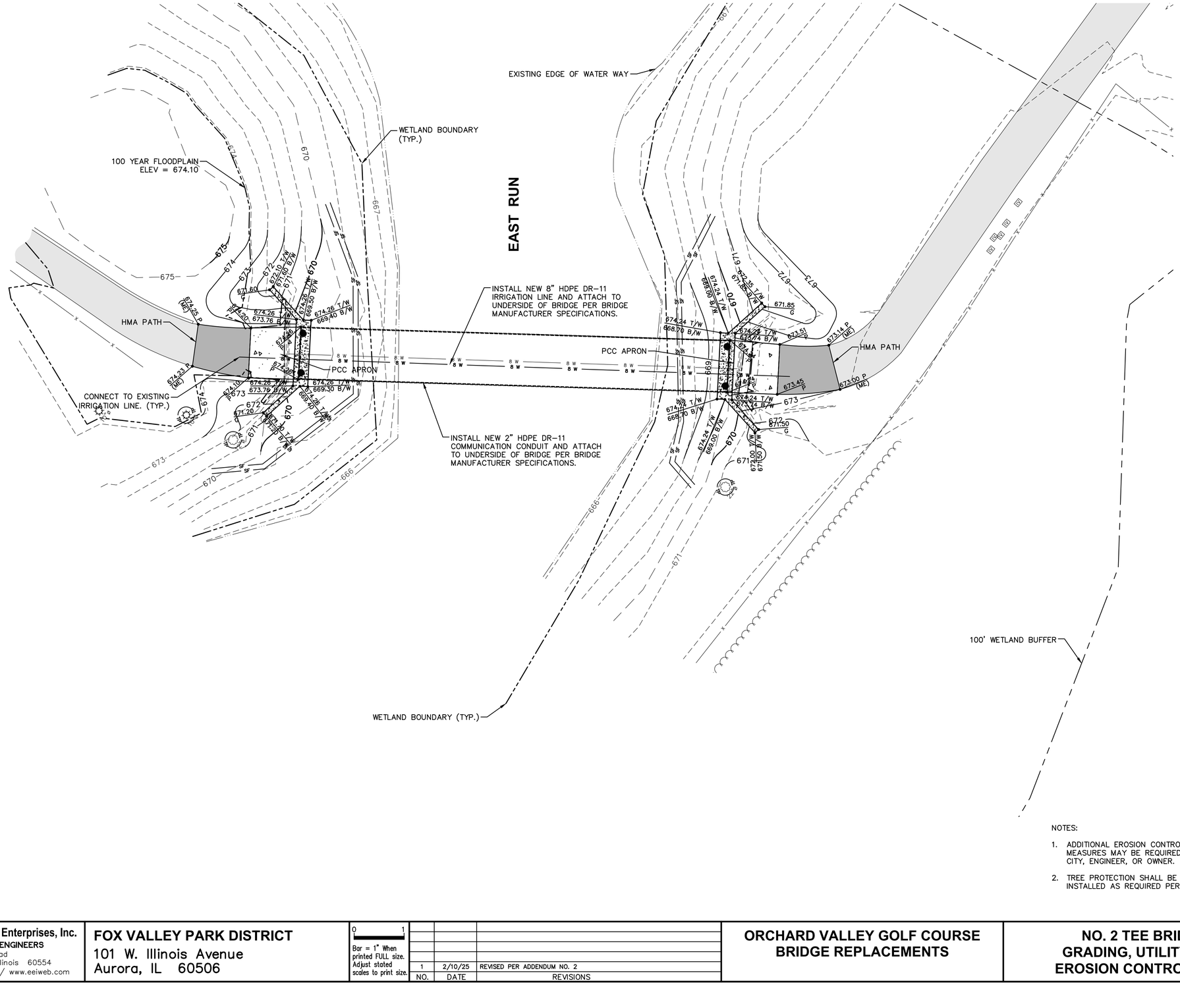

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ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

NO. 2 TEE BRIDGE GRADING, UTILITY, AND EROSION CONTROL PLAN

DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302-GRADE
SHEET C17 OF C30

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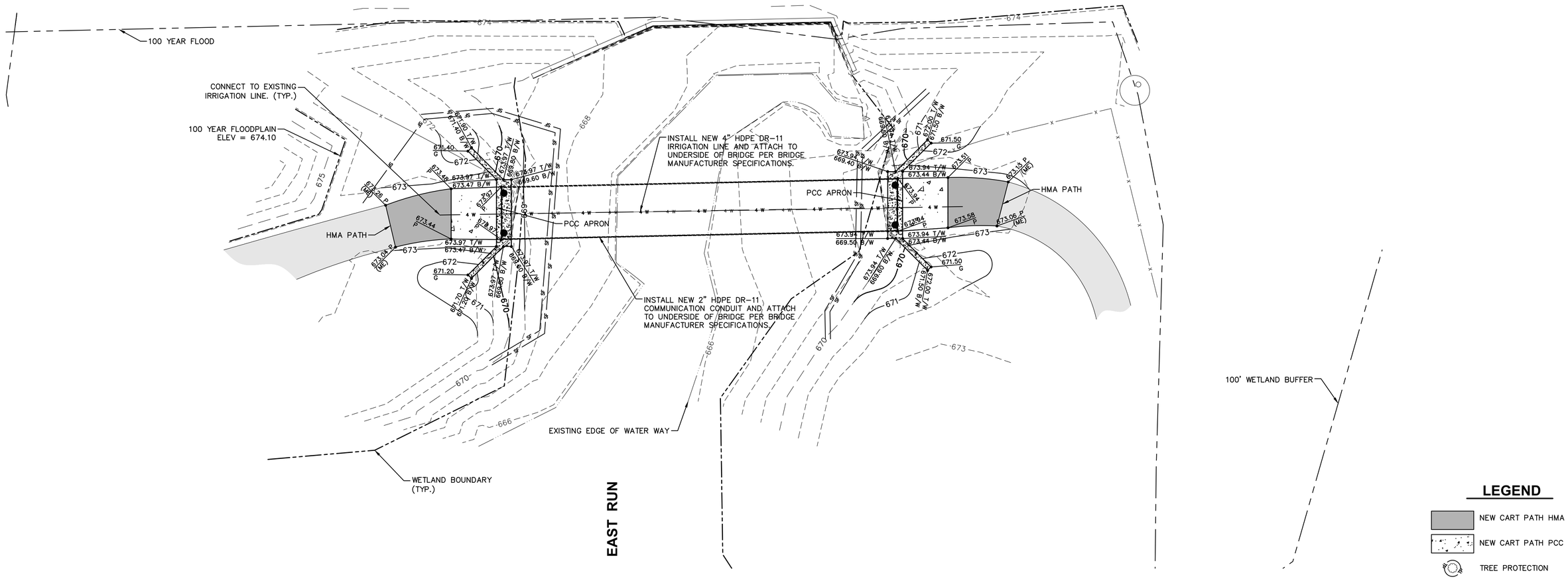

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ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

NO. 4 TEE BRIDGE GRADING, UTILITY, AND EROSION CONTROL PLAN

DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302-GRADE
SHEET C18 OF C30

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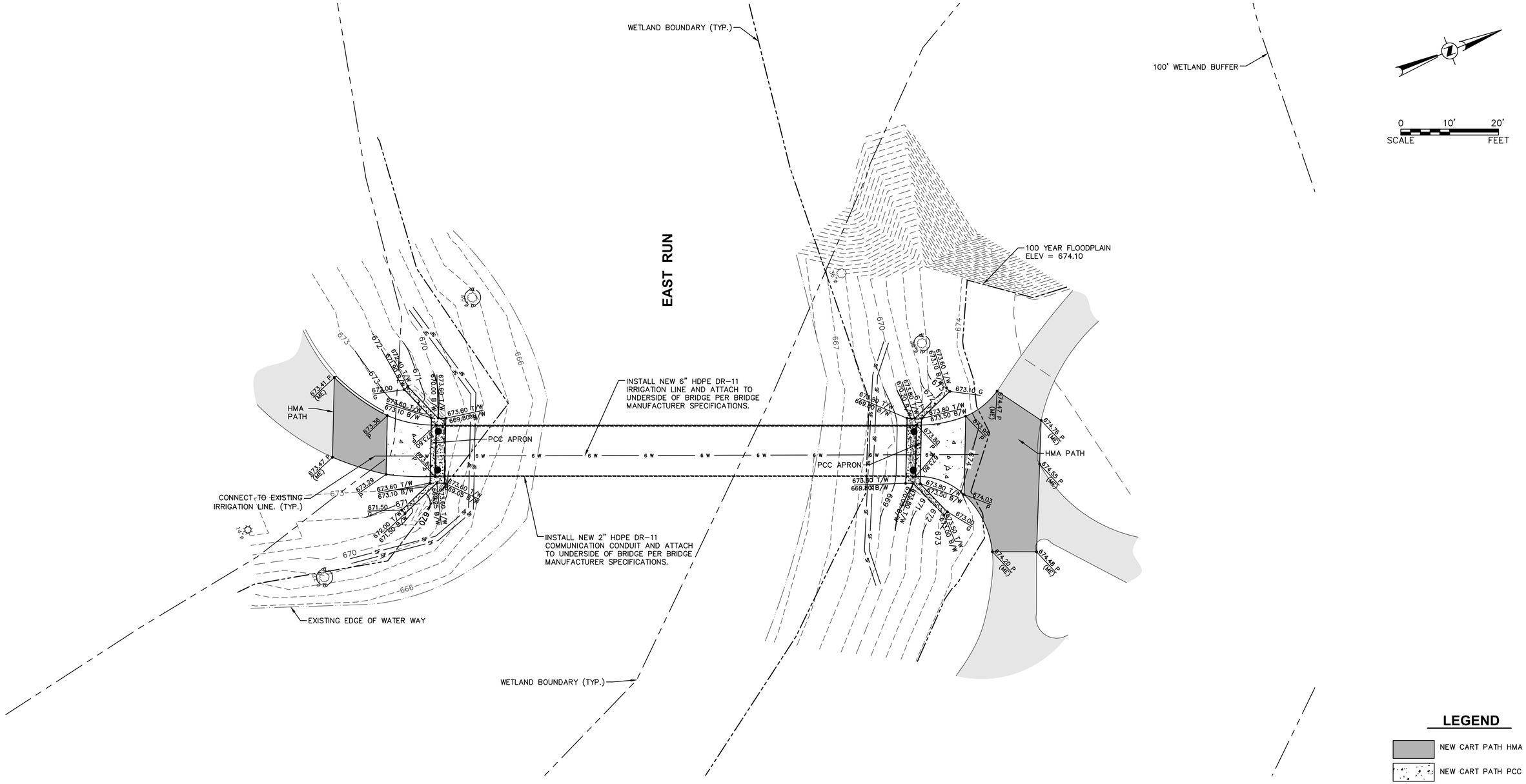

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ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

NO. 15 GREEN BRIDGE GRADING, UTILITY, AND EROSION CONTROL PLAN

DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302-GRADE
SHEET **C19** OF **C30**

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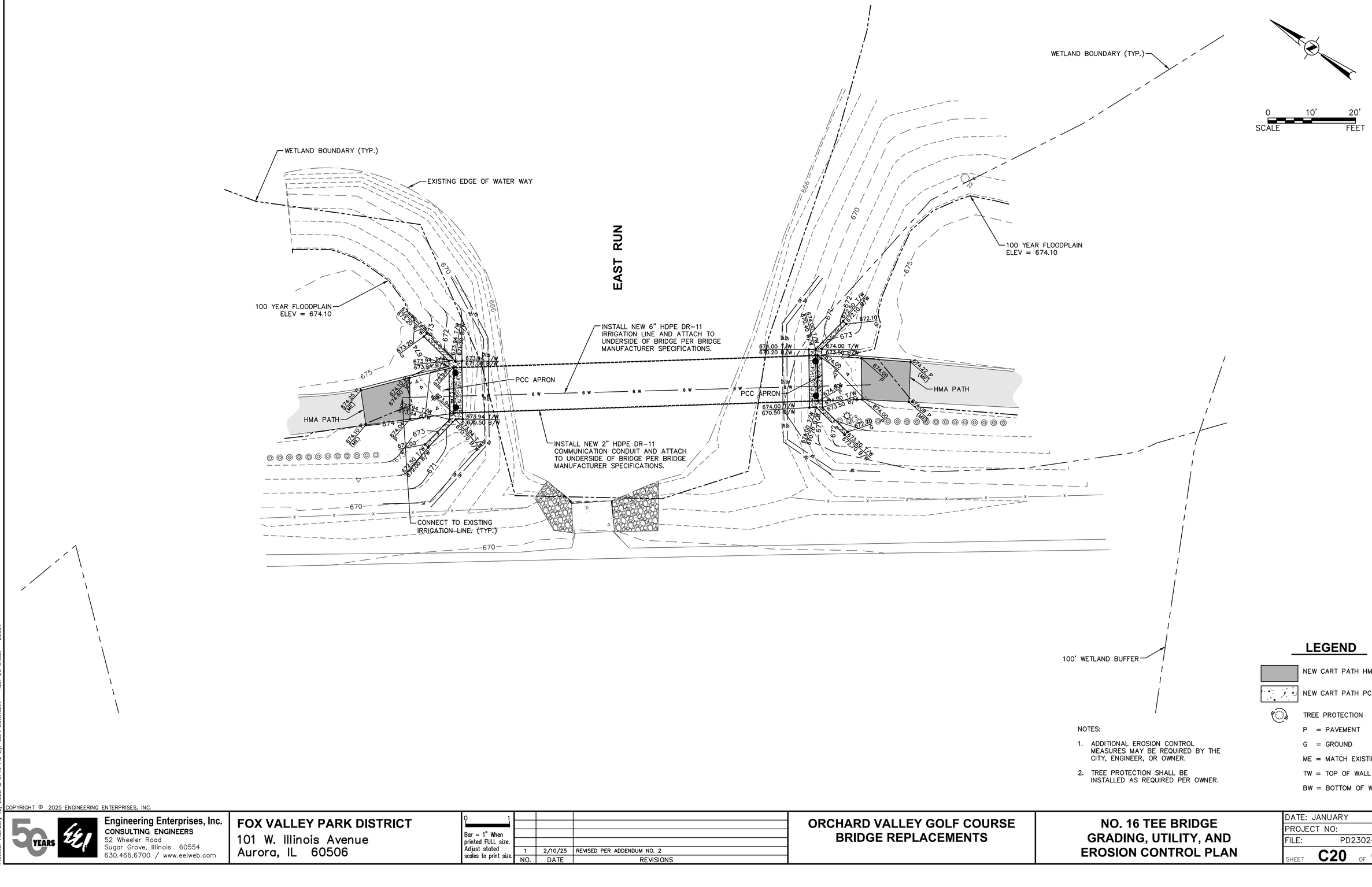

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ORCHARD VALLEY GOLF COURSE
BRIDGE REPLACEMENTS

NO. 16 TEE BRIDGE
GRADING, UTILITY, AND
EROSION CONTROL PLAN

DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302-GRADE
SHEET **C20** OF **C30**

Plotted: February 10, 2025 @ 8:49 PM By: Curt Dettmann - Tab: 20 Grade - 22x34

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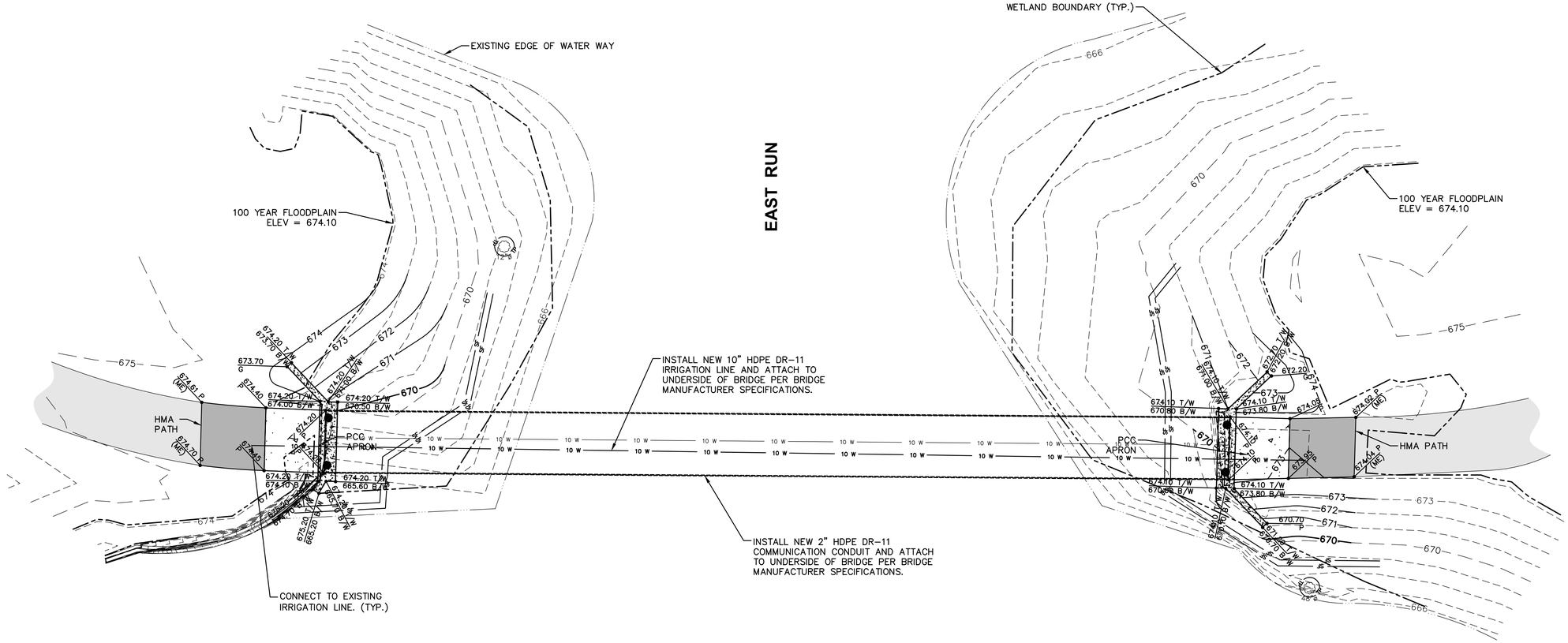

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ORCHARD VALLEY GOLF COURSE
BRIDGE REPLACEMENTS

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

DATE: JANUARY 2025
PROJECT NO: PD2302
FILE: PD2302-GRADE
SHEET C21 OF C30

Plotted: February 10, 2025 @ 8:50 PM By: Curt Dettmann - Tab: 21 Grade - 22x34

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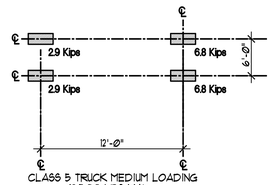
GENERAL STRUCTURAL NOTES:

LOADING SCHEDULE:

BRIDGE DECK LOADS:

DEAD	10 PSF (BEAMS/MISC.)
DEAD	15 PSF (DECKING SYSTEM)
DEAD	5 PSF (IRRIGATION/ELEC' LINES)
LIVE	+/- 100 PSF (EQUIVALENT MEDIUM LOADING)
LIVE	5,800 LB'S (FRONT AXLE - CLASS 5 TRUCK)
	13,600 LB'S (REAR AXLE - CLASS 5 TRUCK)



CLASS 5 TRUCK MEDIUM LOADING
19,500 LBS MAX

WIND LOAD: (115 MPH(ULT.) 90 MPH(NOMINAL), EXP' C)

WIND 20 PSF (MAIN LATERAL SYSTEM)

APPLICABLE CODES AND STANDARDS:

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:

1. 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:

1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301).
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:

	CLASS PER IDOT	F'c PSI @ 28 DAYS	MAX. W/C RATIO	MAX. SLUMP INCHES	TOTAL AIR CONTENT
CONCRETE WALLS	S1	4,000	0.50	4-6	N.A.
CONCRETE PADS	B6	4,000	0.55	5-7	3%
PILE CONCRETE	D5	4,000	0.40	6-8	5-8%
EXTR'R CONC. SLAB	B6	4,500	0.45	4	7%
ALL OTHER N.S. GROUT	N.A.	4,000 N.A.	0.45	4 8	5% N.A.

2

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.
5. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. 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
7. 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	3"
BOTTOM OF FOOTINGS	3"
SURFACES FORMED	2"
ALL OTHER SURFACES	2"

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

SLABS (BOTTOM)	¾"
SLABS (TOP)	1"
WALLS (INTERIOR SURFACE)	1"
ALL OTHER SURFACES	1½"

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 MUST BE MINIMUM #5.
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 CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. PROVIDE CONTINUOUS #4 SPACER BARS IN WALLS AND SLABS TO SUPPORT DOWELS.
11. 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:

1. 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 95%

   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 A36, Fy = 36 KSI UNLESS NOTED OTHERWISE. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B, Fy = 46 KSI. STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S. WIDE FLANGE SECTIONS SHALL CONFORM TO ASTM A992, Fy = 50 KSI. ALL COR-TEN ATMOSPHERE CORROSION RESISTANT STEEL SHALL CONFORM TO ASTM A588/A847.

   •• STEEL TO BE HOT-DIPPED GALVANIZED/PAINTED(ASTM A123 BOLTS + HARDWARE ZINC COATED/GALVANIZED(ASTM A153)

2

2. STRUCTURAL STEEL DETAIL, FABRICATION, AND ERECTION SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION" UNLESS OTHERWISE NOTED.
3. WELDING ELECTRODES SHALL CONFORM TO ASTM 233 CLASS E70 SERIES AWS D1.1-91
4. BOLTS SHALL BE ¾" ø, 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 ¼" FILLET WELDS MINIMUM OR UNLESS OTHERWISE REQ'D.
7. BURNING OF HOLES AND CUTS IN STRUCTURAL STEEL IN THE FIELD SHALL NOT BE PERMITTED, EXCEPT BY WRITTEN PERMISSION FROM THE BRIDGE DESIGN 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. 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.
11. AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED SOIL, AND MUD. ERECTION TOLERANCES SHALL COMPLY WITH AISC AND ASTM REQUIREMENTS.

GENERAL NOTES:

1. 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 = +111.18')
2. ALL WORK SHALL CONFORM TO THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS.
3. 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.
5. NO WORK SHALL BE PERFORMED PRIOR TO SHOP DRAWING REVIEW.
6. UNLESS NOTED OTHERWISE, ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE.
7. 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.
8. 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" ø 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 TEST PILE.
   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 GROUP.
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. PILES SHALL BE DRIVEN TO BEDROCK LAYER LOCATED ø 40' BELOW GRADE(+/-).
9. NOT USED.
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 CRITERIA.
11. THE TESTING AGENCY SHALL RECORD RESULTS OF ALL PILES DRIVEN, GIVING PILE HAMMER USED, PILE SIZE, LENGTH AND DRIVING RESISTANCE 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 PILE DESIGN TABLE

STEEL Fy=36 KSI (MS16" x 0.312 WALL) IDOT SECT'N S12.PILING (2022 STND'S)

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)
#1 GREEN BRIDGE	38'	-27' (BELOW GRADE)	110 KIPS/PILE	2 PRODUCTION 2 TEST PILES
#1 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
#5 GREEN BRIDGE	25'	-28' (BELOW GRADE)	110 KIPS/PILE	2 PRODUCTION 2 TEST PILES
#6 TEE BRIDGE	18'	-20' (BELOW GRADE)	100 KIPS/PILE	2 PRODUCTION 2 TEST PILES
#7 GREEN BRIDGE	28'	-30' (BELOW GRADE)	135 KIPS/PILE	2 PRODUCTION 2 TEST PILES

ALTERNATE PILE SYSTEM:

ALTERNATE TO USE OF TEST PILES, USE OF 40' DEEP PILES AT ALL PIER LOCATIONS CAN BE USED. PILES WILL BE DRIVEN TO REFUSAL ESTIMATED AT BETWEEN -38' TO -40' BELOW EXISTING GRADE.

2

SEAL:

EXPIRES: 11-30-2026
SIGNED: 02-10-2025

RUNDE ENGINEERING, INC.
Structural Engineers
2116 W. GALENA #102 Tel. 630.966.0250
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FOX VALLEY PARK DISTRICT
101 W. Illinois Avenue
Aurora, Illinois 60506

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NO.	DATE	REVISIONS
2	02/10/2025	ADDENDUM #2 BIDS

ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

GENERAL STRUCTURAL LOADS AND NOTES

DATE:
PROJECT NO:
FILENAME - ORCHARD S2 LOADING & NOTES
SHEET S2 OF 13

Plotted: February 10, 2025 @ 6:09 PM By: Don Runde - Tab: S2 22x34 TB

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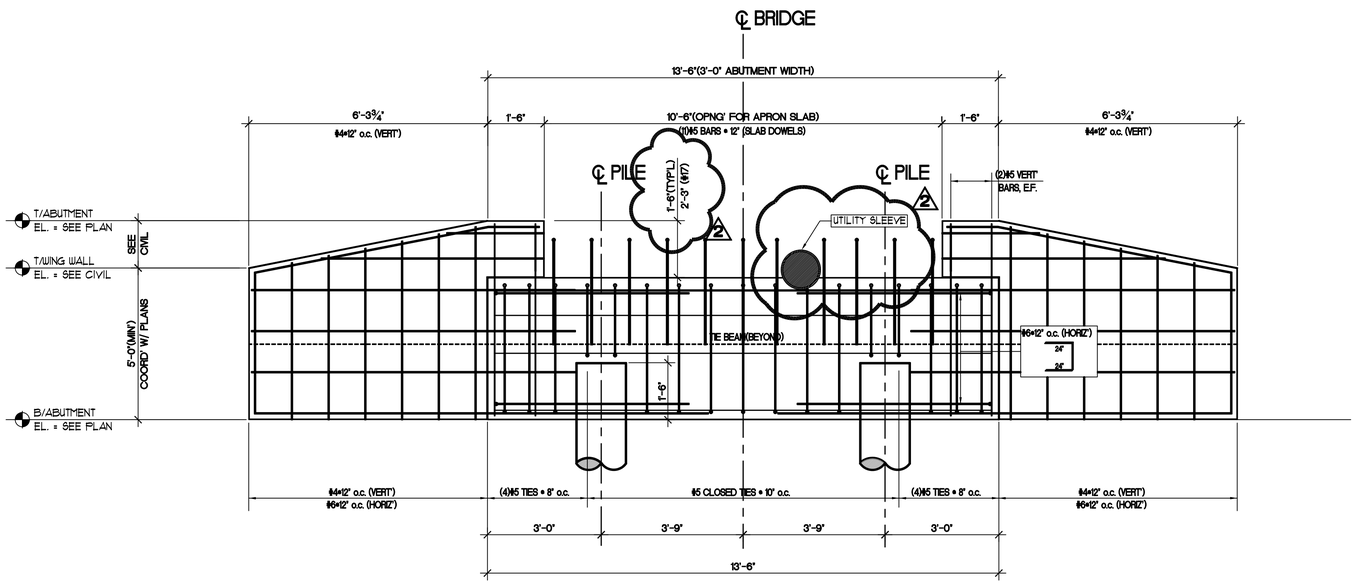
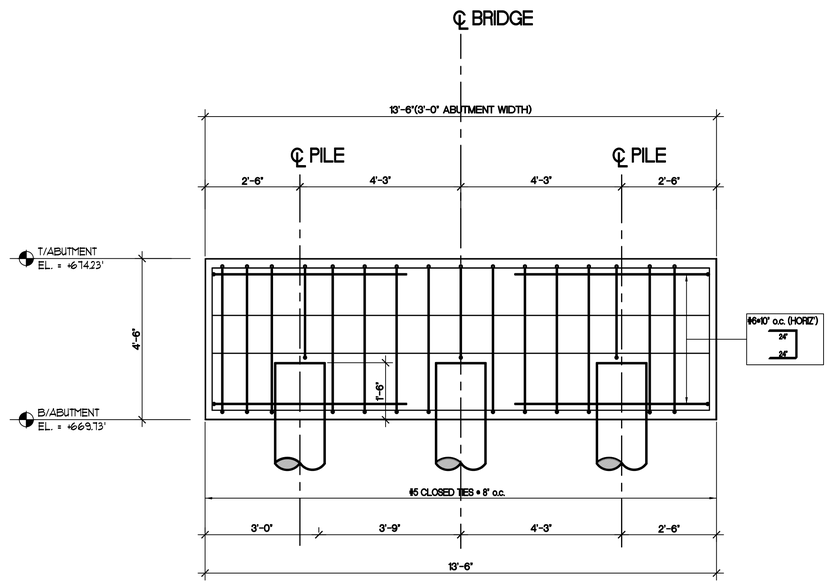


ABUTMENT ELEVATION



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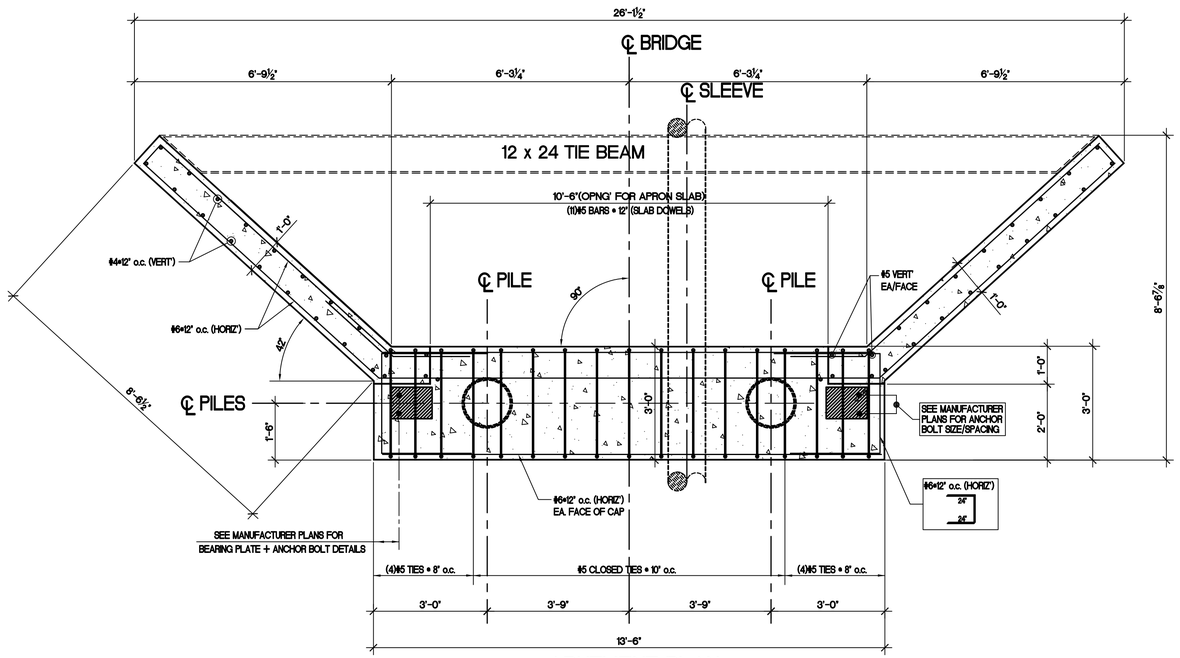
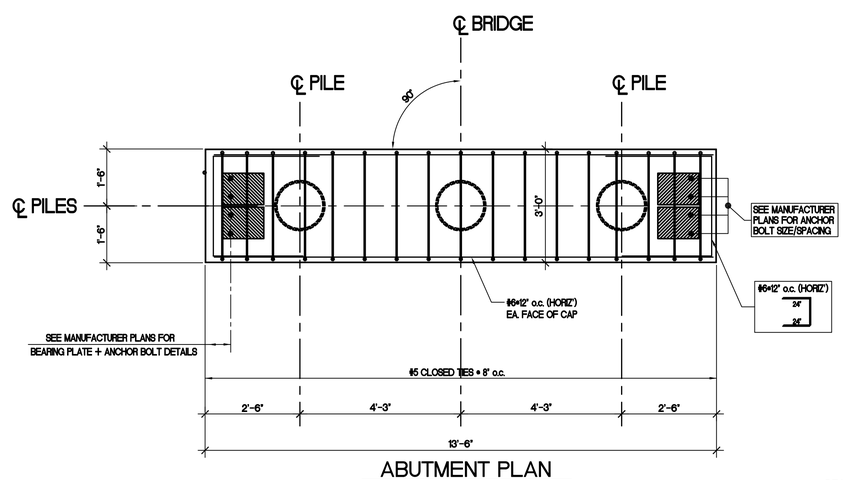


ABUTMENT PLAN

1 TYPICAL ABUTMENT GEOMETRY & REINFORCEMENT

1/2"=1'-0"



ABUTMENT PLAN

2 #1 GREEN BRIDGE PIER CAP GEOMETRY & REINFORCEMENT

1/2"=1'-0"

SEAL:

DANIEL E. RUNDE 081-005534 STATE OF ILLINOIS PROFESSIONAL ENGINEER

EXPIRES: 11-30-2026
SIGNED: 02-10-2025

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FOX VALLEY PARK DISTRICT
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Aurora, Illinois 60506

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NO.	DATE	REVISIONS
2	02/10/2025	ADDENDUM #2 BIDS

ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

BRIDGE ABUTMENT ELEVATION & GEOMETRY PLAN

DATE:
PROJECT NO:
FVRD1L-ORCHARD S10 CONC' ABUTMENT PLAN
SHEET **S10** OF 13

RUNDE ENGINEERING, INC.
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2116 W. GALENA #102 Tel. 630.966.0250
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Professional Design Firm #184-004461

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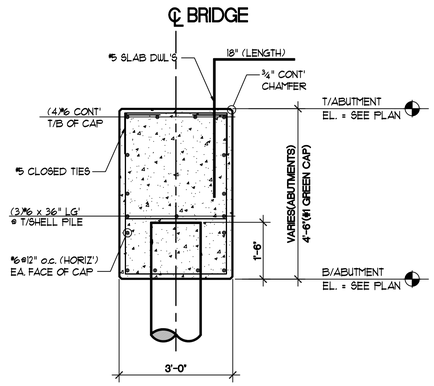
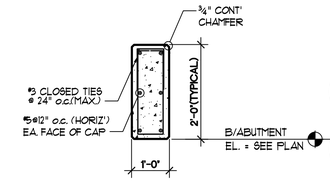
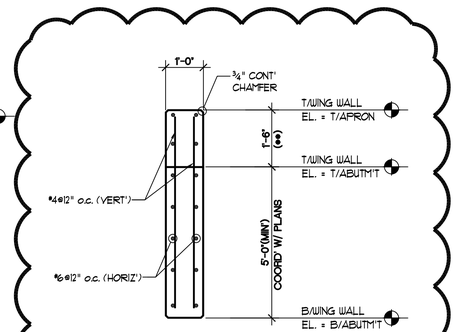


(A)ABUTMENT



(C)TIE-BEAM



(B)WINGWALL

2 SECTIONS THRU ABUTMENT AND WINGWALL
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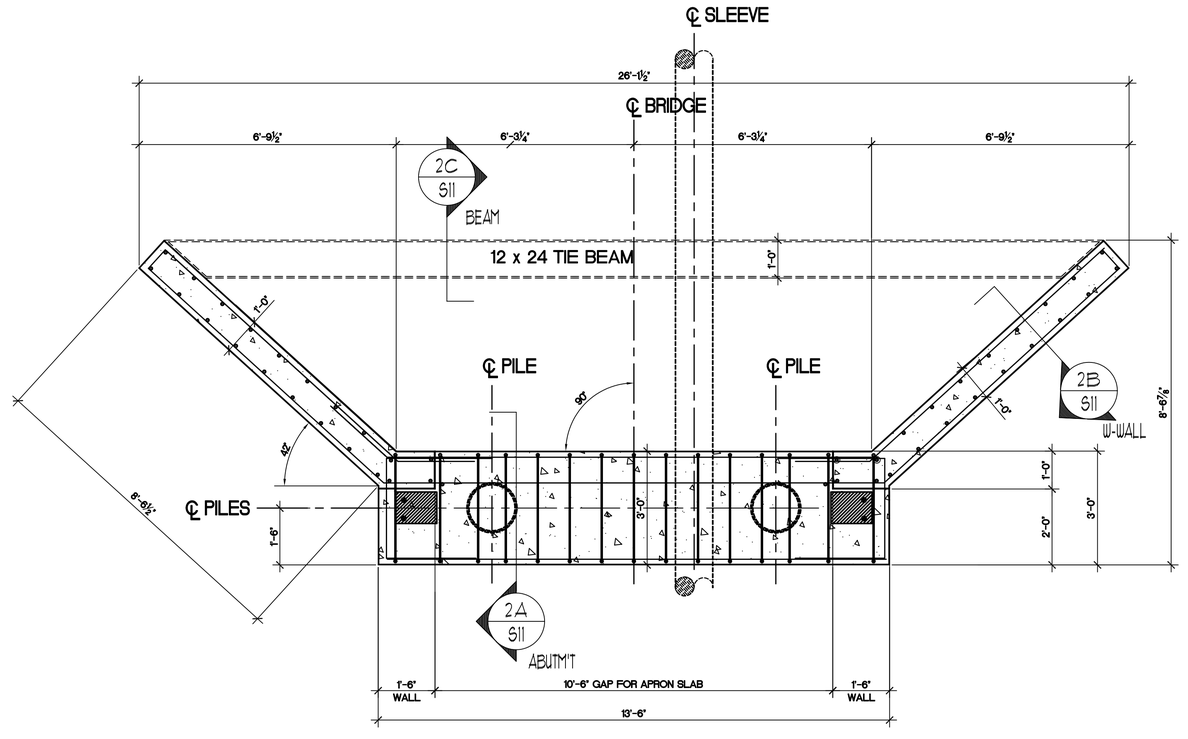

ABUTMENT PLAN

1 TYPICAL ABUTMENT GEOMETRY & WING WALL DIMENSIONS
1/2"=1'-0"

SEAL:
STATE OF ILLINOIS
DANIEL E. RUNDE
081-005534
LICENSED STRUCTURAL ENGINEER
EXPIRES: 11-30-2026
SIGNED: 02-10-2025

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Aurora, Illinois 60506

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NO.	DATE	REVISIONS
2	02/10/2025	ADDENDUM #2 BIDS

ORCHARD VALLEY GOLF COURSE
BRIDGE REPLACEMENTS

BRIDGE ABUTMENT SECTIONS AND DETAILS

DATE:
PROJECT NO:
FILE: ORCHARD S11 CONC' ABUTMENT DTL'S
SHEET 11 OF 13

Plotted: February 10, 2025 @ 6:32 PM By: Dan Runde – Tab: S11 22x34 TB

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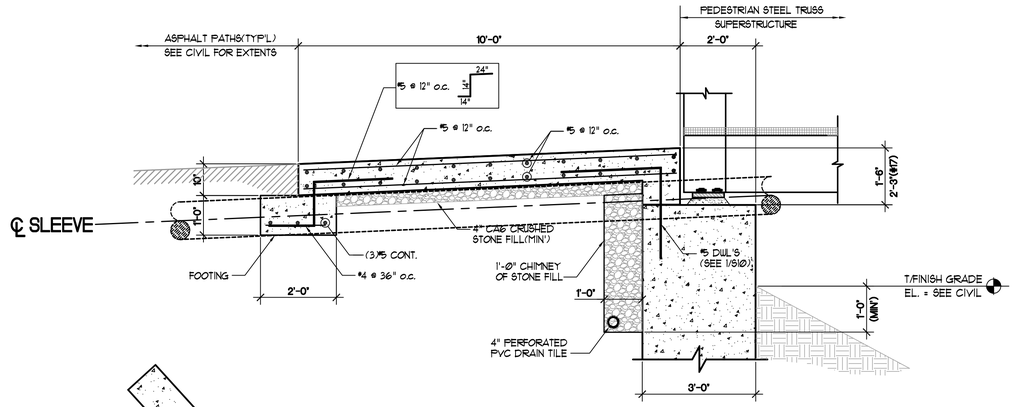
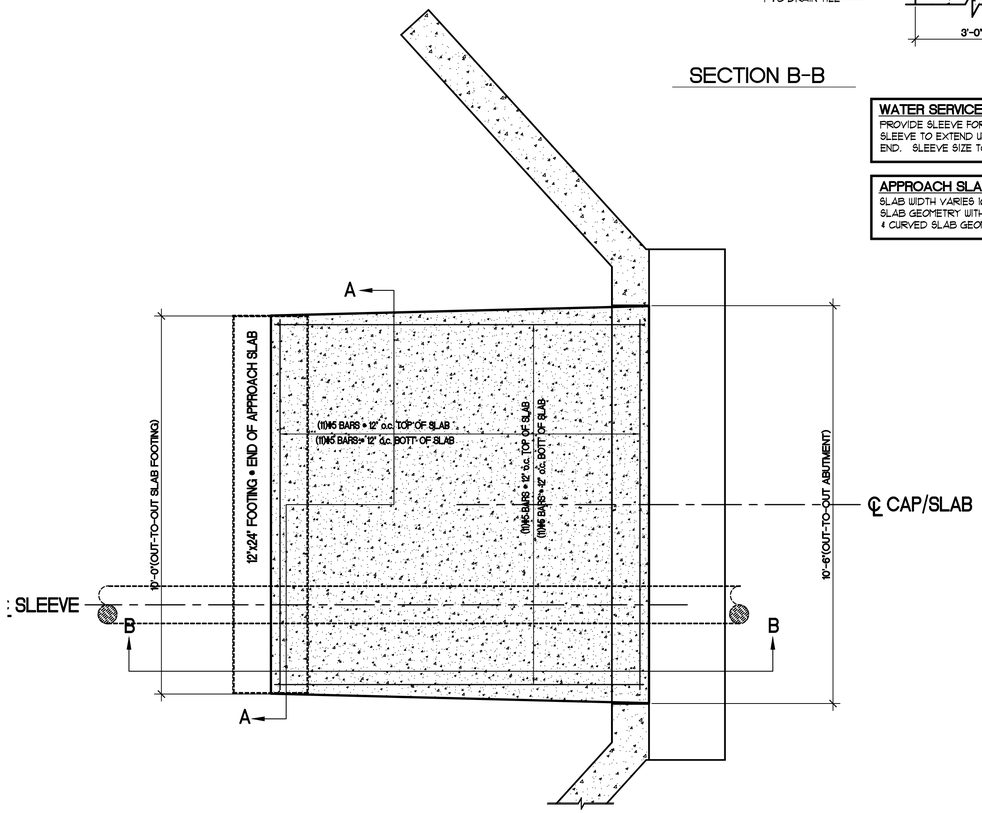


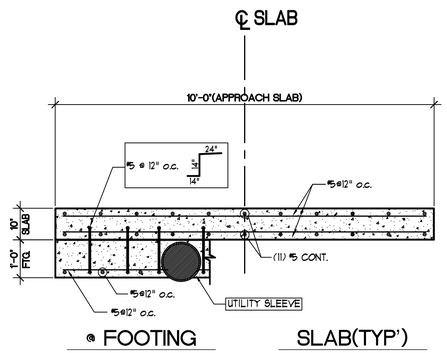
SECTION B-B

WATER SERVICE SLEEVE:
PROVIDE SLEEVE FOR WATER SERVICE AT ALL APPROACH ABUTMENTS. SLEEVE TO EXTEND UNDER ENTIRE APPROACH SLAB AND 30" PAST E.A. END. SLEEVE SIZE TO BE 4" LARGER THAN SERVICE PIPE(SEE TABLE)

APPROACH SLAB NOTE:
SLAB WIDTH VARIES 10'-0" @ WALK TO 10'-6" ABUTMENT. COORDINATE SLAB GEOMETRY WITH CIVIL DRAWINGS. SEE REQUIREMENT FOR CURB & CURVED SLAB GEOMETRY @ #4 TEE/#5 GREEN/#6 TEE BRIDGES(TYP').



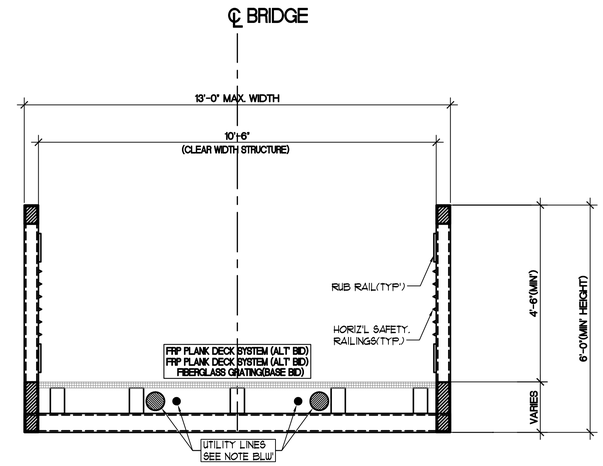
APPROACH SLAB PLAN



SECTION A-A

1 TYPICAL APPROACH SLAB GEOMETRY & REINFORCEMENT

1/2"=1'-0"



BRIDGE UTILITY NOTE:
BRIDGES TO SUPPORT WATER/COMMUNCTN (4"-#Ø"♦ WATER/2"♦ COMM'CT) LINES. PROVIDE ANCHORAGE OF UTILITIES TO UNDERSIDE OF THE BRIDGE STRUCTURE. METHOD OF ANCHORAGE TO BE APPROVED BY FOX VALLEY PARK DISTRICT AND CIVIL/STRUCTURAL ENGINEERS(**ANTICIPATE 2 LINES).

2 TYPICAL BRIDGE SECTION

1/2"=1'-0"

UTILITY/WATER LINES:

HOLE ♦	WATER SIZE	SLEEVE SIZE	COMM' SIZE
#1 GREEN	8" DIA.	12" DIA.	2" DIA.
#1 TEE	8" DIA.	12" DIA.	2" DIA.
#4 TEE	4" DIA.	8" DIA.	2" DIA.
#15 GREEN	6" DIA.	10" DIA.	2" DIA.
#16 TEE	6" DIA.	10" DIA.	2" DIA.
#17 GREEN	10" DIA.	16" DIA.	2" DIA.

WATER LINE = HDPE DR 11 MATERIAL

SEAL:
STATE OF ILLINOIS
DANIEL E. RUNDE
081-005534
PROFESSIONAL ENGINEER
EXPIRES: 11-30-2026
SIGNED: 02-10-2025

RUNDE ENGINEERING, INC.
Structural Engineers
2116 W. GALENA #102 Tel. 630.966.0250
Aurora Illinois 60506 Fax. 630.966.0255

50 YEARS
Engineering Enterprises, Inc.
CONSULTING ENGINEERS
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 / www.eeiweb.com

FOX VALLEY PARK DISTRICT
101 W. Illinois Avenue
Aurora, Illinois 60506

0 1
Bar = 1" When printed FULL size. Adjust stated scales to print size.

NO.	DATE	REVISIONS
2	02/10/2025	ADDENDUM #2 BIDS

ORCHARD VALLEY GOLF COURSE BRIDGE REPLACEMENTS

APPROACH SLAB SECTIONS AND DETAILS

DATE:
PROJECT NO.
FVPD - ORCHARD S12 CONC' APPROACH SLAB DTL'S
SHEET S12 OF 13
REV: 2

Plotted: February 10, 2025 @ 6:28 PM By: Dan Runde - Tab: S12 22x34 TB