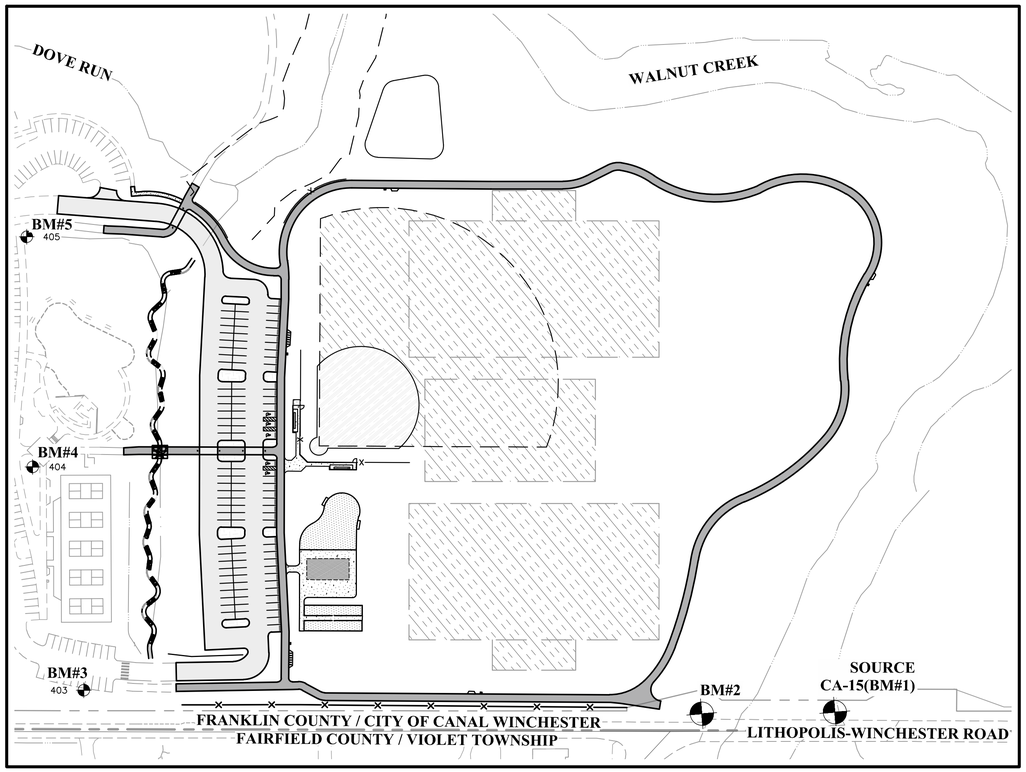
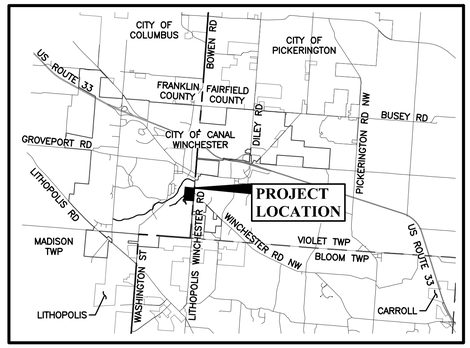
CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
McGILL PARK
PHASE 2B
2025



INDEX MAP
Scale: 1" = 100'

GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet



LOCATION MAP
Not to Scale

SHEET INDEX

Title Sheet	1
Schematic Plan	2
General Notes	3
Legend & Estimate Of Quantities	4
Existing Conditions & Demolition Plan	5
Site Layout	6–9
Grading Plan	10–17
Force Main Plan & Profile	18–19
Sanitary Sewer Plan & Profile	20
Storm Sewer Plan & Profile	21–26
Stream Restoration Plan	27–43
Lighting and Electrical Plan	44–46
Play Area Enlargement	47
Landscape Plan & Details	48–49
Site Details	50–54
Pedestrian Bridge Site Plan & Structure Details	55–56
Pump Station Details	57
Pavement Marking & Signage Plan	58
Sediment & Erosion Control Plan	59–61

BENCH MARKS
(NAVD 1988)

Source BM CA–15 (BM#1 B&B) Aluminum disk in the northwest corner of the north abutment of Lithopolis–Winchester Road bridge MAD 225–0.92 over Little Walnut Creek, 299 feet north of Winchester Road, 23.5 feet west of centerline.
Elev. = 762.414

BM#2 (B&B) Chiseled square at southeast corner of southwest abutment of bridge over Little Walnut Creek.
Elev. = 765.24 (EMH&T)

BM#3 Chiseled square on the west side of a concrete light pole base located on the east side of the parking lot east of the pickleball courts, being 95 feet east of the southeast corner of the pickleball courts.
Elev. = 764.49

BM#4 Chiseled "X" on the south flange bolt of a fire hydrant located on the northside of the parking lot south of the pickleball courts, being 35 feet south from the southwest corner of the pickleball courts.
Elev. = 766.11

BM#5 Chiseled "X" on the northeast rim of a sanitary manhole located on the north side of the pedestrian path, being 15 feet north from the most westerly parking lot of the pickleball court area.
Elev. = 763.12

STANDARD CONSTRUCTION DRAWINGS

The Standard Construction Drawings listed on these plans are to be considered a part thereof.

CITY OF CANAL WINCHESTER

RD–10A–01	SAN–01–01
RD–12–01	SAN–05–01
ST–03–01	SAN–07–01
ST–08–02	SAN–09–02
ST–01–01	R–1762

CITY OF COLUMBUS
AA–S168
AA–S169
2230

ODOT
BP–3.1
HL–20.11
HL–30.11
HL–60.11
RM–5.2

Notify OHIO811.org Before You Dig
Notify online using Remote Ticket Entry
To call dial 8-1-1 or 800-362-2764

PARKING SUMMARY

Parking Spaces Provided	=	108 Spaces
Accessible Parking Spaces Provided	=	5 Spaces
Total Parking Spaces Provided	=	113 Spaces

OWNER

City of Canal Winchester
45 E. Waterloo St.
Canal Winchester, OH 43110
Tel: (614) 834–5109

ENGINEER

EMH&T Inc.
Shane Spencer, P.E.
5500 New Albany Road
Columbus, Ohio 43054
Tel: (614) 778–5692
Email: sspencer@emht.com

MUNICIPALITY APPROVAL

The signatures below signify only concurrence with the general purpose and general location of the project. All technical details remain the responsibility of the design engineer preparing the plans.

FOR THE CITY OF CANAL WINCHESTER:

Mayor, City of Canal Winchester — Date

City Administrator — Date

Asst. Director of Public Service – Utilities — Date

Asst. Director of Public Service – Streets, Lands & Buildings — Date

Urban Forester — Date

City Officials
Joe Steager, Mayor
Matthew C. Peoples, City Administrator
Amanda Jackson, Finance Director
William E. Sims, Construction Services Director
Lucas M. Haire, Development Director

City Council Members
Will Bennett, President
Laurie Amick, Vice President
Jill Amos
Steve Buskirk
Alec McLaughlin
Richard Moore
Patrick Shea

PREPARED BY:

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648

STATE OF OHIO — SHANE J. SPENCER — E-71384 — REGISTERED PROFESSIONAL ENGINEER

Registered Engineer No. E-71384 — 9/15/25 Date

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
TITLE SHEET

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

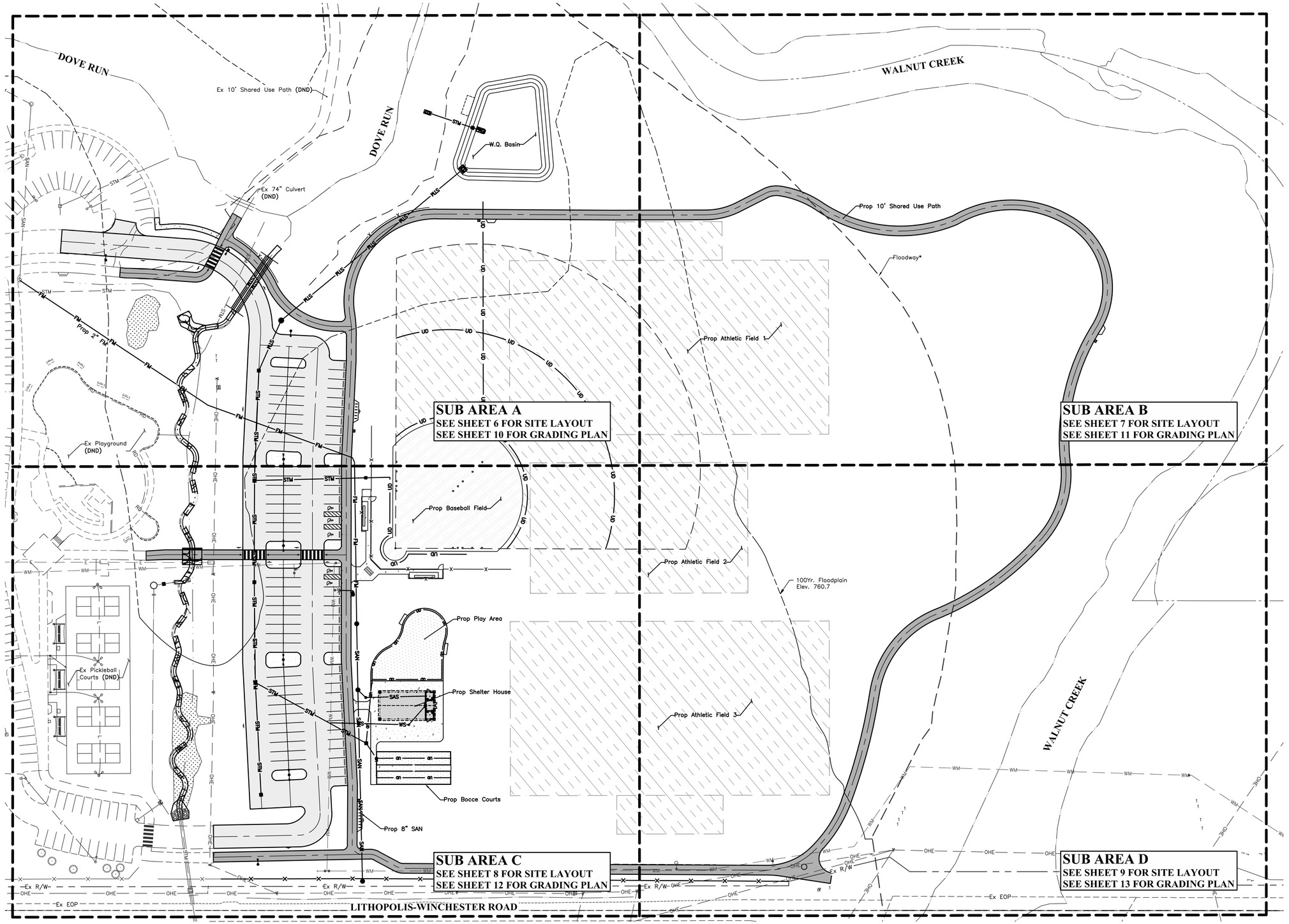
DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
1/61

J:\20241062\Dwg\04Sheets\SITE\TITLE.dwg, Last Saved By: hgreenlee, 9/15/2025 1:02 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:06 PM
5 Xrefs: 50Scale-ViewportLimits, 20241062-CS-REFR-E, 20241062-CS-REFR-N, FairfieldIndex, FranklinIndex



GRAPHIC SCALE

0 25 50 100

1 inch = 50 feet

NOTES:

* Floodway Activities: Construction activities within the regulatory floodway shall be restricted as follows:

– No stockpiling of earth or any construction materials.

– Construction equipment shall not be left in the floodway during non working hours.

– Construction of the shared use path within the floodway shall be done at–grade. No net fills shall occur in the floodway.

– The floodway shall be delineated though the use of sediment fence and/or construction fence to avoid accidental impacts within this area. Barrier may be removed to facilitate shared use path construction but shall be re–erected during non working hours.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
SCHEMATIC PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
1" = 50'

JOB NO.
20241062

SHEET
2/61

J:\20241062\Dwg\04Sheets\SITE\SCHEM–PLAN.dwg, Last Saved By: abanks, 9/9/2025 2:15 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:07 PM
> Xrefs: 20241062–PS–BEFR.dwt, 20241062–PS–BEFR–N
> Xrefs: 20241062–PS–BEFR.dwt, 20241062–PS–BEFR–E

GENERAL NOTES

STANDARDS
The Canal Winchester requirements, together with the latest edition of the City of Columbus Construction and Material Specifications (2018 CMSC) and ODOT specifications (2023 CMS), shall govern all construction items that are a part of the plans, unless otherwise noted. If there are any discrepancies, the Canal Winchester requirements shall govern.

CONSTRUCTION NOTICE
The contractor shall contact the municipal Construction Services Administrator, 614–834–5109, at least three working days prior to the commencement of any construction.

SAFETY
The contractor and subcontractor shall be solely responsible for complying with all federal, state and local safety requirements, together with exercising precautions at all times for the protection of persons (including employees) and property. It is also the sole responsibility of the contractor and subcontractor to initiate, maintain and supervise all safety requirements, precautions and programs in connection with the work.

MODIFICATIONS
Any modification to the specifications or changes to the work as shown on the drawings must have prior written approval of the Municipal Engineer and, when applicable, the Urban Forester.

PERMITS
The contractor shall obtain all necessary permits prior to construction.

EXISTING UTILITIES
Existing utilities shown are from best available records and field investigation, and are not necessarily complete or exact. The contractor is responsible for the investigation, location, support, protection and restoration of all existing utilities and appurtenances whether shown on these plans or not. The contractor shall expose all utilities or structures prior to construction to verify the vertical and horizontal effect on the proposed construction, and shall make adjustments in elevations as directed by the Municipal Engineer to provide sufficient clearance between the proposed and existing utilities. The contractor shall call the Ohio Utilities Protection Service OHIO 811 at 1–800–362–2764 three (3) working days prior to work in the vicinity of their underground lines.

The following utilities are located within the work limits of this project:

Breezeline Fiber Optic	(614) 948–4611
Canal Winchester Division of Water	(614) 737–5623
Canal Winchester Division of Water Reclamation	(614) 837–2254
Canal Winchester Division of Streets	(614) 834–5100
Canal Winchester Division of Urban Forestry	(614) 834–5110
Charter/Spectrum Communications	(740) 466–7357
Columbia Gas of Ohio	(614) 818–2104
MCI (Verizon)	(614) 593–6685
Northeast Ohio Natural Gas	(740) 862–3300
AT&T Ohio	(937) 296–3929
South Central Power	(740) 689–6150

SURVEY MARKINGS
Any property corner pins or permanent survey markings disturbed during construction shall be reset by a registered surveyor at the contractor's expense.

TRACKING OF MUD, DIRT, AND DEBRIS
The tracking of spillage of mud, dirt or debris upon municipal streets is prohibited and any such occurrence shall be cleaned up immediately by the contractor.

NON–RUBBER TIRED VEHICLES
No nonrubber tired vehicle shall be moved on municipal streets. Exceptions may be granted by an authorized municipal official where short distances and special circumstances are involved. Granting of exceptions must be in writing and any resulting damage must be repaired to the satisfaction of the municipality.

MAINTAINING MAIL SERVICE
The contractor shall be responsible for maintaining mail service in the construction area including any temporary mailboxes.

ADDITIONAL COMPENSATION
All items of work called for on the plans for which no specific method of payment is provided shall be performed by the contractor and the cost of same shall be included in the price bid for the various related items.

TREE PROTECTION
The contractor shall exercise extreme caution when excavating in the vicinity of existing trees, taking all measures possible to protect and preserve them, except where noted for removal on the plan. The contractor shall be governed by the provisions of Chapter 1191 of the Canal Winchester Zoning Code.

FIELD TILES
All field tiles broken during excavation shall be replaced to its original condition or connected to the storm sewer system as directed by the Municipal Engineer.

PROPERTY ACCESS
Access to all adjoining properties shall be maintained at all times, unless otherwise shown on the drawings.

All site clearing shall be performed by the developer/contractor, at his expense, prior to construction of this project subject to compliance with Chapter 1191 of the Canal Winchester Zoning Code.

RESTORATION
All areas within the public right–of–way that are disturbed by this project shall be restored to the original or better condition per item CW 205, topsoil and CW 210, seeding, or other applicable specifications.

BACKFILL REQUIREMENTS AT UTILITY CROSSINGS
At all utility crossings, the backfill shall consist of compacted granular material in accordance with Canal Winchester Item 164 or C.C.M.S. Item 912 between the deeper and shallower pipe. Where proposed utilities or services cross proposed or existing pavement areas, backfill shall be compacted granular material in accordance with Canal Winchester Item 164 or C.C.M.S. Item 912 extending at least three (3) feet beyond the back of curb or edge of pavement and at a 1:1 line of influence from this point and compacted to a min. of 98% max. density. C.C.M.S. item 613 LSM may be substituted. The cost is to be included in the price bid for related pipe.

EXCESS EXCAVATION
In the event excavation for the paved areas is from zero (0) inches to twelve (12) inches below what is called for on the plans the contractor shall replace this excess excavated material as directed by the Municipality's Geotechnical Engineer.

EXISTING DRIVEWAY AND PAVEMENT REPAIR
Where necessary to disturb existing pavement or drives, the pavement shall be saw cut in neat, straight lines. The depth of saw cut shall be the full depth of the pavement.

Any existing pavement removed for utility, sanitary sewer, storm sewer or waterline placement repair shall be backfilled with Controlled Density Fill (C.D.F.) reference C.C.M.S. 613 or Item 912.

CONTRACT WORK PERFORMED BY THE CITY
In the event that it becomes necessary, Canal Winchester shall perform work of an immediate nature required of the contractor by this contract because of the failure or refusal of the contractor to perform such work, the contractor shall reimburse Canal Winchester at the rate of 2.5 times the actual cost of labor, materials and equipment necessary to perform such work. Canal Winchester shall be required to notify or attempt to notify the designated representative of the contractor of the necessity to perform such work. In the event of an emergency, no notification is required. If the contractor refuses or fails, within a reasonable time, to perform or cause the performance of such work, Canal Winchester shall be reimbursed by the contractor in the amount provided herein. Reasonable time for all streets involved on this contract is one (1) hour from the time of notification by Canal Winchester.

Erosion control measures in accordance with the requirements of the Soil Conservation handbook Water Management and Sediment Control for Urbanizing Area are required. All sites shall comply with the OEPA general permit.

ADA COMPLIANCE
All sidewalks, and curb ramps, and curbs and gutters shall meet A.D.A (Americans with Disabilities Act) requirements, latest edition.

STANDARD DRAWINGS
The Canal Winchester Standard Drawings shall govern all work unless otherwise noted.

SANITARY SEWER NOTES

Roof drains, foundation drains and other clean water connections to the sanitary sewer system are prohibited on this project.

All sanitary sewers constructed under this plan shall meet the requirements of Canal Winchester. The Canal Winchester Standard Drawings shall govern all projects unless otherwise noted. The Canal Winchester supplemental specifications shall take precedence when applicable.

The construction of new sanitary sewers shall not begin without approval and current Ohio Environment Protection Agency Permit to Install (PTI).

PIPE MATERIAL
The minimum requirements for sanitary sewer pipe shall be PVC sewer pipe ASTM D–3034, SDR 35 and ASTM F–679.

The minimum requirements for sanitary sewer force main shall be 2" IPS HDPE SDR 9 and be in accordance with AWWA C901 as manufactured by JM Eagle or equal. The inside diameter of the pipe shall be approximately 1.815".

The contractor's specific attention is directed to the requirements of the leakage test. Tests shall be infiltration, ex–filtration or low pressure air test in accordance with the item for Testing of Pipe Lines and Sewers, Canal Winchester Item 1600.

SANITARY STRUCTURES
Manhole covers for sanitary sewers shall conform to standard drawings SAN–01–01 and SAN–09–02.

Manhole tops shall be built or subsequently adjusted to meet surface grades established for the development. Cost of this work is to be included in the price bid for the various sewer items.

All new sanitary sewer manholes installed in the Canal Winchester Sanitary Sewer Systems shall be as follows:
a. Pre–cast concrete
b. Four (4) foot diameter, minimum
c. Installed with formed channels
d. Adjusting rings shall be LadTech HDPE or equal.

All new sanitary sewer manholes installed and existing sanitary manholes adjusted to grade shall be constructed with chimney seals in accordance with Canal Winchester Supplemental Specifications and Standard Drawing SAN–01–01.

TRENCH WIDTH
The maximum trench width shall not be greater than the outside diameter of the pipe plus two (2) feet.

All sanitary sewers shall be recorded in DVD format after construction prior to acceptance of the sewers by Canal Winchester. The DVD shall remain the property of Canal Winchester. The DVD shall clearly identify the location of the camera within the sewer, date, and time of the DVD, and be of sufficient quality to determine the condition of the sanitary sewers. An additional DVD taping shall be performed just prior to the expiration of the one (1) year guarantee.

The maximum velocity in any new sanitary sewer shall not exceed ten feet per second (10 fps).

Testing of lateral connections shall be adhered to.

SHOP DRAWINGS
The contractor shall submit to the Construction Services Administrator for review, digital copies of shop drawings for all materials, structures, gradation certifications,, and equipment before any of the said materials, structures, and equipment are ordered. The owner bears no responsibility to accept any of the above–mentioned items without a completed review of said shop drawings.

STORM SEWER NOTES

Roof drains, foundation drains and other clean water connections to the sanitary sewer system are prohibited on this project.

PIPE MATERIAL
The minimum requirement for storm drain pipe shall be: 12" through 36" HDPE N–12 or equal HDPE with smooth interior wall. Storm pipe larger than 36" shall meet the requirements of AASHTO M–294–S.

STORM STRUCTURES
Manhole tops shall be built or subsequently adjusted to meet surface grades established for the development. Cost of this work is to be included in the price bid for the various sewer items.

All new storm drain manholes installed in the Canal Winchester Storm Drain Systems shall be as follows:
a. Pre–cast concrete
b. Four (4) foot diameter, minimum
c. Installed with formed channels

All storm sewers constructed under this plan shall meet the requirements of Canal Winchester. The Canal Winchester Standard Drawings shall govern all projects unless otherwise noted. The Canal Winchester supplemental specifications shall take precedence when applicable.

Curb inlets, manholes and catch basins shall be channeled.

Frames and covers for storm sewer structures shall conform to standard drawings ST–01–01, ST–03–01, and ST–08–02.

Manhole and curb inlet frames shall be adjusted to final grade using HDPE adjusting rings by Ladtech, Inc. or equal.

All new and adjusted to grade manholes located in pavement shall have concrete collars. See Standard Drawing No. ST–01–01.

FLEXIBLE PIPE
All storm sewer lines installed using flexible pipe will be subject to deflection testing by pulling an approved mandrel equal in diameter to 95% of the pipe diameter through the pipe no less than thirty (30) days after the pipe is final backfilled.

The storm sewer will become active in real–time during construction. As such, bypass pumping may be necessary in order to complete mandrel testing.

TRENCH WIDTH
The maximum trench width shall not be greater than the outside diameter of the pipe plus two (2) feet.

SHOP DRAWINGS
The contractor shall submit to the Construction Services Administrator for review, shop drawings for all materials, structures, gradation certifications and equipment before any of the said materials, structures and equipment are ordered. The owner bears no responsibility to accept any of the above–mentioned items without a completed review of said shop drawings.

WATER LINE NOTES

All water service lines shall be sized by the design engineer and be HDPE 4710 ASTM–D3350, cell classification 445574E. ASTM D–2239 or D–2737 AWWA C–901 DR–9.

All waterline materials and installations shall be in accordance with the current rules and regulations of Canal Winchester. The Canal Winchester Standard Drawings shall govern all projects unless otherwise notes. The Canal Winchester supplemental specifications shall take precedence when applicable; however, in no case shall these standards be less than the minimum AWWA requirements.

All waterline bedding shall meet ASTM D–2321, Class 1–A (Angular, crushed open graded aggregate) (Standard Drawing W–07–02).

Fire hydrants provided shall confirm to specifications of Canal Winchester. Fire hydrants shall conform to AWWA C–502 and shall be American B84B or Mueller A–423 Super Centurian fire hydrants. The hydrants shall have six (6) inch mechanical joint inlet connection, a 5–1/4inch main valve opening, two 2–1/2inch hose nozzles, and one 4–inch pumper nozzle with coarse thread (4 per inch). All fire hydrants shall be equipped with a five (5) inch, straight, Stortz fitting on the steamer connection. All outlet nozzles shall have National Standards threads. Hydrants shall be self–draining. A drainage sump two (2) feet in diameter and two (2) feet deep shall be excavated below each hydrant and filled with coarse gravel or stone, compacted in place, under and around the shoe of the hydrant and to a level of six (6) inches above the waste opening. No drainage sump shall be connected to a sanitary sewer. The opening nut shall be pentagon, 1–1/2" point to flat. All fire hydrants shall be AWWA approved. A hydrant wrench shall be furnished with each fire (5) hydrants or less furnished. Hydrants shall be factory painted white with maroon caps and bonnet with the exception of private fire hydrants which shall be factory painted red. All hydrants shall receive a field coat of paint prior to acceptance.

A copper clad steel trace wire shall be installed with all water mains and services. Tracer wire for open cut installations shall be #14 AWG with 30 mil coating by Copperhead Industries or equal. Tracer Wire shall be #8 AWG with 45 mil coating by Copperhead Industries or equal for directional bore installations. Tracer wire materials and installation shall be per CW SS–W1 supplemental specifications for Waterline Trace Wire. All costs associated with tracer wire shall be included with the associated waterline pipe item.

The Contractor shall submit to the Construction Services Administrator for review, five copies of shop drawings for all materials, structures, gradation certifications, and equipment before any of the said materials, structures, and equipment are ordered. The owner bears no responsibility to accept any of the above–mentioned items without a completed review of said shop drawings.

Existing valves shall only be operated by the municipal water department. Requests to schedule a valve operation shall be made in writing to the Canal Winchester Water Department a minimum of 24 hrs in advance of the anticipated operation time. The Water Superintendent may authorize the contractor to operate an existing valve under special circumstances.

The normal working pressure in the waterlines shall not be less than 35psi.

Horizontal separation from the other utilities shall be a minimum of 3 ft. Vertical separation shall be a minimum of 1 ft. Any deviation from these dimensions requires written approval from the City.

Changes to the approved alignment must be approved by the City.

SUPPLEMENTAL NOTES

ITEM 630 GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN
ITEM 630 SIGN, FLAT SHEET, AS PER PLAN
Ground mounted supports shall be Type S per ODOT Standard Drawing TC–41.20.

All visible elements of the sign mounting systems, e.g. sign backing assemblies, support posts, stainless steel banding, back of all signs, etc., shall be painted similar to Federal Specification 595B Color #27040 (Black). Nuts and bolts need not be painted. Paint samples shall be submitted to Canal Winchester for review.

Painting shall be incidental to this item. Payment shall be as per Item 630.

ITEM 604 YARD DRAIN, AS PER PLAN
The proposed yard drain shall be a Nyoplast Drain Basin, or approved equal. Contractor shall follow all requirements for backfill, bury, and structure support as specified by the manufacturer.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
GENERAL NOTES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
3/61

J:\20241062\Dwg\04Sheets\SITE\v2 GENERAL NOTES.dwg, Last Saved By: dbanks, 9/9/2025 2:15 PM Last Printed By: Banks, Annalise, 9/15/2025 1:07 PM (No Xrefs)

ESTIMATE OF QUANTITIES

	Pavement, Site Utilities and Drainage		
201	Clearing and Grubbing	1	L.S.
202	Concrete Walk Removed	400	S.F.
202	Asphalt Path Removed	165	S.Y.
202	Asphalt Pavement Removed	190	S.Y.
203	Excavation and Embankment, As Per Plan	1	L.S.
204	Subgrade Compaction (Parking Lot & Drive)	6,120	S.Y.
207	Temporary Construction Fence	650	L.F.
207	Construction Seeding and Mulching	56,000	S.Y.
207	Inlet Protection	9	EA.
207	Linear Sediment Barrier	1,320	L.F.
207	18" Compost Filter Sock	1,330	L.F.
207	Stabilized Construction Entrance	1	EA.
207	Concrete Washout Area	1	EA.
207	Culvert By-Pass Pumping	1	L.S.
207	Temporary Sediment Basin, As Per Plan	1	L.S.
209	Linear Grading (Temporary Swale)	693	L.F.
304	Aggregate Base, T=8" (Parking Lot/Drive)	1,360	C.Y.
407	Tracklless Tack Coat, 0.1 Gal/SY (Parking Lot/Drive)	615	Gal
441	Asphalt Concrete Surface Course, Type 1, (448), PG 64-22, T=1.5" (Parking Lot/Drive)	260	C.Y.
441	Asphalt Concrete Intermediate Course, Type 1, (448), PG 64-22, T=1.5" (Parking Lot/Drive)	260	C.Y.
601	Rock Channel Protection Type C with Filter	5	C.Y.
604	Standard Catch Basin (per CW STD DWG ST-03-01)	6	EA.
604	Catch Basin (Basin Outlet Structure), As Per Plan	1	EA
604	Sanitary Sewer Manhole (4') (per CW STD DWG SAN-01-01)	2	EA.
604	Connect 2" Force Main to Existing Manhole, As Per Plan	1	EA.
604	Headwall (Dual 36" Pipe) (per CW STD DWG ST-07-01 Modified), As Per Plan	2	EA.
604	Headwall (15" Pipe) (per CW STD DWG ST-07-01)	1	EA.
604	Endwall (12" Pipe) (per COC STD DWG AA-S165)	1	EA.
604	Yard Drain, As Per Plan	1	EA.
605	4" Pipe Underdrains	785	L.F.
605	6" Pipe Underdrains	565	L.F.
605	8" Pipe Underdrains	235	L.F.
607	Fence, Misc. : Wood Fence (per ODOT STD DWG RM-5.2)	170	L.F.
608	Concrete Walk, (T=4") with 4" Aggregate Base, As Per Plan	5,665	S.F.
608	Asphalt Path with 6" Aggregate Base, As Per Plan	33,200	S.F.
623	Construction Layout Stakes	1	L.S.
624	Mobilization	1	L.S.
630	Ground Mounted Support, No. 3 Post, As Per Plan	160	L.F.
630	Sign, Flat Sheet, As Per Plan	100	S.F.
642	Handicap Symbol	5	EA.
642	Parking Lot Striping, Type 1 (Parking Lot)	2,230	L.F.
644	Crosswalk Striping, 24" White	75	L.F.
651	Topsoil Stockpiled	4,500	C.Y.
653*	Topsoil, Furnished and Placed	200	C.Y.
653	Placing Stockpiled Topsoil (t=3")	4,500	C.Y.
659	Seeding and Mulching	56,000	S.Y.
801	6" Ductile Iron Waterline Pipe and Fittings w/ 801.14 Backfill	25	L.F.
802	6" Valve and Appurtenances	1	Ea.
805	1" Water Tap	1	EA.
807	Water Valve Box Adjusted to Grade	9	Ea.
809	Fire Hydrant, Relocated	1	EA.
895/SS	Manufactured Water Quality Structure, As Per Plan	1	EA.
901	12" Storm Sewer Pipe, with Type I Bedding	575	L.F.
901	15" Storm Sewer Pipe, with Type I Bedding	460	L.F.
901	36" Storm Sewer Pipe, with Type I Bedding	135	L.F.
901	8" Sanitary Sewer Pipe, with Type 1 Bedding and Item 911 Backfill	267	L.F.
915	Clean-out	1	EA.
918	4 Inch Diameter Pipe, Sanitary Service Connection	80	L.F.
SPEC	Topsoil Augmentation	28,900	S.Y.
SPEC	1" Water Service	105	L.F.
SPEC	2" Sanitary Force Main with Tracer Wire, As Per Plan	565	L.F.
SPEC	Wooden Pedestrian Bridge, Complete, As Per Plan	1	L.S.
SPEC	Decorative Fence Complete, As Per Plan	590	L.F.
SPEC	Stone Mulch	40	C.Y.
SPEC	Packaged Pump Station, Complete As Per Plan	1	EA.
SPEC	Furnishings- 6' Benches	3	Ea.
SPEC	Furnishings- Bike Rack	12	Ea.
SPEC	Furnishings- Trash Receptacle	5	Ea.
SPEC	Removable Wood Bollard (Per CW STD DWG RD-10B-01)	6	Ea.
SPEC	Concrete Parking Blocks	39	EA.

ESTIMATE OF QUANTITIES

	Landscaping		
661	Thornless Honey Locust Tree (2" Cal.) (B&B), As Per Plan	22	Ea.
661	Tulip Poplar Tree (2" Cal.) (B&B), As Per Plan	5	Ea.
661	Mulching	4	C.Y.
	Baseball Fields		
SPEC	Baseball Field Fence (Backstop, Dugout and Foul line), Complete As Per Plan	1	L.S.
SPEC	Infield Mix	230	Ton
SPEC	Aluminum Bleachers	1	Ea.
SPEC	Dugout Shade Structure, Complete	2	Ea.
SPEC	Dugout Benches	2	Ea.
SPEC	Bases, Mound and Home Plate	1	L.S.
	Shelter, Playground and Furnishings		
SPEC	Restroom & Shelter, Pre-Engineered Building Package	1	L.S.
SPEC	Restroom & Shelter, Erection of Pre-Engineered Building	1	L.S.
SPEC	5" Reinforced Concrete Slab for Shelter House, As Per Plan	1568	SF
SPEC	Playground and Equipment, Complete As Per Plan	1	L.S.
SPEC	Bocce Court, Complete As Per Plan	2	Ea.
SPEC	Concrete Cornhole Board	4	Ea.
SPEC	Chess/Checker Table	2	Ea.
SPEC	Picnic Table	7	Ea.
SPEC	Furnishings- 8' Benches	2	Ea.
	Lighting/Electric		
625	Connection, Fused Pull Apart (HL-60.11)	24	EA
625	Connection, Unfused Pull Apart (HL-60.11)	8	EA
625	Connection, Unfused Permanent	6	EA
625	Pull Box, 725.08, 24" (HL-30.11)	2	EA
625	Light Pole, As Per Plan	8	EA
625	Light Pole Foundation, 24" x 6' Deep (HL-20.11)	8	EA
625	No. 2 AWG, 5000 Volt Distribution Cable (Power)	846	LF
625	No. 4 AWG, 600 Volt Distribution Cable (Lighting)	3291	LF
625	No. 8 AWG, 600 Volt Distribution Cable (Receptacles)	2997	LF
625	No. 10 AWG, Pole and Bracket Cable, 600 Volt (HL-60.11)	696	LF
625	No. 12 AWG, 600 Volt Distribution Cable (Control)	525	LF
625	No. 12 AWG, Pole and Bracket Cable, 600 Volt (HL-60.11)	696	LF
625	Conduit, 2", 725.051, As Per Plan	790	LF
625	Conduit, 3", 725.051, As Per Plan	234	LF
625	Conduit, 3", 725.051, Concrete Encased, As Per Plan	450	LF
625	Conduit, 4", 725.051, As Per Plan	245	LF
625	Luminaire, 112W LED, 240V, Tear Drop, As Per Plan	12	EA
625	Trench (HL-20.11)	1474	LF
625	Underground Warning/Marking Tape (HL-20.11)	1474	LF
625	Ground Rod (HL-60.11)	8	EA
625	Lighting, Misc.: Power Feed To Parking Lot Light Poles and Pump Station	1	LS
625	Power Service, As Per Plan	1	LS
	Stream Restoration		
201	Clearing and Grubbing, As Per Plan	1	LS
203	Embankment (From Stockpile), As Per Plan	84	CY
203	Excavation (To Stockpile), As Per Plan	84	CY
203	Excavation (To Haul Offsite), As Per Plan	1596	CY
601	Rock Channel Protection, Type A with Aggregate Filter, As Per Plan	86	CY
601	Rock Channel Protection, Type C with Aggregate Filter, As Per Plan	35	CY
604	Catch Basin (2'x2')	1	EA
604	Headwall (12" Pipe)	1	EA
607	Fence, Type Special, As Per Plan	210	LF
623	Construction Layout Stakes	1	LS
652	Placing Stockpiled Topsoil, As Per Plan	297	CY
653	Topsoil Furnished and Placed, As Per Plan	297	CY
659	Seeding and Mulching, Zones 2 and 3, As Per Plan	1943	SY
659	Repair Seeding	389	SY
661	Bare Root Shrubs, 18" Ht., As Per Plan	144	EA
661	Bare Root Trees, 18" Ht., As Per Plan	144	EA
661	Deciduous Shrub, No. 5 Cont., As Per Plan	72	EA
661	Deciduous Tree, No. 15 Cont., As Per Plan	36	EA
661	Willow Live Stake, 24" Ht., As Per Plan	356	EA
670	Slope Erosion Protection Mat, As Per Plan	1817	SY
901	12" Storm Sewer Pipe, with Type I Bedding	12	LF
SPEC	Boulder Toe, As Per Plan	33	CY
SPEC	Dewatering, As Per Plan	1	LS
SPEC	Grade Checking, As Per Plan	1	LS
SPEC	Invasive Treatment, As Per Plan	0.04	AC
SPEC	Record Drawing, As Per Plan	1	LS
SPEC	Rock Riffle, As Per Plan	106	CY
SPEC	Root Pruning, As Per Plan	1	LS
SPEC	Water Main Potholing, As Per Plan	1	LS

LEGEND - PROPOSED

WM	Proposed Water Main and Valve
	Proposed Fire Hydrant
WS	Proposed Water Service
SAN	Proposed Sanitary Sewer
	Proposed Manhole
SAS	Proposed Sanitary Service Lateral
FM	Proposed Force Main
STM	Proposed Storm Sewer
UD	Proposed Underdrain
	Proposed Manhole
	Proposed Catch Basin
	Proposed Yard Drain

LEGEND - EXISTING
(Not All Symbols Appear on Plans)

	Right-of-Way line
	Property Line
	Curb
	Edge of Pavement
	℄ Ditch or Stream
OHC	Overhead Telephone/Communication Line
C	Underground Communication Line
	Tele/Comm: Pole, Pull Box, Pedestal, Marker
	Tele/Comm Vault
E	Underground Electric Line
OHE	Overhead Electric Line
	Electric: Pole, Pull Box, Pedestal, Transformer
	Electric Manhole
OHE-OHC	Overhead Electric/Communication Line
	Utility Pole
FO	Underground Fiber Optic Line
FO	Fiber Optic: Pull Box, Manhole
	Lighting: Yard Light, Flood Light
LC	Lighting: Pole, Pull Box, Pedestal, Controller
GM	Natural Gas Line
GS	Natural Gas Service Line
	Natural Gas: Valve, Service Valve, Meter, Marker
SAN	Sanitary Sewer
SAS	Sanitary Service Line
	Sanitary: Manhole, Cleanout
STM	Storm Sewer
RD	Roof Drain
	Storm: Manhole, Curb Inlet, Manhole Curb Inlet, Catch Basin
S	Irrigation: Sprinkler
WM	Water Main
WS	Water Service Line
	Water: Fire Hydrant, Valve, Curb Box

LEGEND - ABBREVIATIONS

ASPH	=	ASPHALT
BOC	=	BACK OF CURB
BLDG	=	BUILDING
BM	=	BENCH MARK
CB	=	CATCH BASIN
C&G	=	CURB AND GUTTER
C&GI	=	CURB AND GUTTER INLET
CI	=	CURB INLET
℄	=	CENTER LINE
CMS	=	CONSTRUCTION AND MATERIAL SPECIFICATIONS
COC	=	CITY OF COLUMBUS
COMM	=	COMMUNICATION CABLE
CONC	=	CONCRETE
DEFL	=	DEFLECTION
DWG	=	DRAWING
EX	=	EXISTING
EOP	=	EDGE OF PAVEMENT
FH	=	FIRE HYDRANT
FO	=	FIBER OPTIC CABLE
FT	=	FEET/FOOT
FUT	=	FUTURE
GM	=	GAS MAIN
GS	=	GAS SERVICE
GV	=	GAS VALVE
INV	=	INVERT
LSMB	=	LOW STRENGTH MORTAR BACKFILL
MH	=	MANHOLE
OHE	=	OVERHEAD ELECTRIC
OHC	=	OVERHEAD COMMUNICATION
P	=	PROPERTY LINE
PROP	=	PROPOSED
PS	=	PUMP STATION
R/W	=	RIGHT-OF-WAY
SAN	=	SANITARY SEWER
SAS	=	SANITARY SERVICE
STD	=	STANDARD
SWLK	=	SIDEWALK
STM	=	STORM SEWER
TYP	=	TYPICAL
UGC	=	UNDERGROUND COMMUNICATION
UGE	=	UNDERGROUND ELECTRIC
UGL	=	UNDERGROUND LIGHTING
UNK	=	UNKNOWN
WM	=	WATER MAIN
WS	=	WATER SERVICE
WV	=	WATER VALVE
(DND)	=	DO NOT DISTURB
(PA)	=	PREVIOUSLY ABANDONED
(TBA)	=	TO BE ABANDONED
(TBR)	=	TO BE REMOVED AND DISPOSED OF
(TBRL)	=	TO BE RELOCATED
(TBRR)	=	TO BE REMOVED AND REPLACED

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
LEGEND & ESTIMATE OF QUANTITIES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

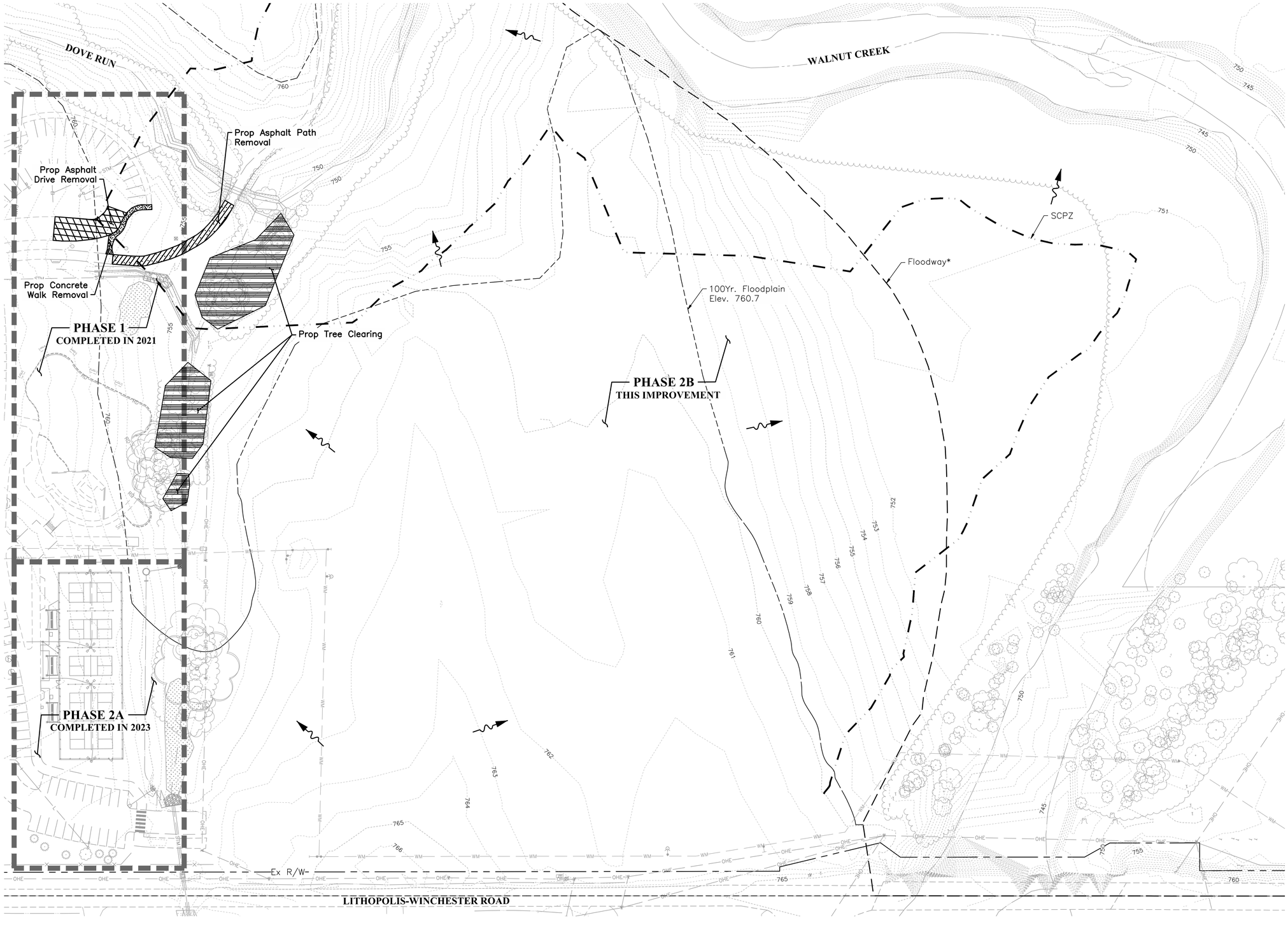
DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
4/61

J:\20241062\Dwg\04Sheets\SITE\44 LEGEND & ESTIMATE OF QUANTITIES.dwg, Last Saved By: abanks, 9/15/2025 12:30 PM Last Printed By: Banks, Annaliss, 9/15/2025 1:07 PM (No Xrefs)



GRAPHIC SCALE

0 25 50 100

1 inch = 50 feet

LEGEND - PROPOSED

	Tree Clearing Limits
	Asphalt Path Removal
	Asphalt Drive Removal
	Concrete Walk Removal

NOTES:

* Floodway Activities: Construction activities within the regulatory floodway shall be restricted as follows:

– No stockpiling of earth or any construction materials.

– Construction equipment shall not be left in the floodway during non–working hours.

– Construction of the shared use path within the floodway shall be done at–grade. No net fills shall occur in the floodway.

– The floodway shall be delineated though the use of sediment fence and/or construction fence to avoid accidental impacts within this area. Barrier may be removed to facilitate shared use path construction but shall be re–erected during non working hours.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
EXISTING CONDITIONS & DEMOLITION PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

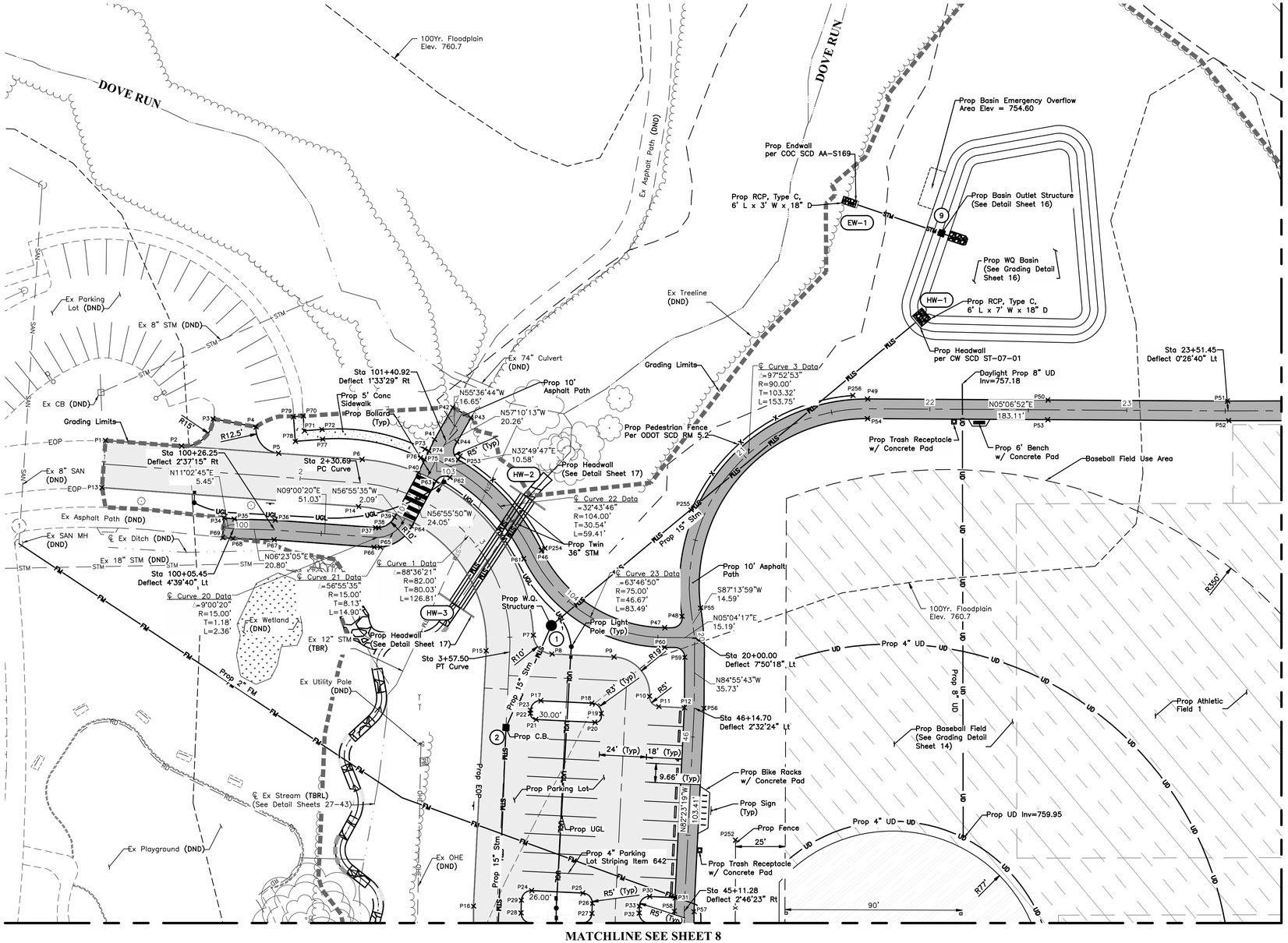
DATE
September 2025

SCALE
1" = 50'

JOB NO.
20241062

SHEET
5/61

J:\20241062\Dwg\04Sheets\SITE\EXISTING CONDITIONS.dwg, Last Saved By: abanks, 9/9/2025 2:16 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:07 PM
Xref: 20241062-ncs-BASE-E



LEGEND - PROPOSED

	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Full-Depth Asphalt Pavement
	Proposed Athletic Field Area
	Proposed Clay Infield
	Proposed Stone Mulch

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

STORM SEWER STRUCTURE COORDINATES

STRUCTURE #	NORTHING - PLAN	EASTING - PLAN	NORTHING - AS BUILT	EASTING - AS BUILT
1	668204.4208	1883131.3064		
2	668177.1832	1883180.9867		
9	668418.4996	1882949.2128		
EW-1	668377.0606	1882931.1668		
HW-1	668401.6968	1882993.2080		
HW-2	668197.7329	1883065.7646		
HW-3	668157.1481	1883117.1922		

PARKING LOT POINT TABLE

POINT NO.	NORTHING	EASTING
P1	667986.6320	1883018.7430
P2	668024.9115	1883024.8096
P3	668042.0746	1883012.3425
P4	668063.3390	1883018.2437
P5	668073.7283	1883032.5462
P6	668115.7086	1883039.1994
P7	668194.9343	1883135.4143
P8	668203.6034	1883145.6851
P9	668234.8143	1883149.8558
P10	668251.1303	1883171.2050
P11	668255.4240	1883176.8232
P12	668268.3094	1883178.5451
P13	667982.8753	1883042.4472
P14	668111.9519	1883062.9035
P15	668170.3782	1883141.3123
P16	668153.1827	1883269.9925
P17	668195.9526	1883168.8761
P18	668221.7235	1883172.3198
P19	668226.0172	1883177.9380
P20	668222.4264	1883182.1596
P21	668192.6907	1883178.1860
P22	668190.1145	1883174.8151
P23	668190.3344	1883173.1697
P24	668183.2792	1883264.6412
P25	668209.0472	1883268.0845
P26	668213.3554	1883273.5826
P27	668212.7930	1883278.7391
P28	668176.9475	1883275.4622
P29	668177.6464	1883269.0550
P30	668242.7505	1883272.5883
P31	668255.5146	1883274.2940
P32	668236.7337	1883280.5227
P33	668237.1177	1883277.0021

CONCRETE WALK POINT TABLE

POINT NO.	NORTHING	EASTING
P70	668087.7478	1883014.7261
P71	668087.6805	1883022.2402
P72	668096.6635	1883022.3207
P73	668147.9473	1883036.6057
P74	668149.8520	1883037.7329
P75	668147.3055	1883042.0358
P76	668145.4008	1883040.9086
P77	668096.6187	1883027.3205
P78	668082.6359	1883027.1951
P79	668082.7480	1883014.6813

FENCE POINT TABLE

POINT NO.	NORTHING	EASTING
P252	668288.5859	1883247.6438
P253	668165.5188	1883041.7209
P254	668204.5192	1883091.9943
P255	668280.1780	1883078.6878
P256	668366.7941	1883027.5984

SHARED USE PATH POINT TABLE

POINT NO.	NORTHING	EASTING
P34	668043.3950	1883062.9330
P35	668048.5425	1883063.9378
P36	668069.1237	1883066.2408
P37	668119.6327	1883074.2456
P38	668121.1979	1883074.3689
P39	668129.5777	1883069.8260
P40	668143.6214	1883048.2613
P41	668153.1660	1883032.1329
P42	668163.8490	1883016.6431
P43	668172.5393	1883022.7172
P44	668164.5518	1883034.3880
P45	668164.3563	1883043.3483
P46	668202.6539	1883092.7159
P47	668261.7517	1883137.1874
P48	668270.9295	1883132.1425
P49	668374.0978	1883029.9697
P50	668465.2878	1883038.1314
P51	668556.1226	1883046.2640
P52	668555.9416	1883056.2825
P53	668464.3964	1883048.0916
P54	668373.2064	1883039.9298
P55	668280.7280	1883128.6948
P56	668278.2507	1883179.6498
P57	668264.5550	1883282.1400
P58	668254.6111	1883281.0554
P59	668270.5738	1883153.0293
P60	668260.8678	1883147.1482
P61	668193.3274	1883096.3237
P62	668159.3570	1883052.0727
P63	668152.2195	1883053.3830
P64	668137.9574	1883075.2832
P65	668121.1979	1883084.3689
P66	668118.0674	1883084.1223
P67	668067.7843	1883076.1533
P68	668047.0260	1883073.8306
P69	668041.7834	1883072.8071

CURVE DATA PC & PT

Curve 1

	Station	Northing	Easting
PC	2+30.69	668113.83	1883051.05
PT	3+57.50	668182.27	1883142.90

Curve 3

	Station	Northing	Easting
PC	20+14.59	668275.73	1883128.94
PT	21+68.34	668373.65	1883034.95

Curve 20

	Station	Northing	Easting
PC	100+77.27	668118.85	1883079.18
PT	100+79.63	668121.20	1883079.37

Curve 21

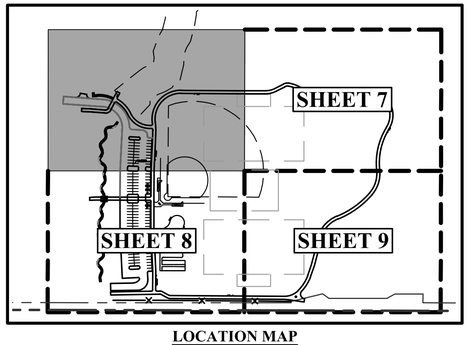
	Station	Northing	Easting
PC	100+79.63	668121.20	1883079.37
PT	100+94.53	668133.77	1883072.55

Curve 22

	Station	Northing	Easting
PC	103+10.58	668162.30	1883048.03
PT	103+69.98	668197.99	1883094.52

Curve 23

	Station	Northing	Easting
PC	103+69.98	668197.99	1883094.52
PT	104+53.47	668261.31	1883142.17



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
AREA A SITE LAYOUT

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

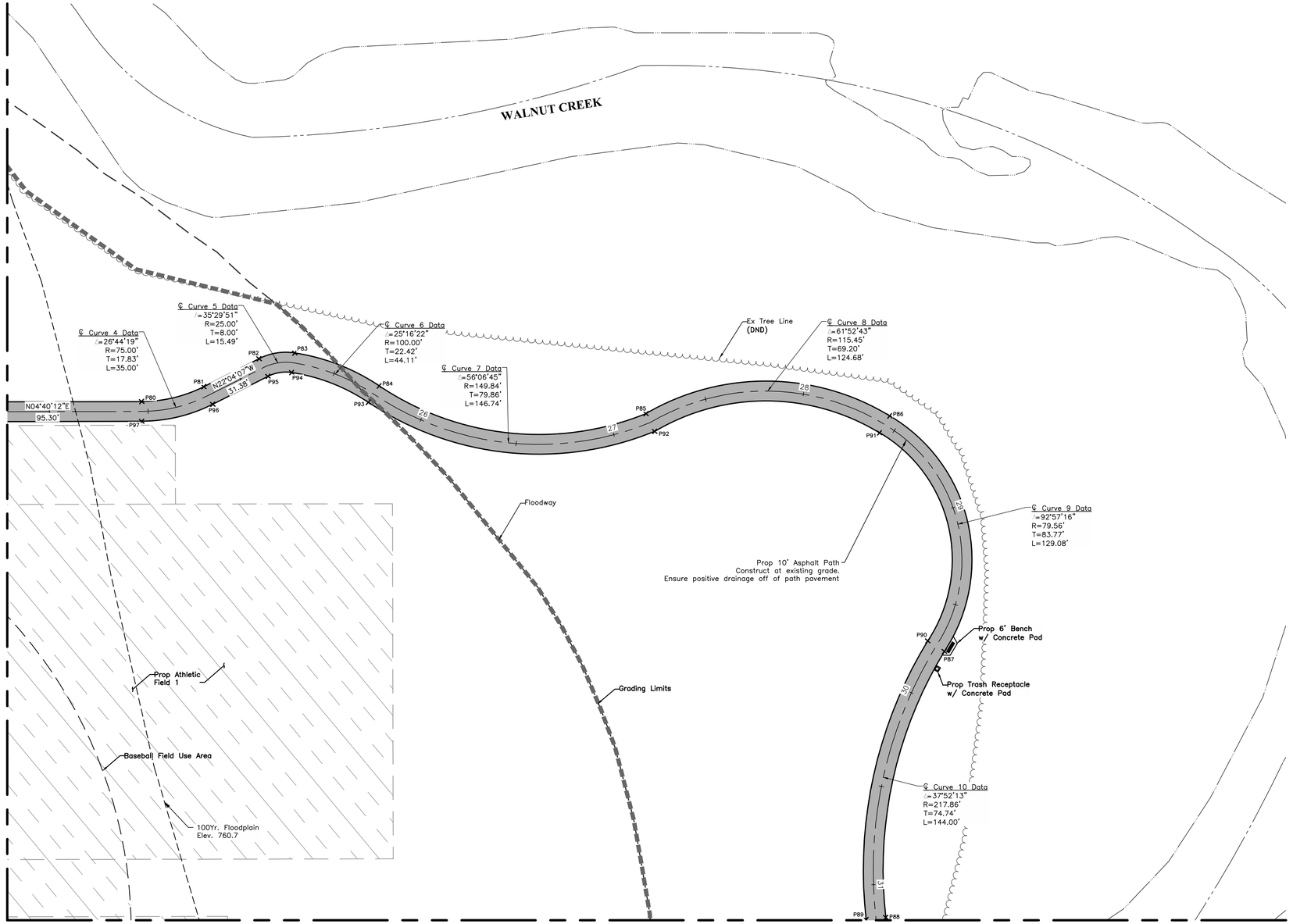
DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
6/61

J:\20241062\Dwg\04Sheets\SITE\AREA A.dwg, Last Saved By: abanks, 9/10/2025 10:01 AM Last Printed By: Banks, Annaliese, 9/15/2025 1:08 PM
Xrefs: 20241062-PRS-REFR-N, 20241062-PRS-REFR-F



CURVE DATA PC & PT

	Curve 4		
	Station	Northing	Easting
PC	24+46.76	668651.02	1883059.03
PT	24+81.76	668685.30	1883053.79
	Curve 5		
	Station	Northing	Easting
PC	25+13.14	668714.39	1883042.00
PT	25+28.63	668729.59	1883040.85
	Curve 6		
	Station	Northing	Easting
PC	25+28.63	668729.59	1883040.85
PT	25+72.74	668768.89	1883060.07
	Curve 7		
	Station	Northing	Easting
PC	25+72.74	668768.89	1883060.07
PT	27+19.48	668907.41	1883086.11
	Curve 8		
	Station	Northing	Easting
PC	27+19.48	668907.41	1883086.11
PT	28+44.16	669025.63	1883096.95
	Curve 9		
	Station	Northing	Easting
PC	28+44.16	669025.63	1883096.95
PT	29+73.24	669042.28	1883211.12
	Curve 10		
	Station	Northing	Easting
PC	29+73.24	669042.28	1883211.12
PT	31+17.24	669000.44	1883346.18

SHARED USE PATH POINT TABLE

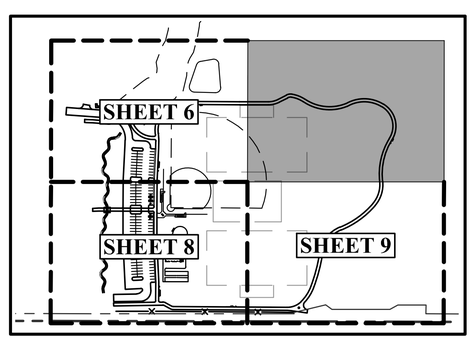
POINT NO.	NORTHING	EASTING
P80	668651.4271	1883054.0492
P81	668683.4264	1883049.1531
P82	668712.5088	1883037.3625
P83	668730.7474	1883035.9848
P84	668772.0152	1883056.1707
P85	668905.5781	1883081.4455
P86	669028.5468	1883092.8881
P87	669046.2689	1883214.1411
P88	669005.4338	1883346.0281
P89	668995.4383	1883346.3282
P90	669038.2987	1883208.0991
P91	669022.7111	1883101.0091
P92	668909.2619	1883090.7705
P93	668765.7626	1883063.9748
P94	668728.4250	1883045.7114
P95	668716.2660	1883046.6299
P96	668687.1835	1883058.4204
P97	668650.6130	1883064.0160

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

LEGEND - PROPOSED	
	Proposed Asphalt Shared Use Path
	Proposed Athletic Field Area



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
AREA B SITE LAYOUT

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

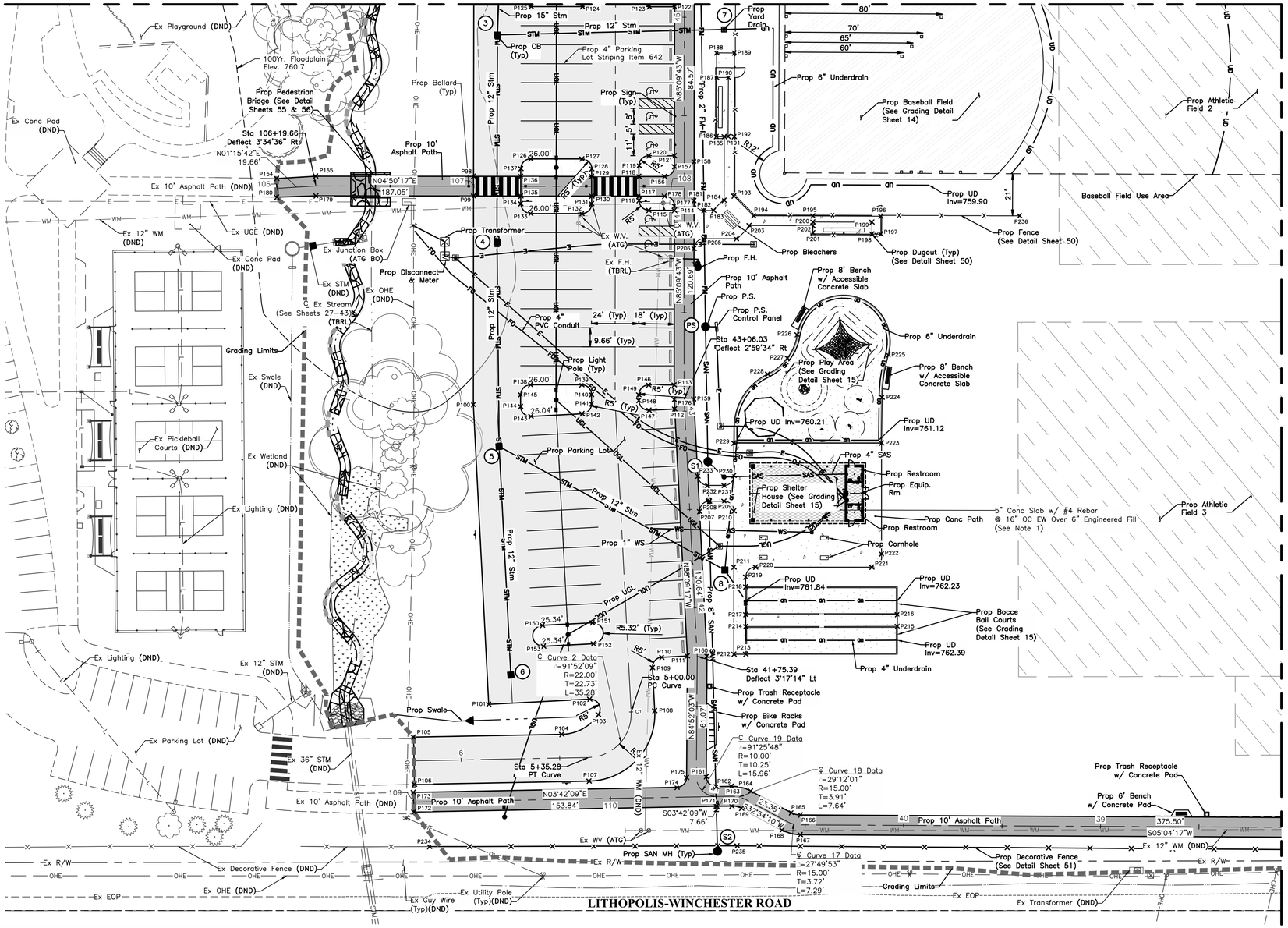
DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
7/61

J:\20241062\Dwg\04Sheets\SITE\AREA B.dwg, Last Saved By: abanks, 9/10/2025 10:04 AM Last Printed By: Banks, Annalisa, 9/15/2025 1:09 PM
Xrefs: 20241062-PS-REFR-N 20241062-PS-REFR-E



PARKING LOT POINT TABLE

POINT NO.	NORTHING	EASTING
P98	668145.1930	1883364.3859
P99	668144.3496	1883374.3503
P100	668135.4162	1883479.8927
P101	668130.5301	1883632.1450
P102	668181.8592	1883633.7923
P103	668185.5877	1883641.9325
P104	668166.2119	1883650.4276
P105	668091.0598	1883645.5582
P106	668089.5080	1883669.5080
P107	668178.0631	1883675.2458
P108	668214.2440	1883642.4076
P109	668214.9462	1883620.5267
P110	668220.1040	1883615.6897
P111	668233.0973	1883616.1067
P112	668237.1254	1883490.5913
P113	668237.9046	1883478.4317
P114	668245.3789	1883390.1274
P115	668232.4252	1883389.0310
P116	668227.8648	1883383.6271
P117	668228.0503	1883381.4349
P118	668228.8937	1883371.4706
P119	668229.3596	1883365.9662
P120	668234.7635	1883361.4057
P121	668247.7172	1883362.5021
P122	668254.0967	1883287.1316
P123	668241.2826	1883286.0470
P124	668207.4008	1883283.1792
P125	668181.4963	1883280.9866
P126	668174.8390	1883357.9794
P127	668200.7463	1883360.1723
P128	668205.3068	1883365.5762
P129	668204.9792	1883369.4464
P130	668204.1358	1883379.4108
P131	668203.8086	1883383.2769
P132	668198.4047	1883387.8374
P133	668172.4973	1883385.6446
P134	668167.9369	1883380.2407
P135	668168.2641	1883376.3745
P136	668169.1075	1883366.4101
P137	668169.4351	1883362.5399
P138	668165.1647	1883472.2748
P139	668191.0721	1883474.4676
P140	668195.6326	1883479.8715
P141	668195.2403	1883484.5063
P142	668190.0977	1883489.0821
P143	668164.0754	1883488.2470
P144	668159.2536	1883482.8278
P145	668159.7609	1883476.8353
P146	668224.9510	1883477.3352
P147	668224.1269	1883490.1741
P148	668219.3051	1883484.7550
P149	668219.5471	1883481.8957
P150	668161.0861	1883594.4657
P151	668186.4097	1883595.2784
P152	668186.0684	1883605.9129
P153	668160.7448	1883605.1003

CONCRETE WALK POINT TABLE

POINT NO.	NORTHING	EASTING
P181	668255.7594	1883386.0544
P182	668260.3199	1883391.4583
P183	668265.2734	1883391.8776
P184	668270.9631	1883387.1429
P185	668273.7710	1883354.9314
P186	668269.7281	1883354.5790
P187	668272.3318	1883324.6925
P188	668273.4171	1883312.2391
P189	668282.4426	1883313.0259
P190	668278.3107	1883325.2134
P191	668275.7055	1883355.1000
P192	668278.7521	1883355.3656
P193	668276.1359	1883385.3775
P194	668285.2326	1883396.2057
P195	668315.2392	1883398.8203
P196	668349.6093	1883401.8154
P197	668348.8230	1883410.8392
P198	668344.3831	1883410.4486
P199	668344.8605	1883404.4714
P200	668314.9738	1883401.8670
P201	668314.4963	1883407.3462
P202	668314.8052	1883403.8014
P203	668282.6446	1883400.9991
P204	668275.5171	1883407.0989
P205	668259.1136	1883405.7105
P206	668253.7097	1883410.2710
P207	668245.4243	1883543.5341
P208	668250.8434	1883538.7129
P209	668258.2336	1883539.3384
P210	668262.7945	1883544.7375
P211	668260.4182	1883573.1366
P212	668256.7380	1883617.2039
P213	668262.7174	1883617.7000
P214	668263.8849	1883603.6283
P215	668340.6213	1883609.9950
P216	668341.1174	1883604.0155
P217	668264.3810	1883597.6489
P218	668265.5485	1883583.5772
P219	668265.9635	1883578.6180
P220	668271.3630	1883574.0523
P221	668330.1711	1883578.9730
P222	668335.7152	1883572.6800
P223	668340.4068	1883516.6093
P224	668342.5824	1883493.4957
P225	668347.5549	1883472.3498
P226	668302.2682	1883458.2229
P227	668296.2912	1883469.6232
P228	668285.6799	1883476.9097
P229	668265.6713	1883510.3559
P230	668264.2953	1883526.8002
P231	668258.8910	1883531.3654
P232	668250.5804	1883530.6620
P233	668246.0047	1883525.5188

FENCE POINT TABLE

POINT NO.	NORTHING	EASTING
P234	668094.4970	1883701.6120
P235	668250.2522	1883714.2494
P236	668419.8244	1883407.4930

LEGEND - PROPOSED

	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Full–Depth Asphalt Pavement
	Proposed 5–Inch Concrete Slab, As Per Plan
	Proposed Athletic Field Area
	Proposed Clay Infield
	Proposed Turf
	Proposed Stone Mulch

NOTES:

1 Item Special – 5" Concrete Slab for Shelter House: The floor of the shelter house shall match the specifications provided in the Romtec drawings. The slab shall be 5" thick with #4 rebar at 16" OC EW over 6" engineered fill. The slab floor shall have a buff wash finish. Concrete sidewalk adjacent to the shelter house has been quantified separately under Item 608 – 4" Concrete Walk and shall follow the specifications provided in the Plan and City of Canal Winchester SCD RD–12–01.

STORM SEWER STRUCTURE COORDINATES

STRUCTURE #	NORTHING - PLAN	EASTING - PLAN	NORTHING - AS BUILT	EASTING - AS BUILT
3	668163.2528	1883293.8447		
4	668154.2428	1883398.8325		
5	668146.7164	1883502.1732		
6	668142.9833	1883618.2173		
7	668278.1686	1883300.7010		
8	668255.7022	1883574.2193		

SANITARY SEWER STRUCTURE COORDINATES

STRUCTURE #	NORTHING - PLAN	EASTING - PLAN	NORTHING - AS BUILT	EASTING - AS BUILT
PS	668256.2211	1883450.3446		
S1	668251.6978	1883518.6196		
S2	668240.0388	1883716.1978		

CURVE DATA PC & PT

Curve 2

	Station	Northing	Easting
PC	5+00.00	668202.25	1883642.02
PT	5+35.28	668178.84	1883663.27

Curve 17

	Station	Northing	Easting
PC	40+52.39	668283.19	1883706.31
PT	40+59.68	668276.37	1883703.96

Curve 18

	Station	Northing	Easting
PC	40+83.05	668256.74	1883691.26
PT	40+90.69	668249.56	1883688.89

Curve 19

	Station	Northing	Easting
PC	40+98.36	668241.92	1883688.39
PT	41+14.32	668232.60	1883677.52

SHARED USE PATH POINT TABLE

POINT NO.	NORTHING	EASTING
P154	668045.4630	1883357.1850
P155	668065.2721	1883357.6212
P156	668241.8474	1883372.5670
P157	668247.2513	1883368.0065
P158	668257.4329	1883366.2832
P159	668247.2645	1883486.4165
P160	668243.0572	1883617.0013
P161	668237.5813	1883677.9677
P162	668242.2383	1883683.4045
P163	668249.8832	1883683.8993
P164	668259.4560	1883687.0656
P165	668279.0833	1883699.7644
P166	668283.6315	1883701.3293
P167	668282.7475	1883711.2902
P168	668273.6512	1883708.1604

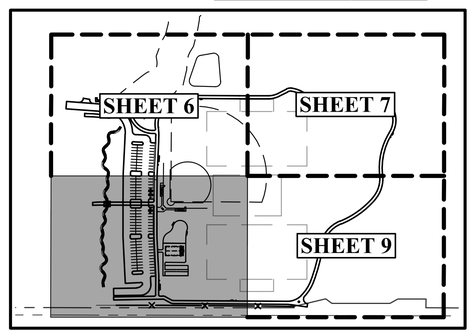
SHARED USE PATH POINT TABLE

POINT NO.	NORTHING	EASTING
P169	668254.0238	1883695.4616
P170	668249.2374	1883693.8784
P171	668241.5926	1883693.3837
P172	668088.0776	1883683.4497
P173	668088.7234	1883673.4705
P174	668222.2739	1883682.1126
P175	668227.5767	1883677.5704
P176	668237.2781	1883485.8340
P177	668245.5645	1883387.9353
P178	668241.0040	1883382.5314
P179	668064.6835	1883367.6072
P180	668044.7030	1883366.6360

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet



LOCATION MAP

Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK PHASE 2B
AREA C SITE LAYOUT

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
AS NOTED

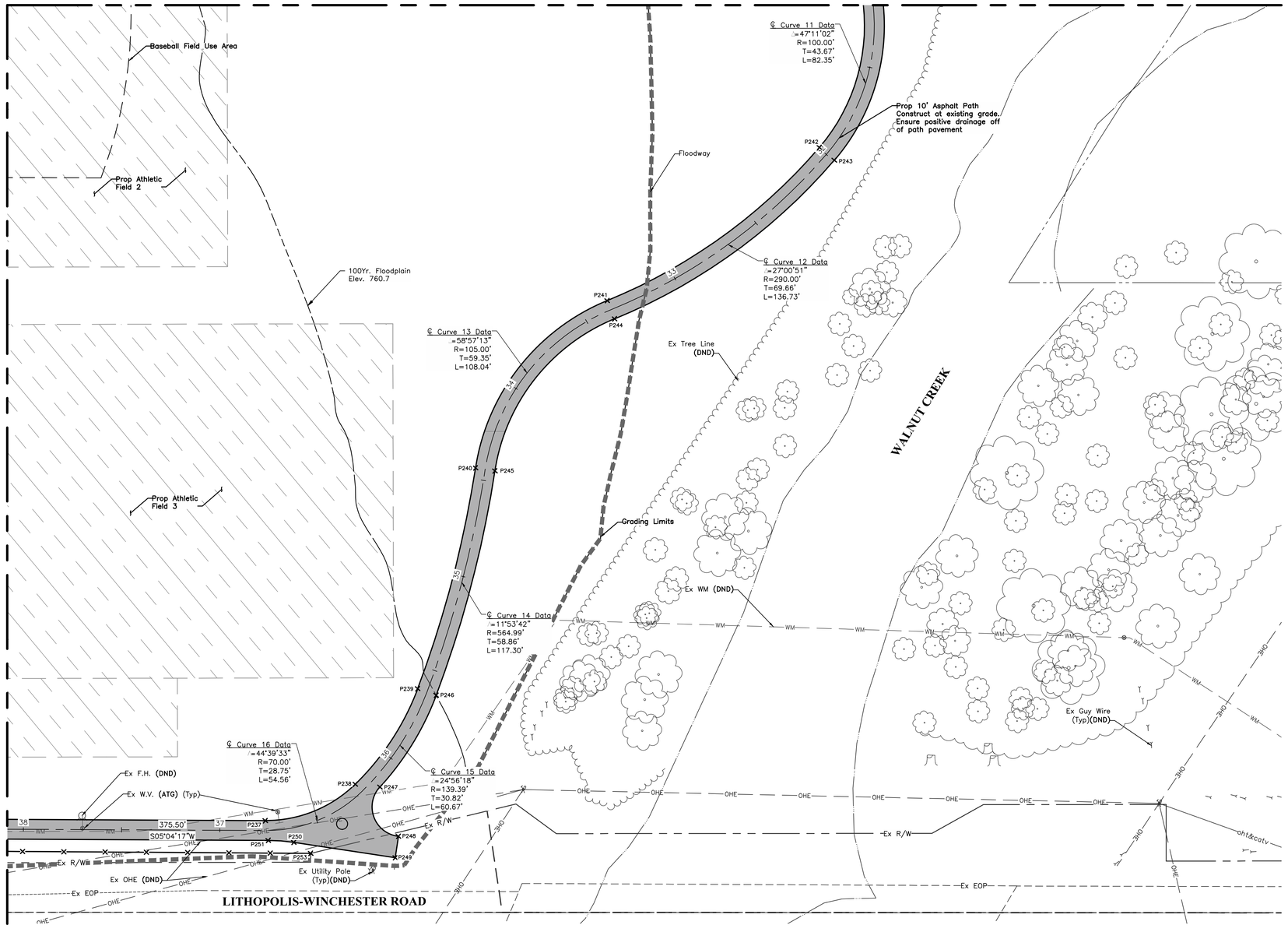
JOB NO.
20241062

SHEET
8/61

J:\20241062\Dwg\04Sheets\SITE\AREA C.dwg, Last Saved By: abanks, 9/10/2025 11:51 AM Last Plotted By: Banks, Annaliso, 9/15/2025 1:10 PM
Xrefs: 20241062-CS-BERM 20241062-CS-BERM-F

MATCHLINE SEE SHEET 7

MATCHLINE SEE SHEET 8



GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Athletic Field Area

CURVE DATA PC & PT

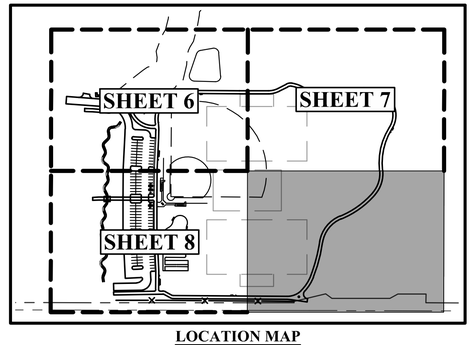
	Curve 11		
	Station	Northing	Easting
PC	31+17.24	669000.44	1883346.18
PT	31+99.59	668970.62	1883420.46
	Curve 12		
	Station	Northing	Easting
PC	31+99.59	668970.62	1883420.46
PT	33+36.32	668854.53	1883490.29
	Curve 13		
	Station	Northing	Easting
PC	33+36.32	668854.53	1883490.29
PT	34+44.36	668784.06	1883565.86
	Curve 14		
	Station	Northing	Easting
PC	34+44.36	668784.06	1883565.86
PT	35+61.66	668745.03	1883676.25
	Curve 15		
	Station	Northing	Easting
PC	35+61.66	668745.03	1883676.25
PT	36+22.33	668708.02	1883723.72
	Curve 16		
	Station	Northing	Easting
PC	36+22.33	668745.03	1883676.25
PT	36+76.89	668657.22	1883739.50

SHARED USE PATH POINT TABLE

POINT NO.	NORTHING	EASTING
P237	668657.6614	1883734.5226
P238	668704.8291	1883719.8693
P239	668740.5105	1883674.1056
P240	668779.1954	1883564.6936
P241	668853.0276	1883485.5222
P242	668967.1100	1883416.8964
P243	668974.1235	1883424.0246
P244	668856.0261	1883495.0621
P245	668788.9181	1883567.0322
P246	668749.6161	1883678.2431
P247	668717.1897	1883722.3399
P248	668724.5078	1883748.0800
P249	668721.9677	1883758.7714
P250	668671.1893	1883746.7073
P251	668658.3416	1883744.6222

FENCE POINT TABLE

POINT NO.	NORTHING	EASTING
P253	668679.3000	1883753.0000



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK PHASE 2B
AREA D SITE LAYOUT

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

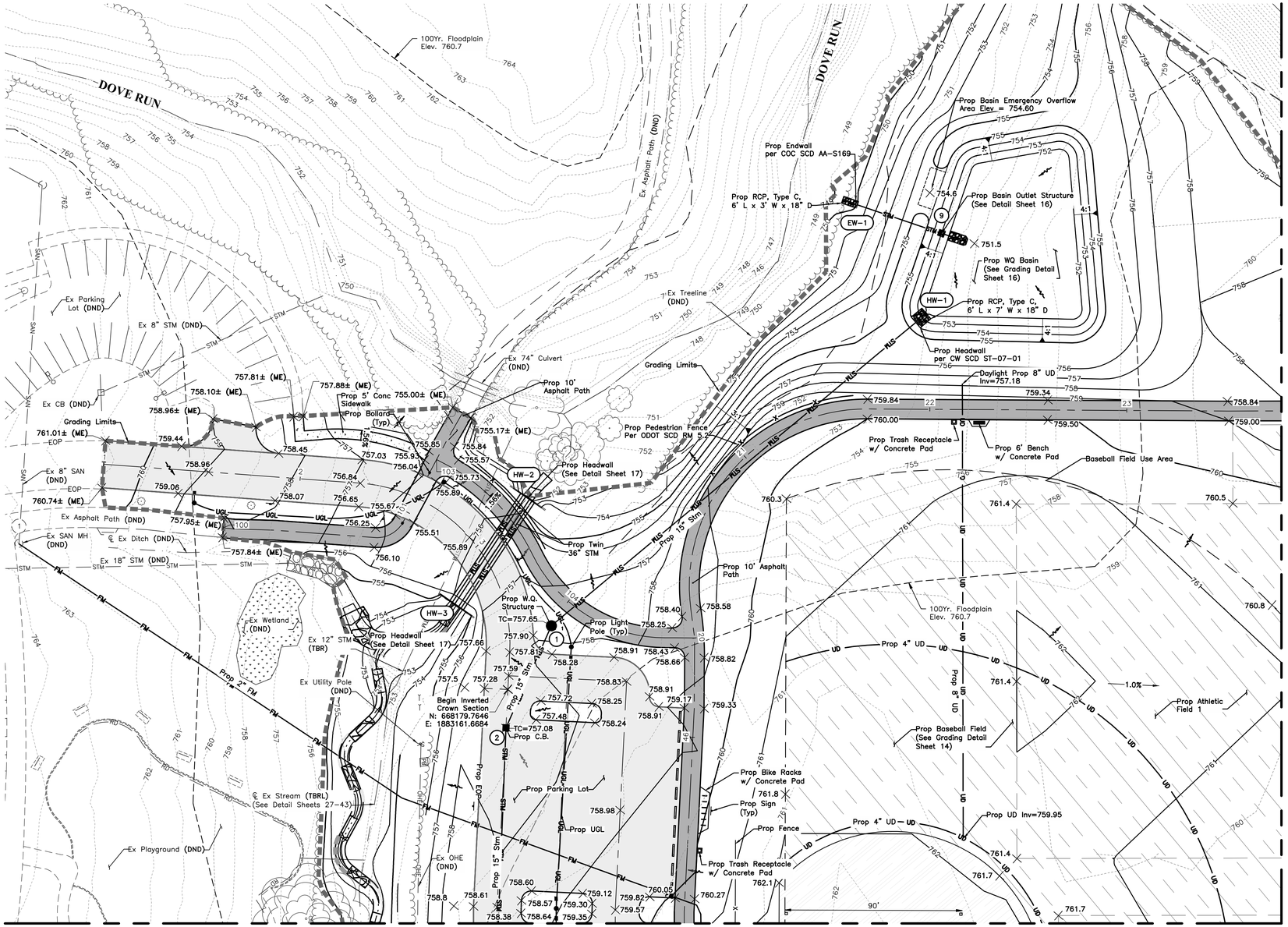
DATE
September 2025

SCALE
AS NOTED

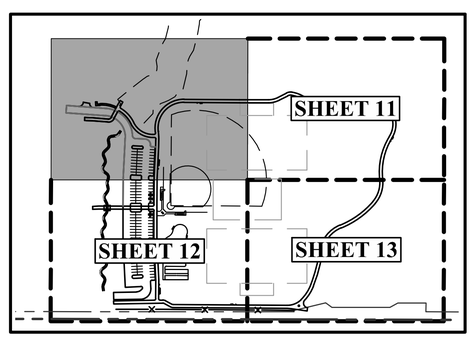
JOB NO.
20241062

SHEET
9/61

J:\20241062\Dwg\04Sheets\SITE\AREA D.dwg, Last Saved By: obanks, 9/9/2025 2:31 PM Last Printed By: Banks, Annaliss, 9/15/2025 1:10 PM
Xrefs: 20241062-XS-BFFB-N 20241062-XS-BFFB-F



LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Full-Depth Asphalt Pavement
	Proposed Athletic Field Area
	Proposed Clay Infield
	Proposed Stone Mulch



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
AREA A GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
10/61

J:\20241062\Dwg\04Sheets\SITE\AREA A.dwg, Last Saved By: obanks, 9/10/2025 10:01 AM Last Printed By: Banks, Annalisa, 9/15/2025 1:11 PM
Xrefs: 20241062_CS_REFR_N 20241062_PS_REFR_F

NOTES:

* Floodway Activities: Construction activities within the regulatory floodway shall be restricted as follows:

– No stockpiling of earth or any construction materials.

– Construction equipment shall not be left in the floodway during non–working hours.

– Construction of the shared use path within the floodway shall be done at–grade. No net fills shall occur in the floodway. Contractor shall ensure effective drainage of the path is maintained.

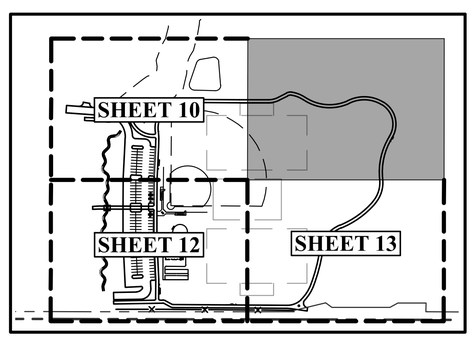
– The floodway shall be delineated though the use of sediment fence and/or construction fence to avoid accidental impacts within this area. Barrier may be removed to facilitate shared use path construction but shall be re–erected during non working hours.

LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Athletic Field Area

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
AREA B GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
11/61

J:\20241062\Dwg\04Sheets\SITE\AREA B.dwg, Last Saved By: obanks, 9/10/2025 10:04 AM Last Printed By: Banks, Annalisa, 9/15/2025 1:12 PM
Xrefs: 20241062-CS-REFR-N 20241062-CS-REFR-E

MATCHLINE SEE SHEET 10

MATCHLINE SEE SHEET 13

LITHOPOLIS-WINCHESTER ROAD

NOTES:

1 Item Special – 5" Concrete Slab for Shelter House: The floor of the shelter house shall match the specifications provided in the Romtec drawings. The slab shall be 5" thick with #4 rebar at 16" OC EW over 6" engineered fill. The slab floor shall have a buff wash finish. Concrete sidewalk adjacent to the shelter house has been quantified separately under Item 608 – 4" Concrete Walk and shall follow the specifications provided in the Plan and City of Canal Winchester SCD RD–12–01.

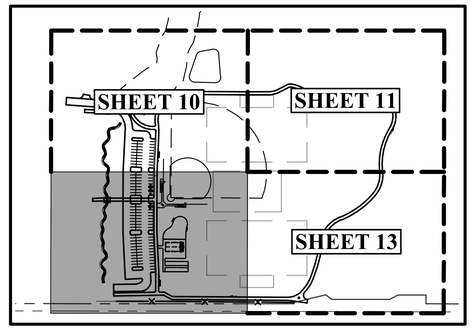
GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

LEGEND - PROPOSED

	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Full–Depth Asphalt Pavement
	Proposed 5–Inch Concrete Slab, As Per Plan
	Proposed Athletic Field Area
	Proposed Clay Infield
	Proposed Turf
	Proposed Stone Mulch



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
AREA C GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
AS NOTED

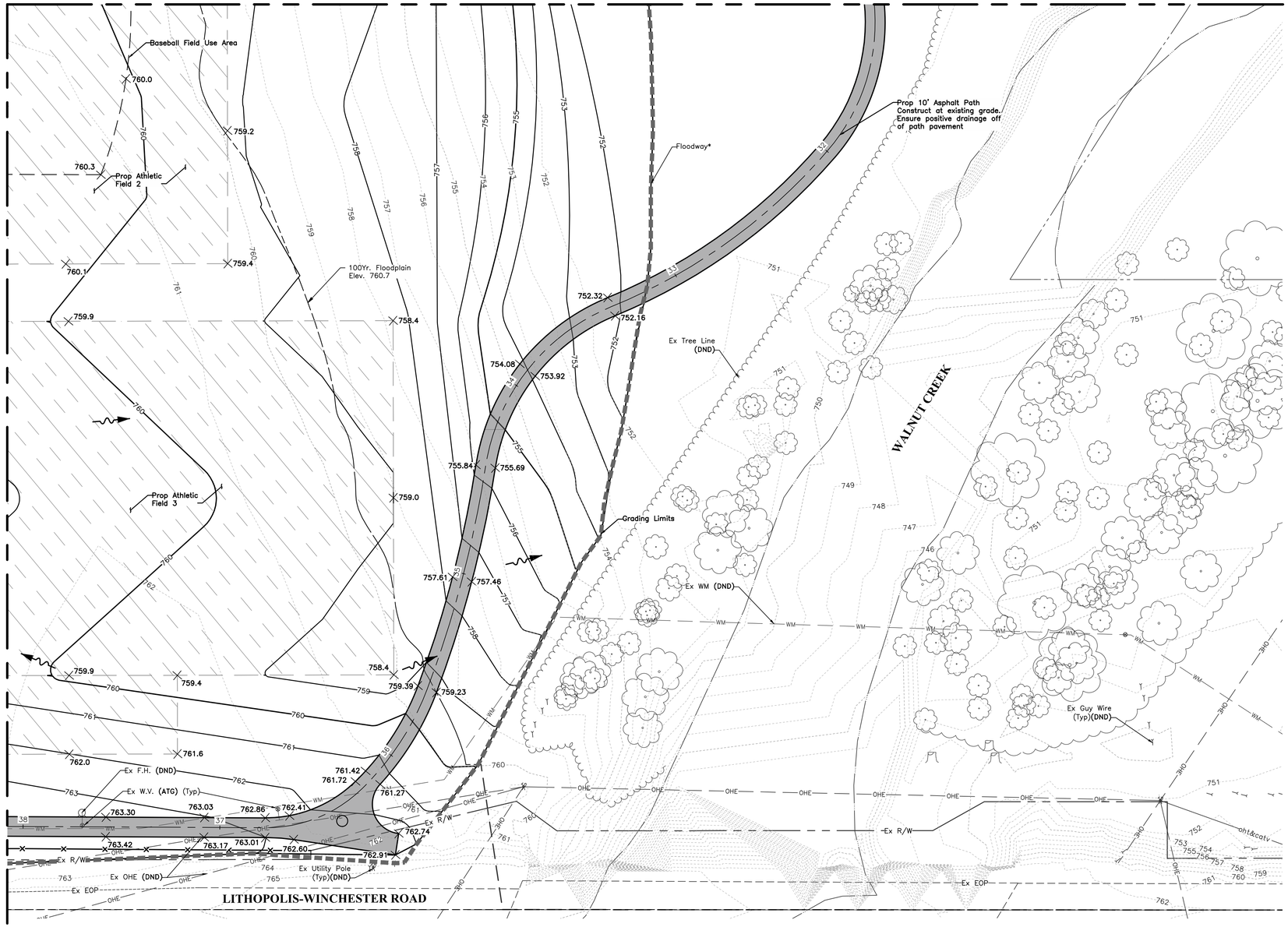
JOB NO.
20241062

SHEET
12/61

J:\20241062\Dwg\04Sheets\SITE\AREA C.dwg, Last Saved By: abanks, 9/10/2025 11:51 AM Last Printed By: Banks, Annaliisa, 9/15/2025 1:12 PM
Xrefs: 20241062-CS-REFR-N, 20241062-CS-REFR-E

MATCHLINE SEE SHEET 11

MATCHLINE SEE SHEET 12



NOTES:

* Floodway Activities: Construction activities within the regulatory floodway shall be restricted as follows:

– No stockpiling of earth or any construction materials.

– Construction equipment shall not be left in the floodway during non–working hours.

– Construction of the shared use path within the floodway shall be done at–grade. No net fills shall occur in the floodway. Contractor shall ensure effective drainage of the path is maintained.

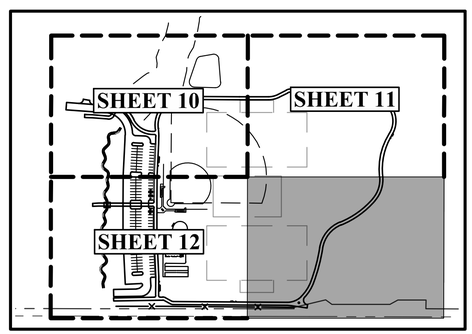
– The floodway shall be delineated though the use of sediment fence and/or construction fence to avoid accidental impacts within this area. Barrier may be removed to facilitate shared use path construction but shall be re–erected during non working hours.

GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Athletic Field Area



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
AREA D GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
13/61

J:\20241062\Dwg\04Sheets\SITE\AREA D.dwg, Last Saved By: obanks, 9/9/2025 2:31 PM Last Printed By: Banks, Annaliso, 9/15/2025 1:13 PM
Xrefs: 20241062-CS-REFR-N 20241062-CS-REFR-E

Prop Pedestrian Fence per ODOT SCD RM 5.2

Prop 10' Asphalt Path

Baseball Field Use Area

Prop Baseball Field

100Yr. Floodplain Elev. 760.7

Prop Athletic Field 1

Prop 4" UD

Prop 8" UD

Prop Bike Racks

Prop Sign

Prop UD Inv=759.95

Prop 4" UD

Prop Yard Drain

Prop Conc Pad for Field Storage

Prop 6" Underdrain

Prop UD Inv=759.90

Prop Chainlink Fence (See Detail Sheet 50)

Prop Dugout (Typ) (See Detail Sheet 50)

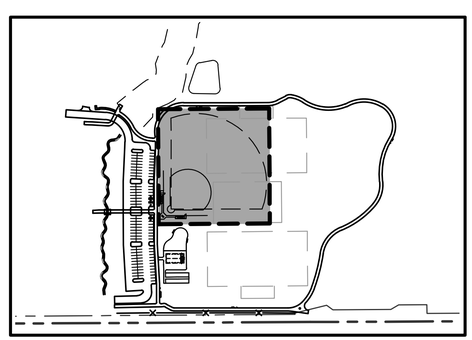
Prop Athletic Field 2

LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Athletic Field Area
	Proposed Clay Infield

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet



LOCATION MAP

Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
BASEBALL FIELD GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

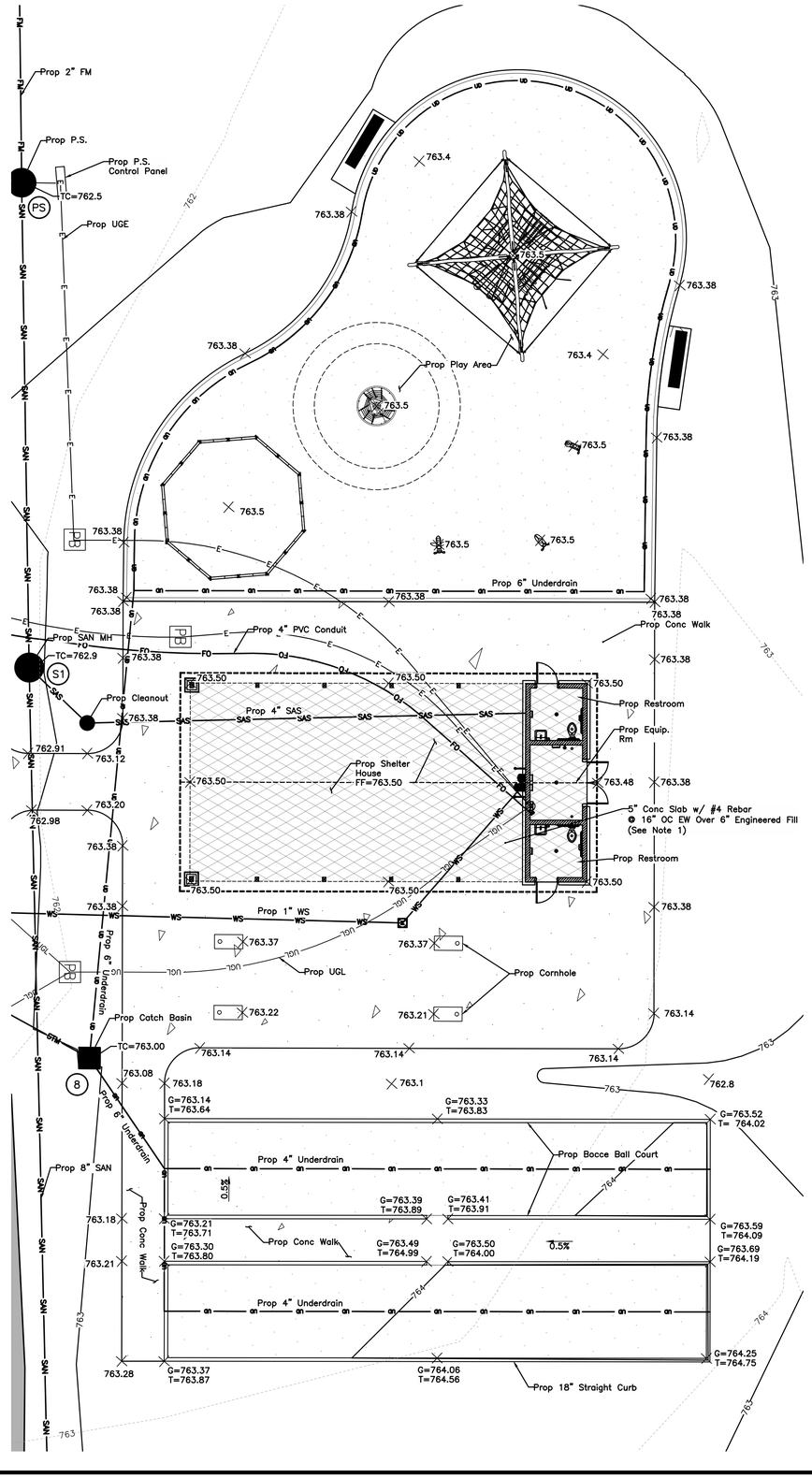
DATE
September 2025

SCALE
1" = 20'

JOB NO.
20241062

SHEET
14/61

J:\20241062\Dwg\04Sheets\SITE\BASEBALL FIELD DETAIL.dwg, Last Saved By: obanks, 9/9/2025 2:31 PM Last Printed By: Banks, Annaliss, 9/15/2025 1:13 PM
Xrefs: 20241062_CS_REFR_N, 20241062_CS_REFR_E



ABBREVIATION LEGEND

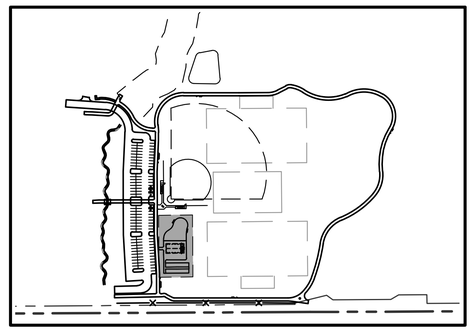
G = Ground Adjacent to Curb Elevation
T = Top of Curb Elevation

GRAPHIC SCALE

0 5 10 20

1 inch = 10 feet

LEGEND - PROPOSED	
	Proposed Concrete Sidewalk
	Proposed Turf
	Proposed 5-Inch Concrete Slab, As Per Plan



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B
SHELTER HOUSE & PLAY AREA GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

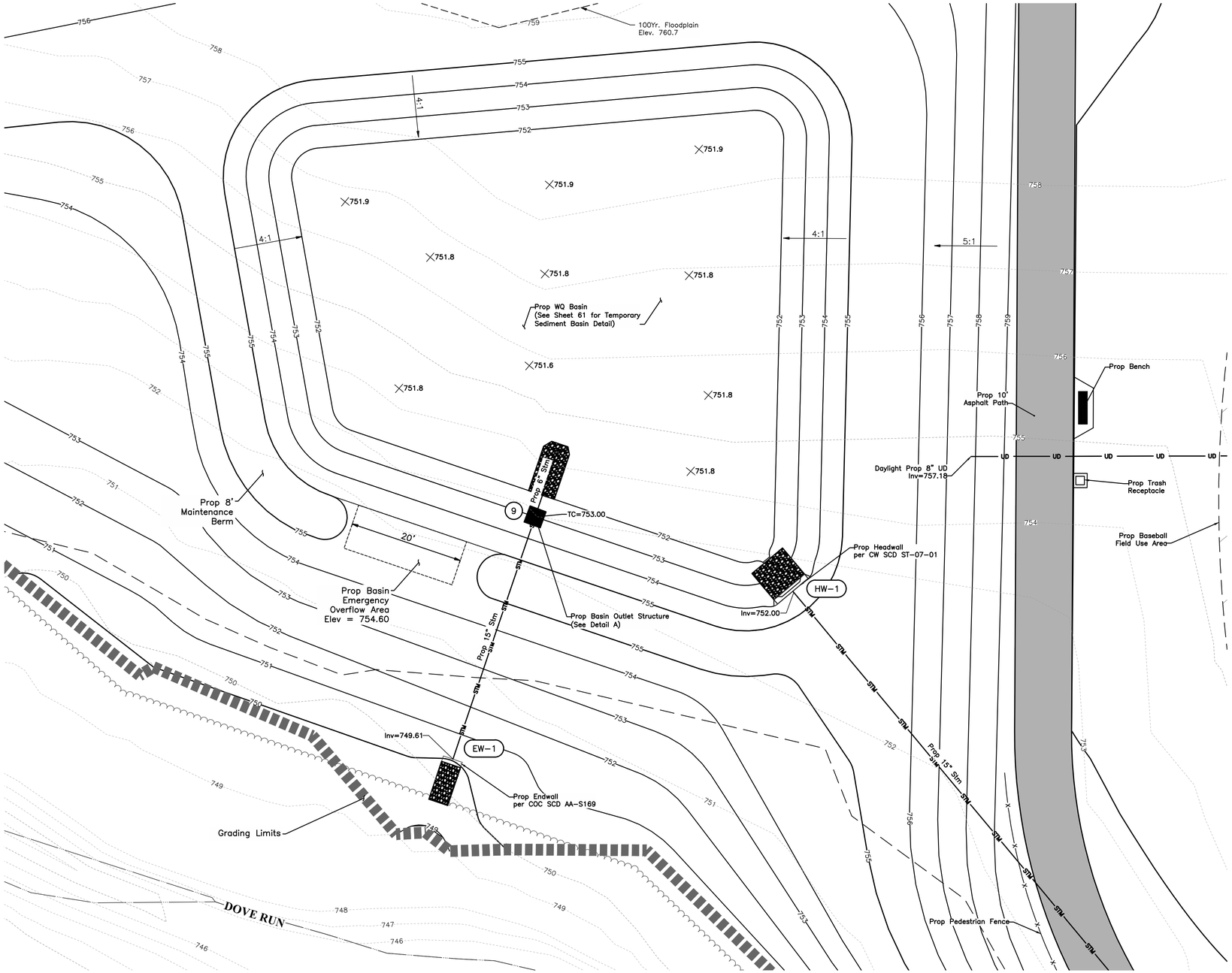
DATE
September 2025

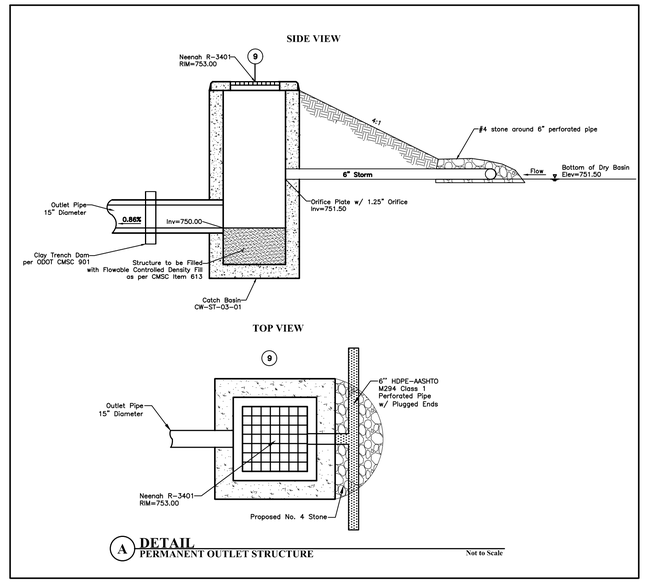
SCALE
1" = 10'

JOB NO.
20241062

SHEET
15/61

J:\20241062\Dwg\04Sheets\SITE\DETAIL GRADING.dwg, Last Saved By: obanks, 9/15/2025 1:39 PM Last Printed By: Banks, Annaliss, 9/15/2025 1:41 PM
Xrefs: 20241062-PS-REFR.dwg, 20241062-PS-REFR-N





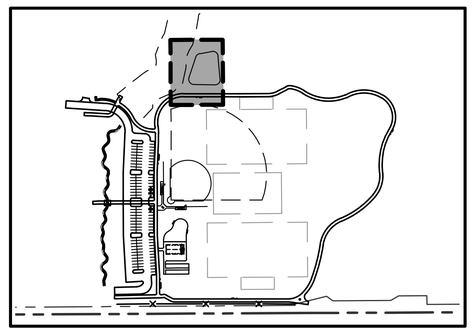
A DETAIL
PERMANENT OUTLET STRUCTURE
Not to Scale

Item 604 – Catch Basin Outlet Structure, As Per Plan: 6–inch perforated pipe and stone shall be considered incidental to the pay item.

LEGEND - PROPOSED

	Proposed Asphalt Shared Used Path

GRAPHIC SCALE
0 5 10 20
1 inch = 10 feet



LOCATION MAP
Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
BASIN GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

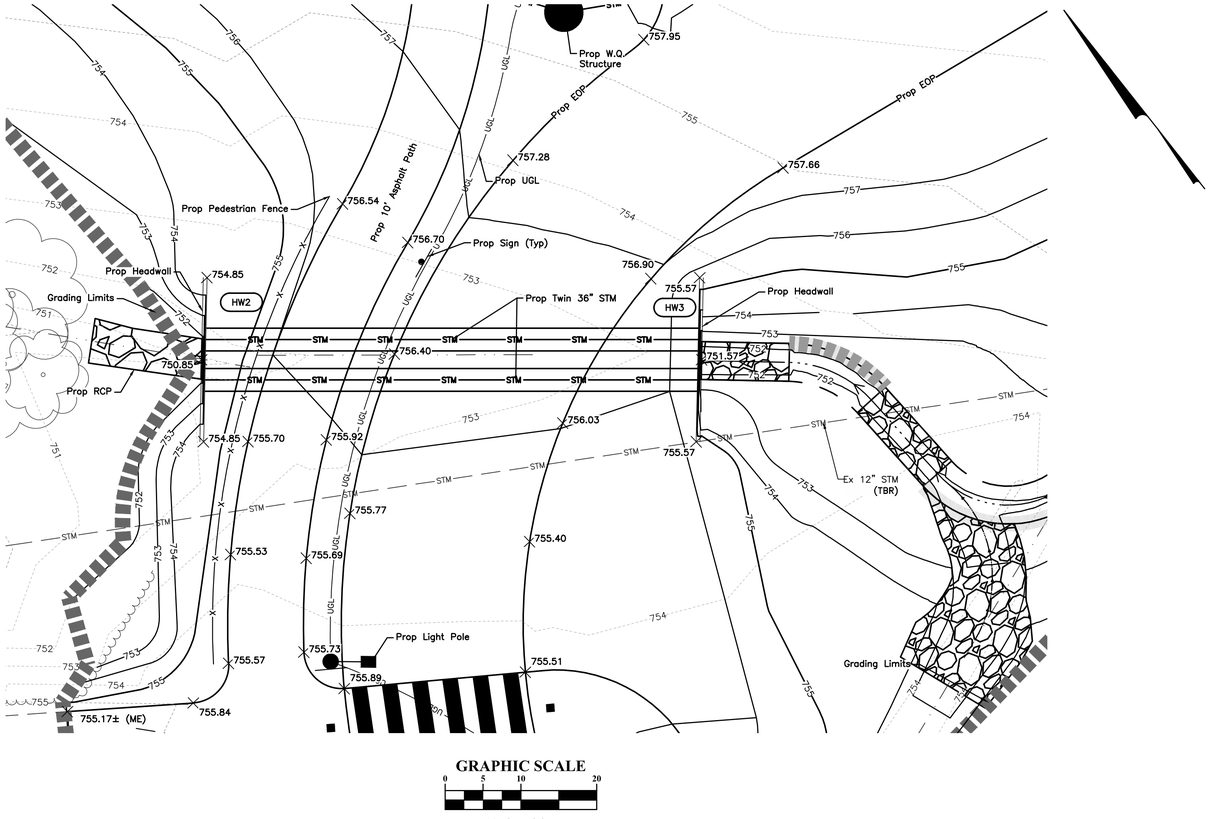
DATE
September 2025

SCALE
1" = 10'

JOB NO.
20241062

SHEET
16/61

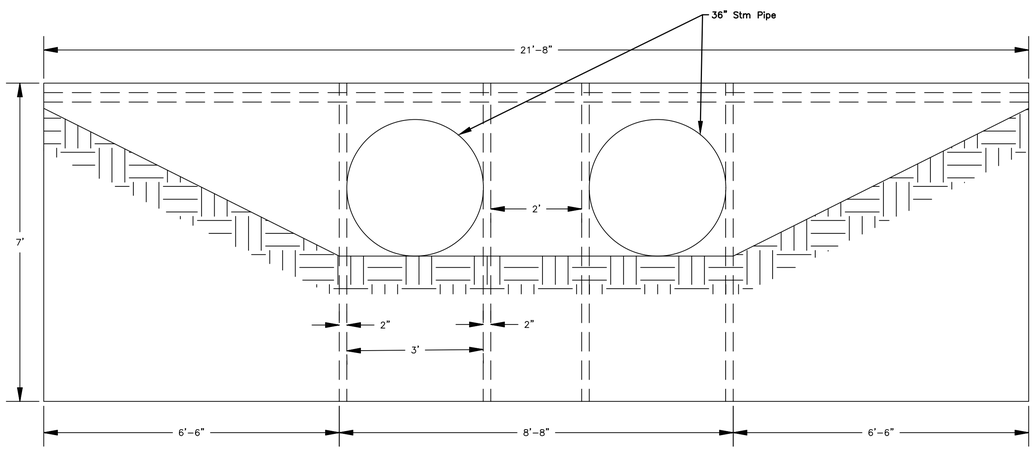
J:\20241062\Dwg\04Sheets\SITE\ DETAIL GRADING.dwg, Last Saved By: abanks, 9/15/2025 1:04 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:14 PM
Xrefs: 20241062-PS-REF-N 20241062-PS-REF-E



GRAPHIC SCALE

0 5 10 20

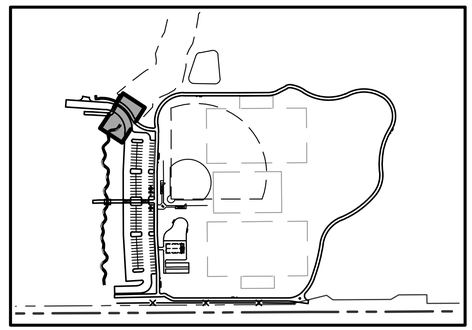
1 inch = 10 feet



HW2 & HW3 DETAIL

NOTES:

1. Site grading around the proposed headwalls is based upon the overall length and height of the headwall. Spacing between the two pipes may be modified at the discretion of the precast concrete headwall manufacturer.



LOCATION MAP

Not to Scale

REVISIONS			
MARK	DATE	DESCRIPTION	

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B
HEADWALL GRADING PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Landscape Architects
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

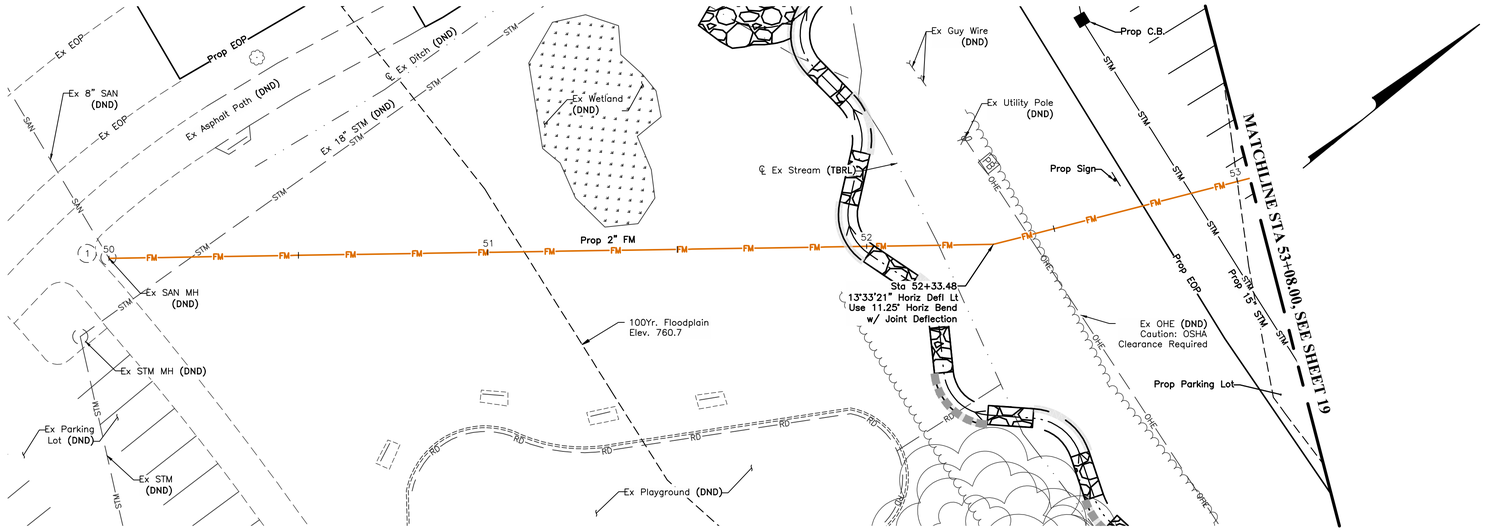
DATE
September 2025

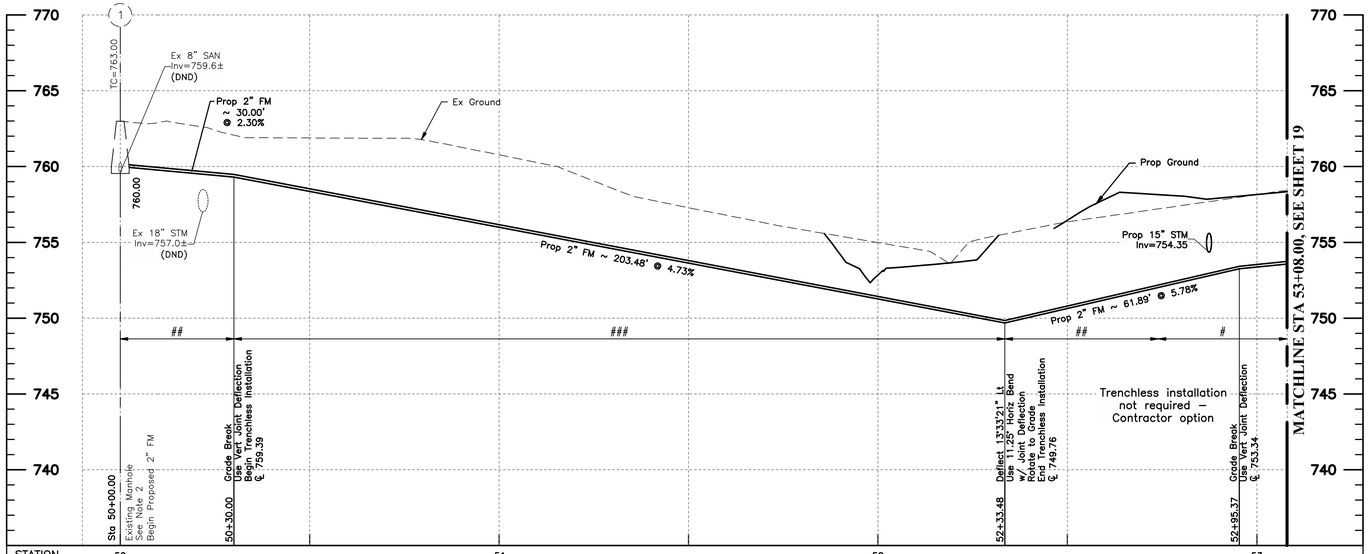
SCALE
1" = 10'

JOB NO.
20241062

SHEET
17/61

J:\20241062\Dwg\04Sheets\SITE\Headwall Grading Detail.dwg, Last Saved By: obanks, 9/10/2025 12:35 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:15 PM
Xrefs: 20241062-CS-REFR-N 20241062-CS-REFR-F





STATION	50		51		52		53
EX GROUND	763.00	761.89	760.77	757.28	754.98	756.35	758.15
INVERT	759.54	758.36	756.00	753.63	751.26	750.63	753.37
CUT	3.46	3.52	4.78	3.65	3.72	5.71	4.78
PROP GROUND						756.46	758.16

NOTES:

1. All "Cut" profile view labels are in reference to the existing ground
2. Core existing manhole and provide watertight boot/seal at connection. Direct proposed FM toward 8" sewer outlet to the west. All work for this connection shall be paid for under Item 604 – Connect 2" Force Main to Existing Manhole, As Per Plan

\# Open cut installation with compacted granular backfill per CMSC 912

\## Open cut installation with compacted backfill per CMSC 911

\### Trenchless installation. No backfill required.

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK PHASE 2B
FORCE MAIN PLAN & PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers, Surveyors, Planners, Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

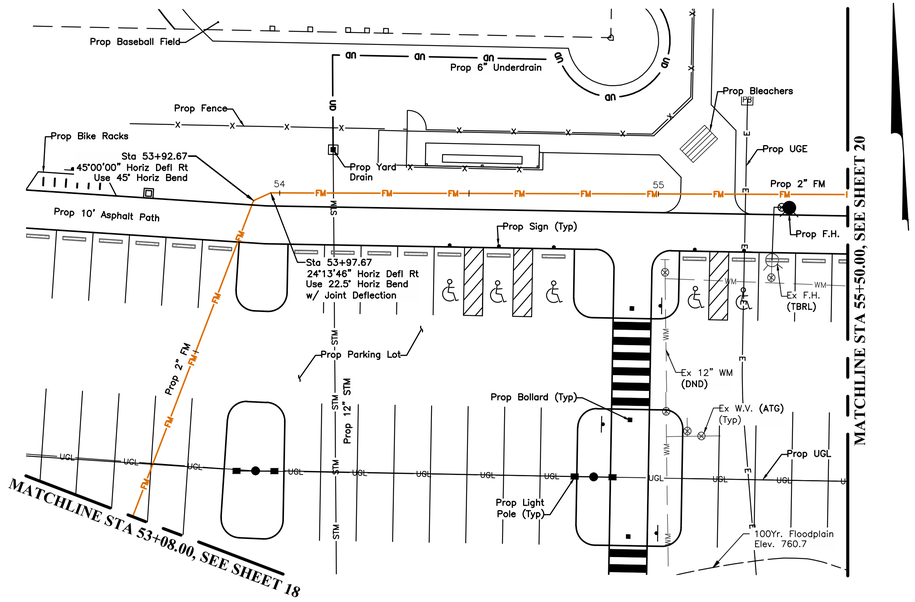
DATE
September 2025

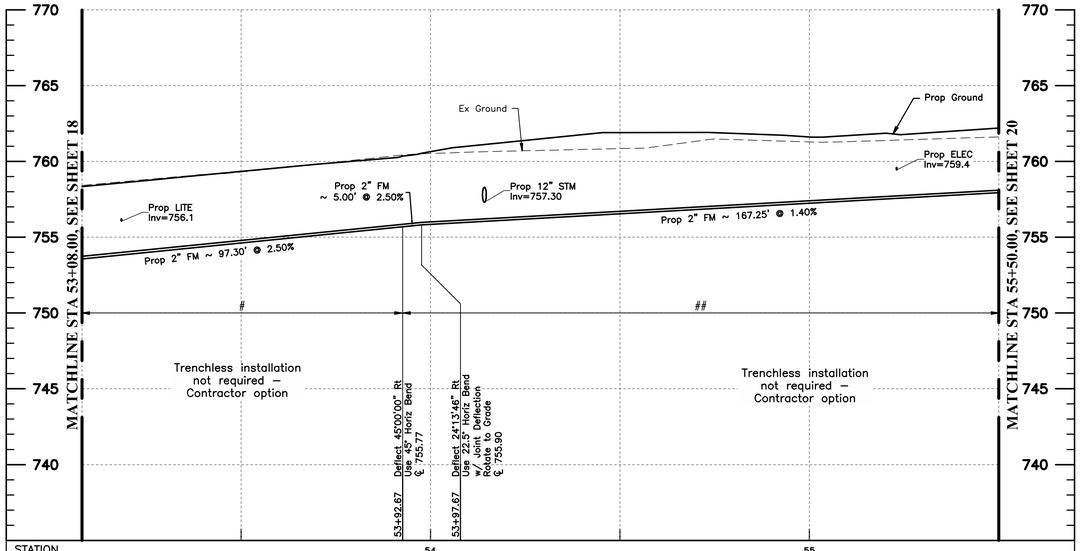
SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
18/61

J:\20241062\Dwg\04Sheets\SITE\SANITARY SEWER PLAN.dwg, Last Saved By: cbanks, 9/9/2025 2:34 PM Last Printed By: Banks, Annaliese, 9/15/2025 1:15 PM
XRefs: 20241062-PS-BFFB.dwg, 20241062-PS-BFFB-E, 20241062-GIS-SSWB.dwg





STATION		54		55	
EX GROUND	759.30	760.53	760.85	761.29	761.62
INVERT	754.62	755.85	756.55	757.25	757.94
CUT	4.68	4.68	4.30	4.05	3.68
PROP GROUND	759.34	760.64	761.91	761.62	762.20

NOTES:

1. All "Cut" profile view labels are in reference to the existing ground

\# Open cut installation with compacted granular backfill per CMSC 912

\## Open cut installation with compacted backfill per CMSC 911

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

MARK	DATE	REVISIONS DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK PHASE 2B

FORCE MAIN PLAN & PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

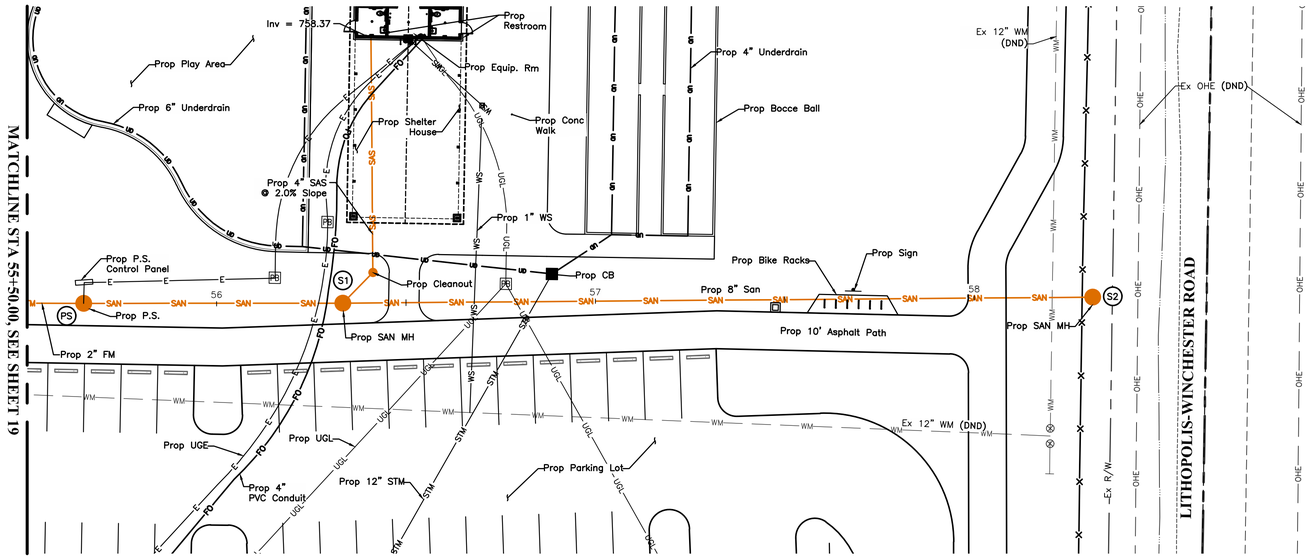
DATE
September 2025

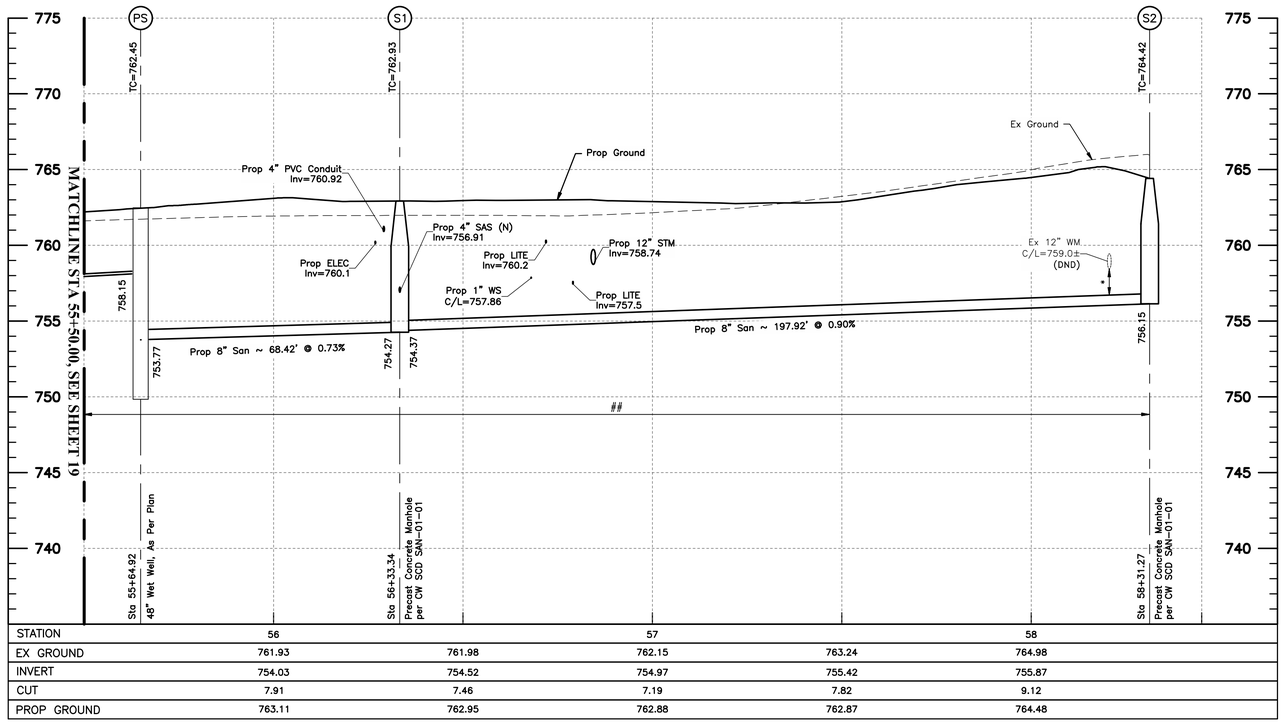
SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
19/61

J:\20241062\Dwg\04Sheets\SITE\SANITARY SEWER PLAN.dwg, Last Saved By: cbanks, 9/9/2025 2:34 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:15 PM
Xrefs: 20241062-PS-BFFR-N, 20241062-PS-BFFR-E, 20241062-PS-SSWR-N





STATION		56		57		58
EX GROUND	761.93		761.98	762.15	763.24	764.98
INVERT	754.03		754.52	754.97	755.42	755.87
CUT	7.91		7.46	7.19	7.82	9.12
PROP GROUND	763.11		762.95	762.88	762.87	764.48

NOTES:

1. All "Cut" profile view labels are in reference to the existing ground

* Maintain a minimum of 18" vertical clearance between the proposed sanitary sewer and existing water main.

\## Open cut installation with compacted backfill per CMSC 911

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

SANITARY SEWER TABLE

LINE	BEARING	LENGTH	SIZE
PS–S1	S86°12'35"E	68.42'	8"
S1–S2	S86°37'23"E	197.92'	8"

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B

SANITARY SEWER PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

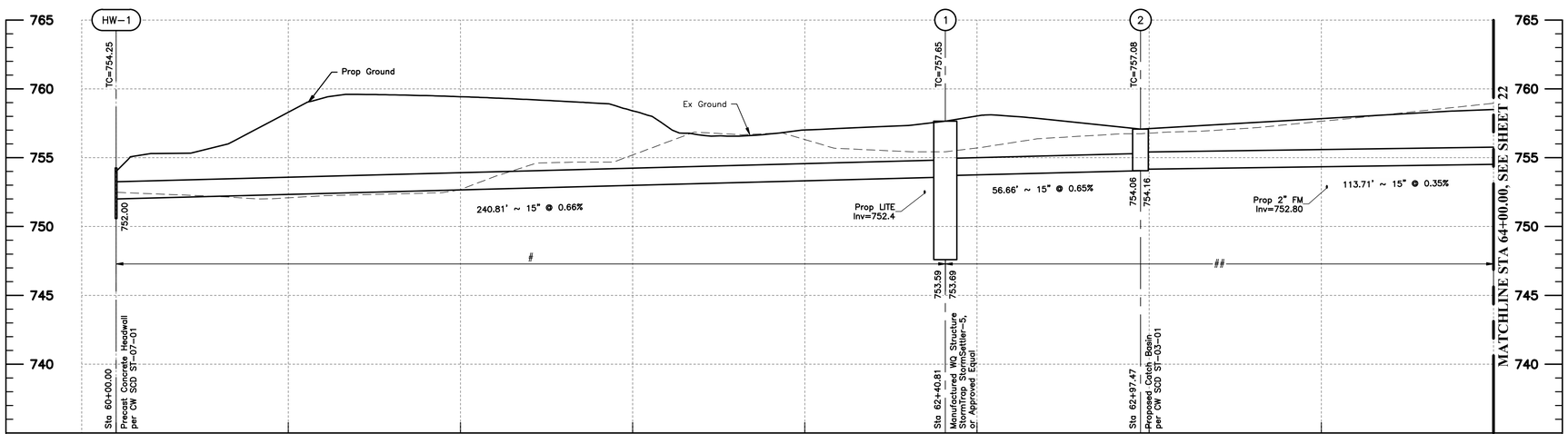
DATE
September 2025

SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
20/61

J:\20241062\Dwg\04Sheets\SITE\SANITARY SEWER PLAN.dwg, Last Saved By: obanks, 9/9/2025 2:34 PM Last Printed By: Banks, Annaliese, 9/15/2025 1:15 PM
Xrefs: 20241062-PS_REFR-N 20241062-PS_REFR-F 20241062-CIV-SSWR-N



STATION	60		61		62		63		64
EX GROUND	752.49	752.09	752.69	755.20	756.32	755.70	756.78	757.65	758.95
INVERT	752.00	752.33	752.66	752.99	753.32	753.75	754.17	754.34	754.52
CUT	0.49	-0.24	0.03	2.21	3.00	1.95	2.61	3.30	4.43
PROP GROUND	754.00	758.30	759.43	758.41	757.01	758.03	757.12	757.84	758.50

NOTES:

1. All "Cut" profile view labels are in reference to the existing ground
2. # Open cut installation with compacted granular backfill per CMSC 912
3. ## Open cut installation with compacted backfill per CMSC 911
4. * Maintain a minimum of 18" vertical clearance between proposed storm sewer and existing/proposed sanitary sewer or water main.

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

STORM SEWER TABLE

LINE	BEARING	LENGTH	SIZE
1-2	S61°15'57"E	56.66'	15"
2-3	S82°57'48"E	113.71'	15"
HW-1-1	S34°59'35"E	240.81'	15"

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STORM SEWER PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers Planners Surveyors
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

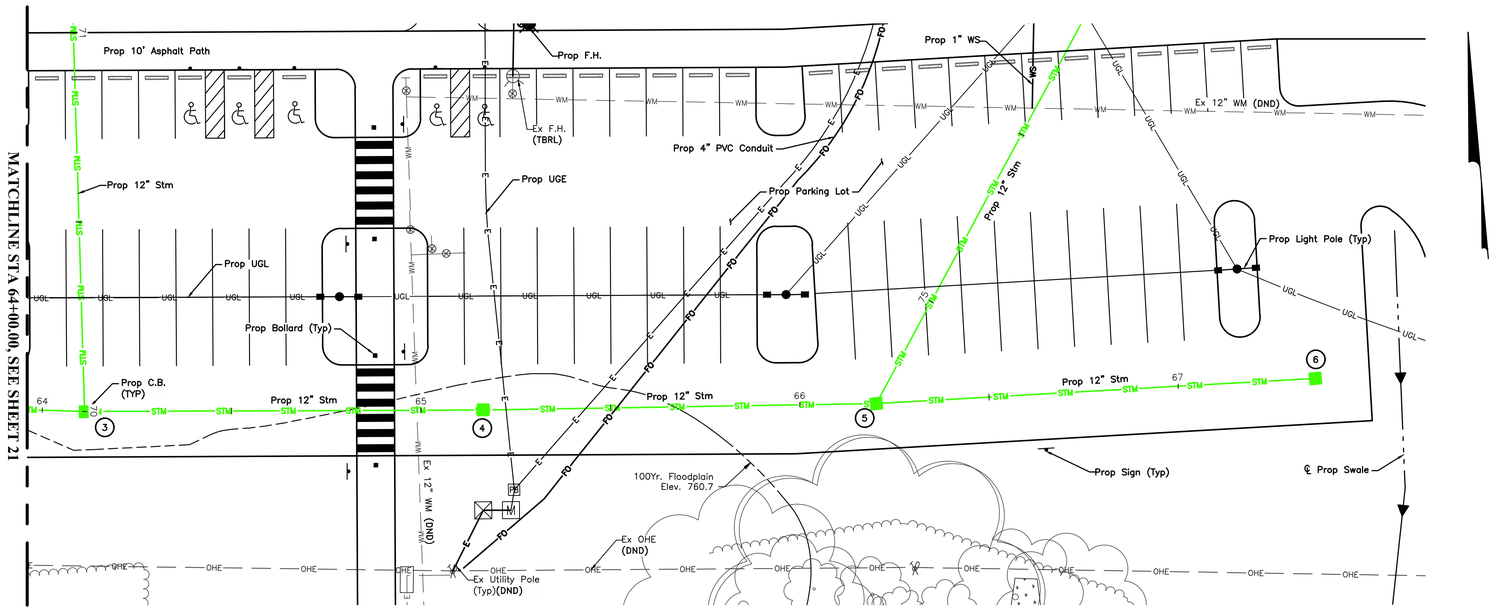
DATE
September 2025

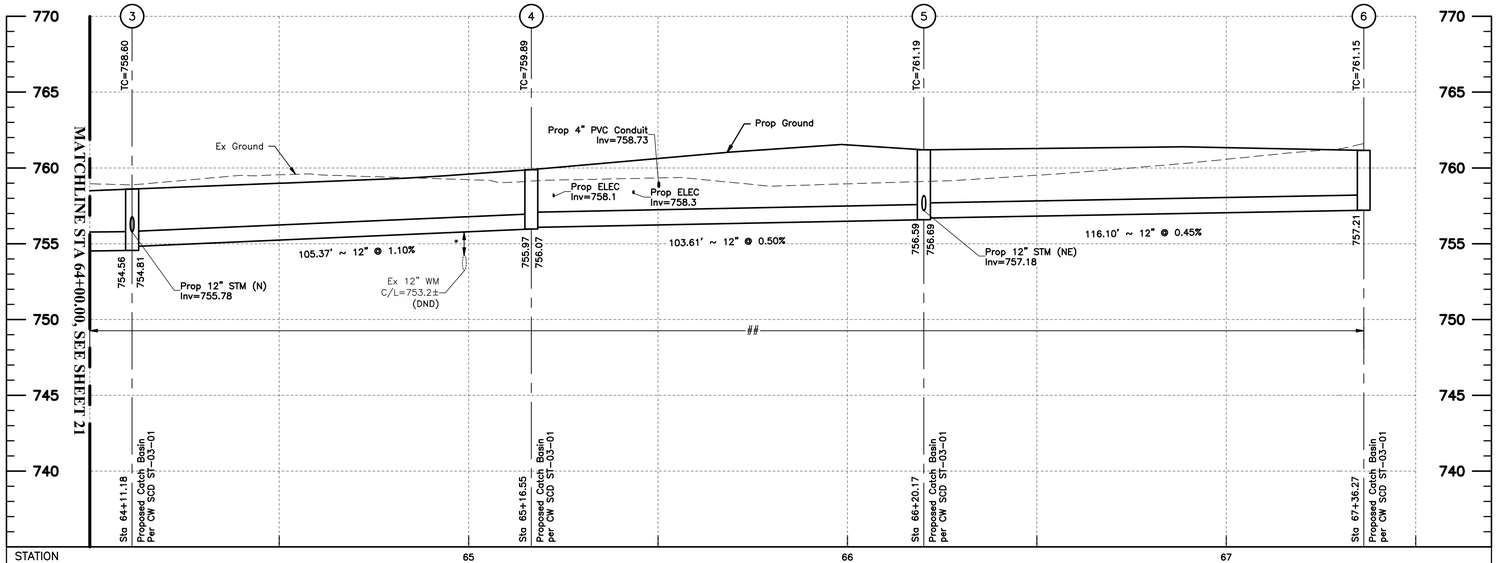
SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
21/61

J:\20241062\Dwg\04Sheets\SITE\STORM SEWER PLAN.dwg, Last Saved By: obanks, 9/9/2025 2:38 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:16 PM
Xrefs: 20241062-CS-REFR-N 20241062-PS-REFR-F 20241062-PU-STRM-N





NOTES:

1. All "Cut" profile view labels are in reference to the existing ground
2. # Open cut installation with compacted granular backfill per CMSC 912
3. * Maintain a minimum of 18" vertical clearance between proposed storm sewer and existing/proposed sanitary sewer or water main.

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

STORM SEWER TABLE

LINE	BEARING	LENGTH	SIZE
3–4	S85°05'42"E	105.37'	12"
4–5	S85°50'04"E	103.61'	12"
5–6	S88°09'27"E	116.10'	12"

STATION		65		66		67
EX GROUND	759.55	759.23	759.34	758.95	759.52	760.57
INVERT	755.24	755.79	756.24	756.49	756.82	757.05
CUT	4.31	3.44	3.10	2.47	2.69	3.52
PROP GROUND	758.99	759.59	760.63	761.52	761.28	761.34

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STORM SEWER PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

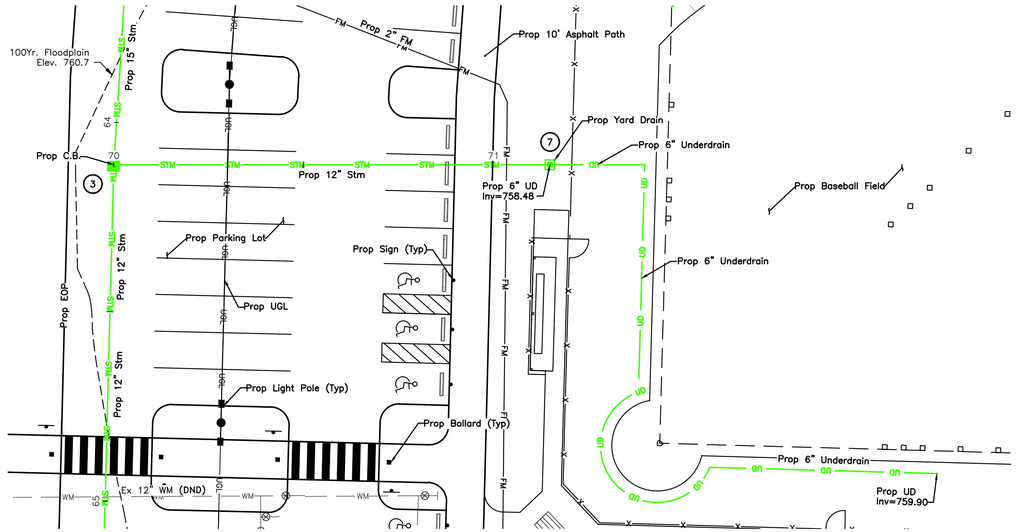
DATE
September 2025

SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
22/61

J:\20241062\Dwg\04Sheets\SITE\STORM SEWER PLAN.dwg, Last Saved By: obonks, 9/9/2025 2:38 PM Last Printed By: Banks, Annaliese, 9/15/2025 1:16 PM
Xrefs: 20241062-PS_BFFB-E_20241062-PS_BFFB-N_20241062-PS_BFFB-P_20241062-PLT_STRM-N



NOTES:

1. All "Cut" profile view labels are in reference to the existing ground

Open cut installation with compacted backfill per CMSC 911

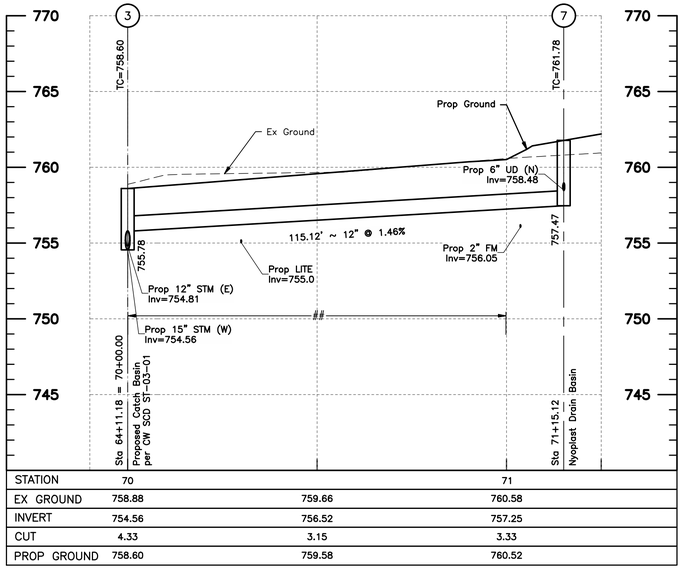
GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

STORM SEWER TABLE

LINE	BEARING	LENGTH	SIZE
7–3	S03°24'52"W	115.12'	12"



STATION	70		71
EX GROUND	758.88	759.66	760.58
INVERT	754.56	756.52	757.25
CUT	4.33	3.15	3.33
PROP GROUND	758.60	759.58	760.52

MARK	DATE	DESCRIPTION

REVISIONS

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B

STORM SEWER PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

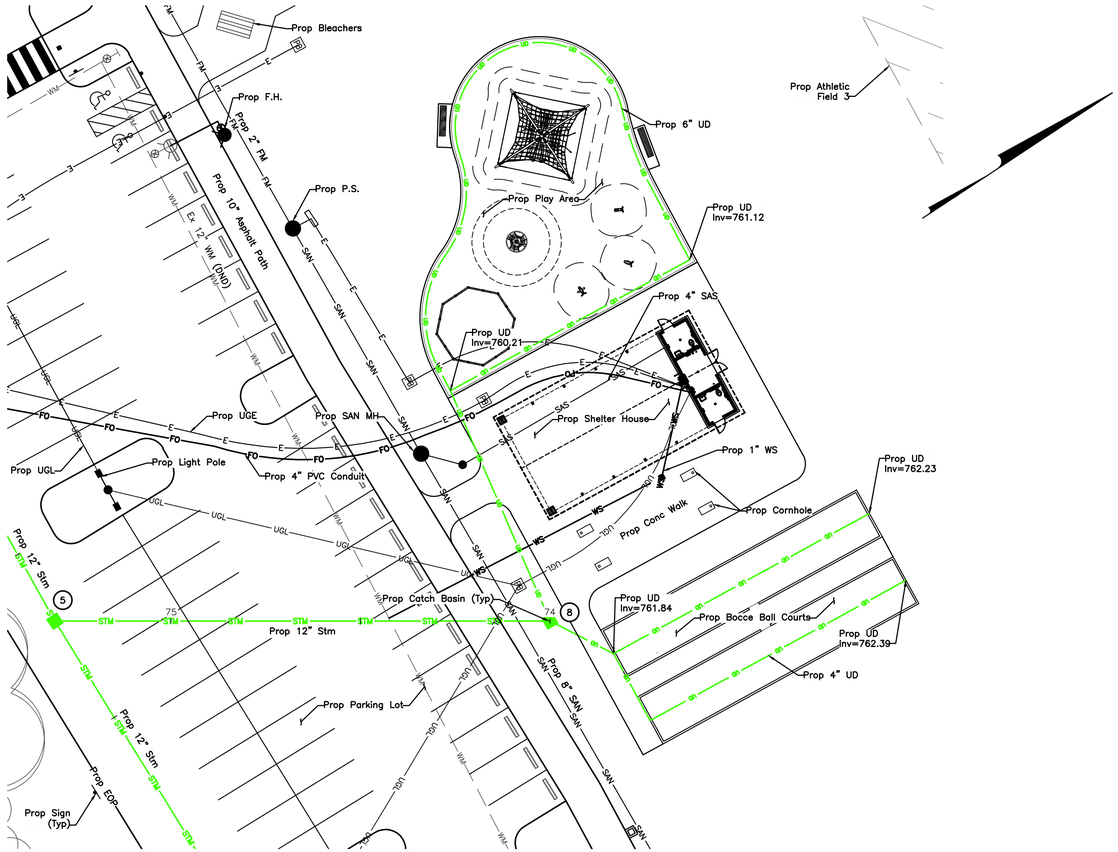
DATE
September 2025

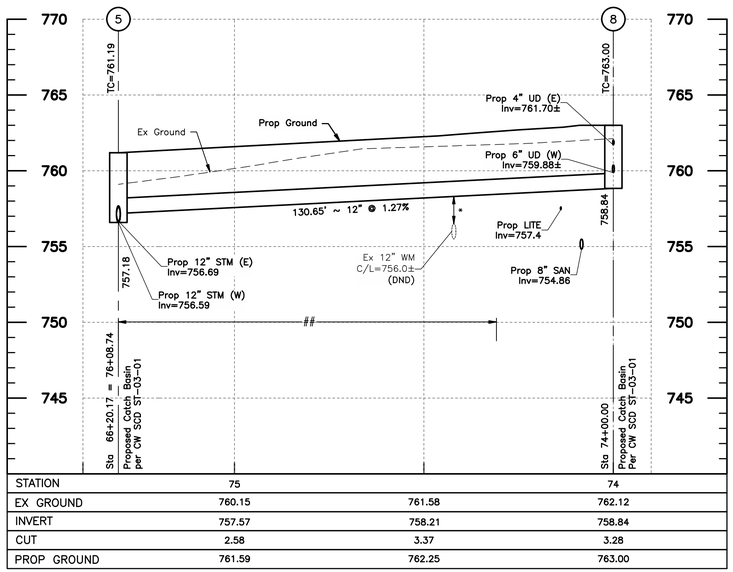
SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
23/61

J:\20241062\Dwg\04Sheets\SITE\STORM SEWER PLAN.dwg, Last Saved By: cbonks, 9/9/2025 2:38 PM Last Printed By: Bonks, Annaliisa, 9/15/2025 1:16 PM
X-refs: 20241062_PS_REFR_N 20241062_PS_REFR_E 20241062_PS_REFR_C 20241062_PS_REFR_CL-STRU_N





STATION	75		74
EX GROUND	760.15	761.58	762.12
INVERT	757.57	758.21	758.84
CUT	2.58	3.37	3.28
PROP GROUND	761.59	762.25	763.00

STORM SEWER TABLE

LINE	BEARING	LENGTH	SIZE
8–5	S33°28'01"W	130.65'	12"

NOTES:

1. All "Cut" profile view labels are in reference to the existing ground

Open cut installation with compacted backfill per CMSC 911

* Maintain a minimum of 18" vertical clearance between proposed storm sewer and existing/proposed sanitary sewer or water main.

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STORM SEWER PLAN & PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

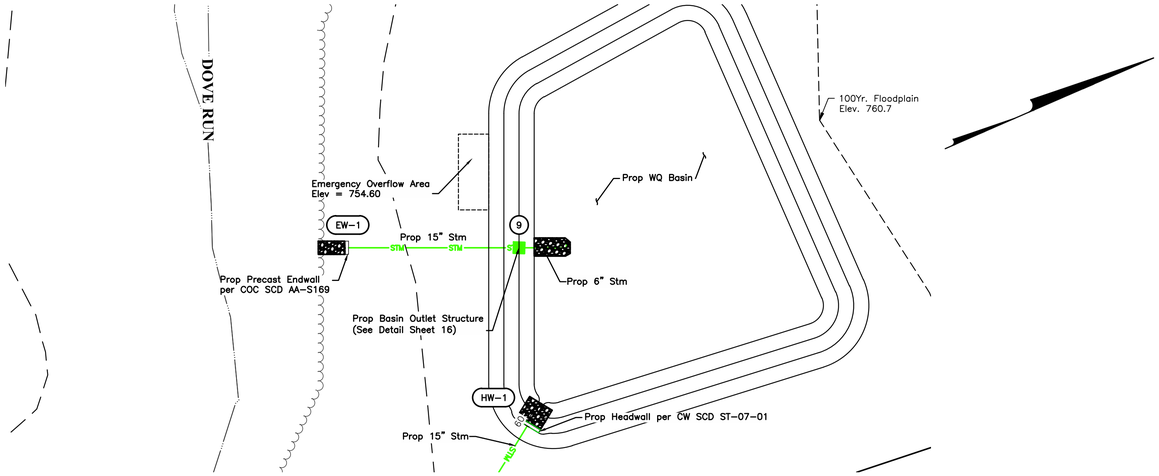
DATE
September 2025

SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
24/61

J:\20241062\Dwg\04Sheets\SITE\STORM SEWER PLAN.dwg, Last Saved By: cbanks, 9/15/2025 1:46 PM Last Printed By: Banks, Annaliso, 9/15/2025 1:46 PM
X Refs: 20241062-PS_BEFR_N, 20241062-PS_BEFR_F, 20241062-PLSTRM_N

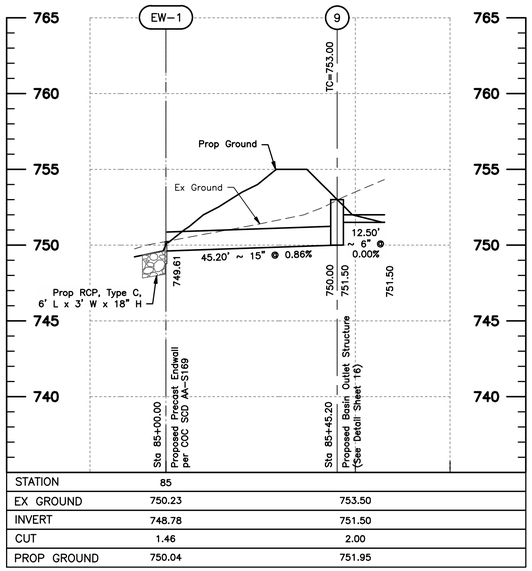


GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

STORM SEWER TABLE			
LINE	BEARING	LENGTH	SIZE
9–	N23°31'57"E	12.50'	6"
EW–1–9	N23°31'57"E	45.20'	15"



STATION	85	
EX GROUND	750.23	753.50
INVERT	748.78	751.50
CUT	1.46	2.00
PROP GROUND	750.04	751.95

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STORM SEWER PLAN & PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

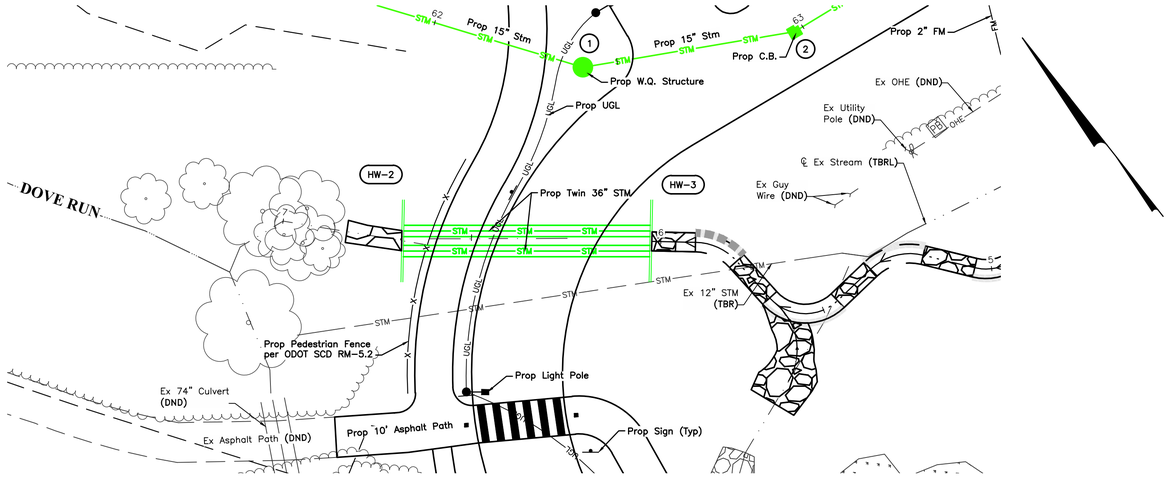
DATE
September 2025

SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
25/61

J:\20241062\Dwg\04Sheets\SITE\STORM SEWER PLAN.dwg, Last Saved By: obonks, 9/9/2025 2:38 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:17 PM
Xrefs: 20241062-PS-REFB.dwg, 20241062-PS-REFB-N.dwg, 20241062-PS-REFB-E.dwg, 20241062-PLT-STRM.dwg



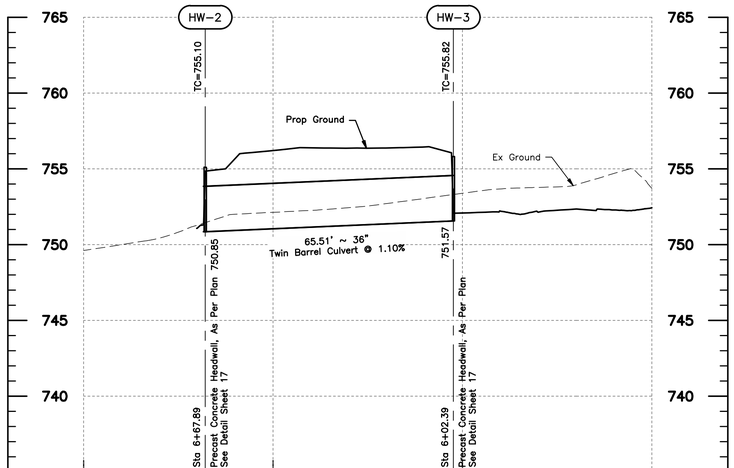
GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

STORM SEWER TABLE

LINE	BEARING	LENGTH	SIZE
HW-3-HW-2	N51°43'15"W	65.51'	36"



STATION		6
EX GROUND	752.14	753.39
INVERT	751.05	
CUT	5.16	
PROP GROUND	756.21	

MARK	DATE	DESCRIPTION

REVISIONS

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B
STORM SEWER PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
Horiz: 1" = 20'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
26/61

J:\20241062\Dwg\04Sheets\SITE\STORM SEWER PLAN.dwg, Last Saved By: obanks, 9/9/2025 2:38 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:17 PM
Xrefs: 20241062-PS-REFR-N 20241062-PS-REFR-F 20241062-01-STRM-N

GENERAL NOTES

SITE VISIT

The Contractor shall perform field reconnaissance to become acquainted with the existing site conditions and the potential effects upon the scope of work.

PERMITS

The Contractor shall secure and pay for all permits, government fees, and licenses necessary for the proper execution and completion of the improvements shown on the plans.

Waterway Permit

The City will obtain a waterway permit from the U.S. Army Corps of Engineers (CWA Section 404 Permit # TBD). The Contractor must abide by all terms and conditions of the waterway permit that has been obtained for the project for all work within Waters of the United States (i.e., streams, wetlands, etc.). No work within the stream channel during the restricted period of March 15 – June 30 can occur without additional approval from the required regulatory agencies. If needed, the City will provide authorization to the Contractor for in–water water work during this period following receipt of regulatory approval.

Floodplain Permit

The site is shown on Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) for Village of Canal Winchester, Panel No. 39049C0458K (effective date: June 17, 2008). The project area is located in Zone AE, the 100–year floodplain and Zone X, the 500–year floodplain. No work may occur within the stream channel or the identified flood hazard areas without issuance of a Floodplain Development Permit from the City.

NPDES Permit

The City will obtain a Notice of Intent (NOI) for the project, providing coverage under the Ohio EPA's Construction General Permit. Prior to starting work on the project, the Contractor shall become a co–permittee on the NOI.

Copies of all permits shall be kept on–site at all times.

PLAN MODIFICATION

Any modifications to the work as shown on these drawings must have prior written approval by the City. Inspectors have no authority to approve revisions in the field.

PRE-CONSTRUCTION MEETING

A pre–construction conference involving a representative of the City, the Principal Contractor, and all applicable Sub–Contractors will be held prior to the start of construction.

During the conference the Contractor shall submit their construction schedule, proposed schedule for controlling siltation and erosion, and temporary and permanent seeding for the project.

PRUNING

Branches or growth which interferes with the free construction of the project may be removed from trees/bushes that are to be saved by the use of pruning tools with prior approval from the Owner. All pruning tools used and methods employed shall meet the approval of the Owner. The branches shall be removed with a good clean cut made flush with the parent trunk or, if having a good healthy lateral branch, the cut shall be a good clean slanting cut close to and beyond the healthy branch. All pruning cuts shall be painted with an accepted pruning preservative.

Trees damaged or destroyed that were not designated for removal or approved by the Owner for removal shall be replaced at the Contractor's expense.

DEWATERING

The Contractor is solely responsible to the Ohio Department of Natural Resources (ODNR) for registry, maintenance, and abandonment of any withdrawal devices used in the construction of this project.

Installation of any well, well point, pit or other device used for the purpose of lowering the groundwater level to facilitate construction of this project shall be properly abandoned in accordance with the provisions of Section 3745–9–10 of the Ohio Administrative Code or as directed by the Director or his representatives.

The Contractor shall be required to complete and file a Well Log and a Drilling Report Form with ODNR, Division of Water, within 30 days of the completion of installation of any well, well point, pit or other device used for the purpose of removing groundwater from an aquifer, in accordance with Sections 1521.01 and 1521.05 of the Ohio Revised Code. In addition, any such facility that has a capacity to withdraw waters of the State in an amount greater than 100,000 gallons per day from all sources shall be registered by the Contractor with the Chief of the ODNR, Division of Water, within three (3) months of the completion of the facility in accordance with Section 1521.16 of the Ohio Revised Code. Copies of the necessary paperwork can be obtained at ODNR, Division of Water, Fountain Square, Columbus, OH, 43224–1387 – Phone: (614) 265–6717.

The Contractor shall furnish and operate suitable pumping equipment of such capacity, adequate to dewater the work area, should water be encountered. The work area shall be sufficiently dewatered so that the compaction of earth can be performed. The cost of any dewatering operations required for the construction of the project improvements shall be included in the price bid for the various improvement items.

The Contractor shall convey all water to a natural drainage channel or storm sewer without damage to property. The Contractor shall be responsible to place and maintain the necessary sediment and erosion control measures to filter the dewatering discharge and to prevent erosion at the discharge location. Cost for the above shall be included in the bid price for the various improvement items.

MAINTAIN DRAINAGE

The flow in all sewers, drains, and watercourses encountered shall be maintained by the Contractor at his/her own expense, and whenever such watercourses and drains are disturbed or destroyed during the execution of the work, they shall be restored by the Contractor at his/her own cost and expense, unless specific provision is made within the Contract Documents for the measure of and payment for such cost specific items, to a condition satisfactory to the City Engineer.

REMOVAL AND REPLACEMENT OF DRAIN TILE AND STORM SEWER

All drain tile and storm sewers damaged, disturbed, or removed as a result of the Contractor's operations shall be replaced with the same quality pipe or better, maintaining the same gradient as existing as directed by the City. The drain tile and/or storm sewer shall be connected to the storm sewer system or provided with an outlet into the proposed stream valley with headwall and outlet protection as applicable. Replaced drain tile/storm sewer shall be laid on compacted bedding equal in density to surrounding stratum. Backfill void(s) with cohesive material that is compacted to the embankment specification per Item 203. Identified tiles that affect the drainage from adjacent property shall not be removed until an alternate drainage method is designed and constructed by an Agent of the City. Mark the tile locations, and notify the City immediately if identified. The City shall coordinate with the Franklin County Engineer's Office to confirm whether tiles are serving off–site property owners and the final disposition of those tiles. No field tile shall be removed or plugged prior to identifying the origin of the tile. Removed materials become the property of the Contractor and shall be removed from the project site. The cost of this work is to be considered incidental to the overall project. No separate payment shall be made.

CLEANUP

The Contractor shall be responsible for the immediate cleanup of any debris, mud, or dirt tracked or spilled on public streets or private drives whether inside or outside the project area. The Contractor is responsible for the cost of any services contracted and/or completed by the City Engineer in the cleanup of any tracking or spillage anytime during project construction. The Engineer may require the Contractor to perform weekly street cleaning if excessive amounts of dirt and mud are left along the street. This may include removal by sweeping, power cleaning, or manual methods. The cost of this work shall be included in the various contract items, unless otherwise specified.

CONSTRUCTION DEBRIS

All debris, rubble, unusable materials, and items not salvaged by the City shall become the property of the Contractor and shall be removed from the site by the Contractor and disposed of properly.

ELEVATION DATUM

Elevations are based on North American Vertical Datum of 1988 (NAVD 88).

ACCESS

Access to adjoining properties shall be maintained at all times.

ACCESS TO THE STREAM CORRIDOR

During construction of the new stream corridor, Contractor shall minimize vehicular travel along unstabilized slopes. Contractor shall maintain a minimal number of access points for construction vehicles to enter the stream corridor.

TREE AND LANDSCAPE PROTECTION DURING CONSTRUCTION

The Contractor shall constrict all activities, equipment storage, and staging to within the construction limits. Unless otherwise identified in the plans, the construction limits are plotted accordingly.

Except as shown on the tree removal plan, all trees within the work limits shall be protected against injury or damage to branches, trunks, or roots from construction and excavation. Interfering branches of trees may be removed when acceptable to the City Engineer. Any trees damaged or destroyed due to the Contractor's negligence will be treated or removed and replaced at the Contractor's expense. Additionally, the Contractor shall preserve and protect all landscaping beds and minimize impacts to these landscaping beds within the construction limits.

PROTECTION OF THE WORK AREA

Contractor shall construct the proposed stream channel in the dry to the extent practical. Earthen plugs shall be maintained at the upstream and downstream connections to the existing stream to isolate the work area. Contractor shall furnish and maintain temporary dewatering pumps to remove water from the work area as needed. Pumped water shall be filtered through sediment bags prior to return to a receiving waterway.

Upon stabilization of the new channel section, Contractor shall remove the earthen plugs at each end to allow for construction at the connection points to the existing stream. Contractor shall install aggregate check dams as indicated on the plans to restrict flow into the new channel until it is adequately stabilized, as determined by the Engineer.

COORDINATION WITH UTILITIES

The Contractor is advised that some utility facilities may not be clear of the construction area during the time of construction. These utility facilities may remain in place or be relocated within the construction limits. The Contractor shall not wait on the relocations to be completed, but instead shall cooperate with the utilities including their contractors, and work around the existing facilities. The Contractor shall cooperate with all utilities located within the limits of this construction project and take responsibility for the protection of the utility property and services. No separate payment shall be made for the Contractor to coordinate with Utility Companies.

The Contractor shall exercise caution when working in the proximity of existing and/or relocated utility facilities. Costs to expose conduit shall be included in the items of work affected. The Contractor is reminded to keep their OUPS ticket updated according to industry practices.

AERIAL UTILITY CROSSINGS

The Contractor shall install and maintain during construction, safety signage at all aerial utility crossings.

ABANDONED UTILITIES

The Contractor shall be responsible for the removal and disposal of any abandoned utility facility that may conflict with any facility or construction activity proposed in these plans, including the installation of proposed conduit, underdrain, storm sewer, structure, waterline, sanitary sewer line, subgrade stabilization, foundations, etc. The Contractor is advised to verify that a utility facility has been abandoned before proceeding with removing it. If it is determined that the utility facility is active and in conflict, then the Contractor shall notify the Engineer prior to proceeding with any affected proposed work.

The cost of the operations necessary to remove and dispose of conflicting abandoned utilities shall be included with the price of the affected item for payment. No separate payment shall be made.

CONSTRUCTION LAYOUT

General field layout control shall be provided by the Contractor. Provisions for all other construction staking required to accomplish the improvements shall be performed in accordance with the Contract Documents. All staking shall be completed by a Professional Surveyor registered with the State of Ohio.

ENVIRONMENTAL COMMITMENTS

Construction activities will be performed offline or during low flow conditions to the greatest extent practicable.

The Contractor shall not stockpile soil or any other materials/equipment in the vicinity of any identified wetlands.

The Contractor shall not remove trees measuring greater than 3–inches DBH under this project from April 1 through September 30. All necessary tree removal shall occur from October 1 through March 31. This requirement is necessary to avoid impacts to bat species as required by the Endangered Species Act.

MAINTENANCE OF CONSTRUCTION EQUIPMENT

All construction equipment shall be inspected daily for hydraulic and fuel leaks. All fuel operations, lubricating, hydraulic topping off and equipment repairs and maintenance shall be performed at upland locations away from the onsite wetlands and stream channels. These activities must take place on an approved pad with spill control/collection devices in place. All equipment and materials not in use must be securely locked to avoid vandalism and accidental spills. Emergency response liquid containment devices such as absorbent socks and pads shall be readily available on site. Fuel tank purging or draining of water from fuel bowls is prohibited on site.

PROTECTION OF PLACED TOPSOIL

Contractor shall avoid unnecessary vehicular travel across placed topsoil within the stream corridor. Compacted topsoil shall be disced prior to planting. See topsoil notes for Item 652, Placing Stockpiled Topsoil, As Per Plan and Item 653, Topsoil Furnished and Placed, As Per Plan Sheet 28.

COMPLETE PROJECT

The Contractor shall be required to construct a complete project, meeting the intent of these drawings and specifications. Any items required to complete the work that do not have a specific method of payment described shall be performed by the Contractor. The cost of the work shall be included in the price for the various related items.

LANDSCAPE CONTRACTOR QUALIFICATIONS REQUIRED

The Contractor is hereby advised that the landscape improvements to be constructed under this project are critical to the project's ability to meet the requirements of the approved stream restoration plan document. All landscape work shall be performed by a qualified landscaping contractor with documented prior experience successfully completing installations on similar projects. The Contractor shall furnish qualifications for the proposed persons or entities proposed for the landscaping portion of the project. The Owner may reasonably object to any proposed landscaping subcontractor upon review of this information.

LANDSCAPING WARRANTY

The Contractor is advised the landscaping improvements shown on the plans include a landscaping warranty in addition to the project warranty discussed in the General Conditions. The Contractor shall refer to the Planting Notes (Sheet 42–43) and Planting Plan (Sheet 41) for additional information regarding the landscaping warranty.

FLOODPLAIN SUBGRADE DISCING REQUIRED

The Contractor shall ensure the floodplain bench subgrade is thoroughly disced prior to spreading topsoil. The discing effort is essential to the successful installation of the planting materials specified for the project.

SUPPLEMENTAL NOTES

ITEM 201, CLEARING AND GRUBBING, AS PER PLAN

Existing trees to be removed, as indicated on the plan, shall be removed between October 1 and March 31st. All wood chips that result from clearing and grubbing activities are to be hauled off–site and should not remain on the premises. Any root cutting necessary for any/all construction operations shall be included.

The cost of all labor, equipment, and materials associated with this work shall be included in the price bid for Item 201, Clearing and Grubbing, As Per Plan.

ITEM 203, EMBANKMENT (FROM STOCKPILE), AS PER PLAN

The specifications of Item 203 shall apply for this work along with the following notes. Fill within the planting zones shall be compacted in horizontal lifts to reach a target compaction requirement of 90% Standard Proctor (±2.5%) and wet of optimum moisture content. Fill in all other areas shall be compacted according to Item 203. All required testing to be provided by the Contractor.

The cost of all labor, equipment, and materials associated with this work shall be included in the price bid for Item 203, Embankment (From Stockpile), As Per Plan.

ITEM 203, EXCAVATION (TO STOCKPILE), AS PER PLAN

This item consists of excavating material from the proposed stream restoration grading area and stockpiling on–site for reuse as embankment material within the proposed stream restoration corridor.

The specifications within Item 203 shall apply for this work along with the following notes. The Contractor shall coordinate with the Owner to determine the temporary onsite stockpile location. This item also includes, but is not limited to, removal and disposal of pipe and debris encountered in the excavation work and any subgrade overexcavation needed for topsoil placement, rock channel protection placement, or instream feature placcement.

The cost of all labor, equipment, and materials associated with this work shall be included in the price bid for Item 203, Excavation (To Stockpile), As Per Plan.

ITEM 203, EXCAVATION (TO HAUL OFFSITE), AS PER PLAN

This item consists of excavating material from the proposed grading area to be disposed off–site. The Contractor shall provide a copy of the signed, written agreement between the Contractor and the offsite landowner before such disposal occurs. The agreement shall clearly state the purpose of the agreement and indicate the landowner's permission for such use. This item also includes, but is not limited to, removal and disposal of pipe and debris encountered in the excavation work and any subgrade overexcavation needed for topsoil placement, rock channel protection placement, or instream feature placcement.

The cost of all labor, equipment, and materials associated with the work shall be included in the price bid for Item 203, Excavation (To Haul Offsite), As Per Plan.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION GENERAL NOTES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, Ohio 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
27/61

J:\20241062\Dwg\04Sheets\SITE\14 STREAM RESTORATION SUPPLEMENTAL NOTES.dwg, Last Saved By: dbanks, 9/9/2025 2:39 PM Last Printed By: Banks, Annalise, 9/15/2025 1:17 PM

SUPPLEMENTAL NOTES (CONT.)

ITEM 601, ROCK CHANNEL PROTECTION, TYPE A, WITH AGGREGATE FILTER, AS PER PLAN

The specifications within Item 601 shall apply for this work along with the following notes. No reinforcing steel is permitted. Rock Channel Protection shall conform to ODOT CMS Section 601.09. In addition, the voids between stones shall be filled with #1 and #2 stone. Plan quantities assume a 30% void ratio in rock channel protection to be infilled with #1 and #2 stone. Recycled concrete is not permitted for use as riprap (rock channel protection) on this project. Rock Channel Protection, Type A, with Aggregate Filter shall be installed at the location shown on the plans. The cost of all labor, equipment, and materials associated with this work shall be in included in the price bid for Item 601, Rock Channel Protection, Type A, With Aggregate Filter, As Per Plan.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE C, WITH AGGREGATE FILTER, AS PER PLAN

The specifications within Item 601 shall apply for this work along with the following notes. No reinforcing steel is permitted. Rock Channel Protection shall conform to ODOT CMS Section 601.09. In addition, the voids between stones shall be filled with #1 and #2 stone. Plan quantities assume a 30% void ratio in rock channel protection to be infilled with #1 and #2 stone. Recycled concrete is not permitted for use as riprap (rock channel protection) on this project. Rock Channel Protection, Type C, with Aggregate Filter shall be installed at the location shown on the plans. The cost of all labor, equipment, and materials associated with this work shall be in included in the price bid for Item 601, Rock Channel Protection, Type C, With Aggregate Filter, As Per Plan.

ITEM 607, FENCE, TYPE SPECIAL, AS PER PLAN

This work includes all labor, equipment, and material required to install 4' orange snow fence at the perimeter of the designated Tree Protection Areas as shown on this plan.

The cost of all labor, equipment, and materials associated with this work shall be in included in the price bid for Item 607, Fence, Type Special, As Per Plan.

ITEM 652, PLACING STOCKPILED TOPSOIL, AS PER PLAN

Contractor shall source stockpiled topsoil from proposed site grading north of the stream restoration. Labor, equipment, and materials associated with stockpiling topsoil are covered under the Pavement, Site Utilities and Drainage Quantities.

Prior to respreading topsoil material, perform soil testing following the requirements below. Provide the test results to the Engineer. The Engineer shall determine if soil amendments (compost, lime, fertilizer, etc.) are required. If soil amendments are required, the labor, materials, and equipment associated with providing the soil amendments will be paid for under a change order. Sample frequency and collection method shall be per CMS 659.02 (B).

Topsoil shall be per ASTM D5268–13, pH range of 5.5 to 7, min. 4 percent organic material, free of stones and soil clumps 3/4 inch and larger. The topsoil shall be free of herbicides, petroleum–based materials or other substances of a hazardous or toxic nature which may inhibit plant growth. The topsoil shall be free of noxious weeds, seeds or vegetative parts of weedy plants that cannot be selectively controlled in the planting.

Submittals:

Submit supplier name and contact information, location of material sources, agricultural soil testing laboratory name and contact information, and test results for the following:

1) Topsoil: include particle size analysis (% sand, silt and clay) and USDA texture class, pH, soluble salts content, organic matter content, and chemical analysis.
2) Product certificates for each chemical soil amendment and fertilizer material, if applicable.
3) Written plan for placing and settling installed materials including wheel load data for earthwork equipment. Plan to be submitted two weeks in advance of soil installation.

Construction Requirements:

Roto–til or disc the top 12" of subgrade. The intent is to support long–term root growth for proposed riparian trees and shrubs. Topsoil shall not be placed until subgrade elevations are approved by the Engineer according to Item Spec., Grade Checking, As Per Plan. Place topsoil to finished grade elevation in settled 6 inch lifts according to topsoil depths specified on the plans. Topsoil shall be consolidated, but not over compacted. If the Engineer/Owner determines the topsoil to be over compacted, Contractor will be required to scarify the area. The site shall be fine graded to the elevations shown on the plans, within tolerances specified in Item Spec., Grade Checking, As Per Plan.

– The Contractor shall spread topsoil across the work area to the depths listed on Sheet 37 and Sheet 38.

The cost of all labor, equipment, and materials associated with this work shall be included in the price bid for Item 652, Placing Stockpiled Topsoil, As Per Plan.

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN

To supplement the quantity of stockpiled topsoil, the Contractor shall identify a source or supplier of off–site topsoil material meeting the requirements stipulated on this plan. The Submittal and Construction Methods stipulated for Item 652, Placing Stockpiled Topsoil, As Per Plan, shall also apply to the work performed under Item 653, Topsoil Furnished and Placed, As Per Plan.

The cost of all labor, equipment, and materials associated with this work shall be included in the price bid for Item 653, Topsoil Furnished and Placed, As Per Plan.

ITEM 659, SEEDING AND MULCHING, ZONES 2 AND 3, AS PER PLAN

Seeding shall conform to the notes contained herein and the requirements of ODOT CMS Section 659. Cover for the seeding will use slope erosion control matting, as shown in the Planting Plan and Typical Section Details. In addition to these requirements, the seeding shall conform to the following:

Permanent seeding: disturbed areas that are at final grade must be permanently stabilized within seven days of the most recent disturbance. Disturbed areas within 50 feet of a surface water must be permanently stabilized within 2 days of reaching final grade.

Temporary seeding: disturbed areas that are not at final grade and that will be dormant for more than 14 days shall be temporarily stabilized within 7 days of the most recent disturbance. Disturbed areas within 50 feet of a surface water and that will be dormant for more than 14 days shall be temporarily stabilized within 2 days of the most recent disturbance.

The Zones 2 and 3 Seed Mix is specified on Sheet 41. This seed mix shall be used in the areas specified on Sheet 41 and is referred to within this plan as Item 659, Seeding And Mulching, Zones 2 and 3, As Per Plan.

Perform the work according to ODOT CMS Item 659. The cost of all labor, equipment, and materials associated with this work shall be included in the price bid for Item 659, Seeding And Mulching, Zones 2 and 3, As Per Plan.

ITEM 661, BARE ROOT SHRUBS, 18" HT., AS PER PLAN
ITEM 661, BARE ROOT TREES, 18" HT., AS PER PLAN
ITEM 661, DECIDUOUS SHRUB, NO. 5 CONT., AS PER PLAN
ITEM 661, DECIDUOUS TREE, NO. 15 CONT., AS PER PLAN
ITEM 661, WILLOW LIVE STAKE, 24" HT., AS PER PLAN

The Contractor shall provide all labor, equipment, and material necessary to install and maintain the following planting items, as specified in the planting notes, details, and planting plan on Sheets 41–43.

Item 661, Bare Root Shrubs, 18" Ht., As Per Plan
Item 661, Bare Root Trees, 18" Ht., As Per Plan
Item 661, Deciduous Shrub, No. 5 Cont., As Per Plan
Item 661, Deciduous Tree, No. 15 Cont., As Per Plan
Item 661, Willow Live Stake, 24" Ht., As Per Plan

ITEM 670, SLOPE EROSION PROTECTION MAT, AS PER PLAN

This work includes all labor, equipment, and material required to install a temporary erosion control mat at the location and elevation indicated on the plans. The temporary erosion control mat shall be North American Green C125BN, or approved equal. Mat shall be installed with anchor trenches, overlaps, and anchor stakes following the manufacturers recommendations. Anchor stakes shall be installed at no less than 3.75 stakes per square yard. A detail of the installation is provided on Sheet 40. The cost of all labor, equipment, and materials required for this work shall be included in the price bid for Item 670, Slope Erosion Protection Mat, As Per Plan.

ITEM SPEC, BOULDER TOE, AS PER PLAN

The Boulder Toe shall be constructed per the details and notes on Sheets 37–38. The cost of all labor, equipment, and materials required for this work shall be included in the price bid for Item Spec, Boulder Toe, As Per Plan.

ITEM SPEC, DEWATERING, AS PER PLAN

Contractor shall perform dewatering operations as indicated on the plans and as necessary to perform the work. Contractor shall provide a dewatering plan for the Owner's approval, install and maintain dewatering operations, collect and remove accumulated sediment from the work area, and remove dewatering works upon completion of the construction activities that require dewatering. Dewatering activities shall be performed in strict accordance with local noise ordinances. The Contractor shall furnish, install, and maintain throughout the course of the work mufflers, noise–control enclosures, or other noise control methods, measures, and features on and around all dewatering pumps such that steady noise emanating from this equipment does not disturb adjacent property operations. The cost of all labor, equipment, and materials required for this work shall be included in the price bid for Item Spec, Dewatering, As Per Plan.

ITEM SPEC, GRADE CHECKING, AS PER PLAN

Grade checking shall be performed at incremental stages of the project. Surveying shall be performed under supervision of an Ohio licensed Professional Surveyor. Survey data will be evaluated by the Design Engineer for conformance within the specified tolerance. The Contractor must submit updated survey data to document that all required adjustments have resolved any noted deficiencies.

Submittal Requirements:

Submit survey spot shots to the Design Engineer in a CAD–compatible format (point files as .csv or .txt) for the following items until grade is approved to be within plan tolerance.

Channel Profile and Cross Sections:

Submit spot shots along the proposed profile grade, which includes the following features indicated on the profile: bottom of pool, begin riffle, riffle crest, end riffle, and any other grade breaks.

Submit cross section spot shots for all plan cross sections and along hydraulic model sections (extending from bankfull to bankfull only), as directed by the Design Engineer. Channel profile and cross section elevations shall be approved prior to finalizing subgrade elevations.

Subgrade [Final Grade – Topsoil Depth]:

Submit spot shots of the subgrade within the proposed planting areas on a 50–foot grid minimum and include all grade breaks. Subgrade spot shots shall also be submitted along hydraulic model sections, as directed by the Design Engineer. Topsoil shall not be placed until approval of subgrade elevations is obtained.

Final Grade

Submit spot shots of the final grade within the proposed grading area on a 50–foot grid, along all grade breaks, and at hydraulic model cross sections, as directed by the Design Engineer. Topsoil shall not be seeded until approval of final grade elevations is obtained.

Project Tolerance:

Rock Riffles and Rock Sills	+/– 0.15 ft
Storm Sewer, Catch Basin, and Headwalls	+/– 0.10 ft
Subgrade [Final Grade – Topsoil Depth]:	+0.00 ft / –0.25 ft
Final Grade:	+/– 0.15 ft

ITEM SPEC, INVASIVE TREATMENT, AS PER PLAN

Invasive treatment shall occur within the area identified on Sheet 41.

The Contractor shall remove all invasive bush honeysuckle (Lonicera sp.) within the area of construction limits as indicated on the plan sheets. Plants shall be cut close to the ground either by hand or via mechanized clearing, leaving low stumps (1– to 2–inches high) in place. If mechanized clearing is used, no grubbing or ground disturbance shall occur.

The Contractor shall remove all grape vines by tracing them to the area(s) where rooted into the ground and cutting the vine on both sides of where it is rooted.

The Contractor shall apply oil–soluble triclopyr herbicide (trade name Garlon 4 Ultra or approved equal) to the cut surface of shrubs and vines immediately (within 30 minutes) after cutting. Apply at least 20% Garlon 4 Ultra in diesel, fuel oil, kerosene or basal oil, following specifications provided on the product label.

The Contractor shall apply the oil–soluble triclopyr herbicide mixture directly to the freshly cut surface using a hand–held sprayer. Spray the top of the stump to the point of runoff and around the sides to the ground line. Do not allow the herbicide to puddle at the base. Care should be taken not to apply herbicide to adjacent native vegetation.

The Contractor shall complete a follow up application of foliar herbicide to any regrowth during the growing season (late June–October). Apply water–soluble glyphosate herbicide (trade name Rodeo, Accord or approved equal) to the leaves using a sprayer, following the specifications provided on the product label. Care should be taken not to apply herbicide to adjacent native vegetation.

The Contractor may chip plant material on–site and utilize this material only to stabilize disturbed areas. All trees, debris, and excess chipped plant material shall be removed from the site.

All work associated with the above shall be paid for under Item Spec, Invasive Treatment, As Per Plan.

ITEM SPEC, RECORD DRAWING, AS PER PLAN

After all items within the Item Spec, Grade Checking, As Per Plan specification are approved, the Contractor shall submit a record drawing of the project to the Owner and Design Engineer complying with the following:

1. Final spot elevations overlaid on 22"x34" plan sheets in both CAD and PDF format for the channel profile and final grade locations, as specified under Item Spec., Grade Checking, As Per Plan.
2. Record drawing shall include a statement indicating elevations are within plan tolerance and represents a record survey of the completed project.
3. Record drawing shall be signed and sealed by a Professional Surveyor registered in the State of Ohio.

Submittal of the Record Drawing is a requirement of the environmental permits obtained for this project.

ITEM SPEC, ROCK RIFFLE, AS PER PLAN

The Rock Riffles shall be constructed per the details and notes on Sheet 39. The Contractor is responsible for coordination with the Engineer immediately following installation of the first rock riffle, referred to as the test riffle. Approval of the test riffle by the Engineer shall be required prior to installation of subsequent rock riffles.

The cost of all labor, equipment, and materials required for this work shall be included in the price bid for Item Spec, Rock Riffle, As Per Plan.

ITEM SPEC, ROOT PRUNING, AS PER PLAN

This work includes all labor, equipment, and material required to perform root pruning at the interface between the tree preservation area and the proposed stream restoration grading. Root pruning shall be performed prior to any earthwork in the vicinity. The roots shall be cleanly cut using mechanical root pruner, vibratory knife, or similar equipment that will result in clean cuts. If the root pruning trench is cut using excavation equipment without the aforementioned methods, all roots one inch or greater must be cut by hand using pruners. The trench should be immediately backfilled with excavated soil or other organic soil. The root trench shall be a minimum depth of 24 inches. The cost of all labor, equipment, and materials required for this work shall be included in the price bid for Item Spec, Root Pruning, As Per Plan.

ITEM SPEC, WATER MAIN POTHOLING, AS PER PLAN

Prior to earthwork activities, the Contractor shall locate and pothole the existing 12" water main at the location where the water main intersects the proposed stream channel alignment, as shown on the plans. Contractor shall confirm plan elevation of water main, and shall alert the Owner/Engineer if a conflict is found. The cost of all labor, equipment, and materials required for this work shall be included in the price bid for Item Spec, Water Main Potholing, As Per Plan.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION SUPPLEMENTAL NOTES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3646
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

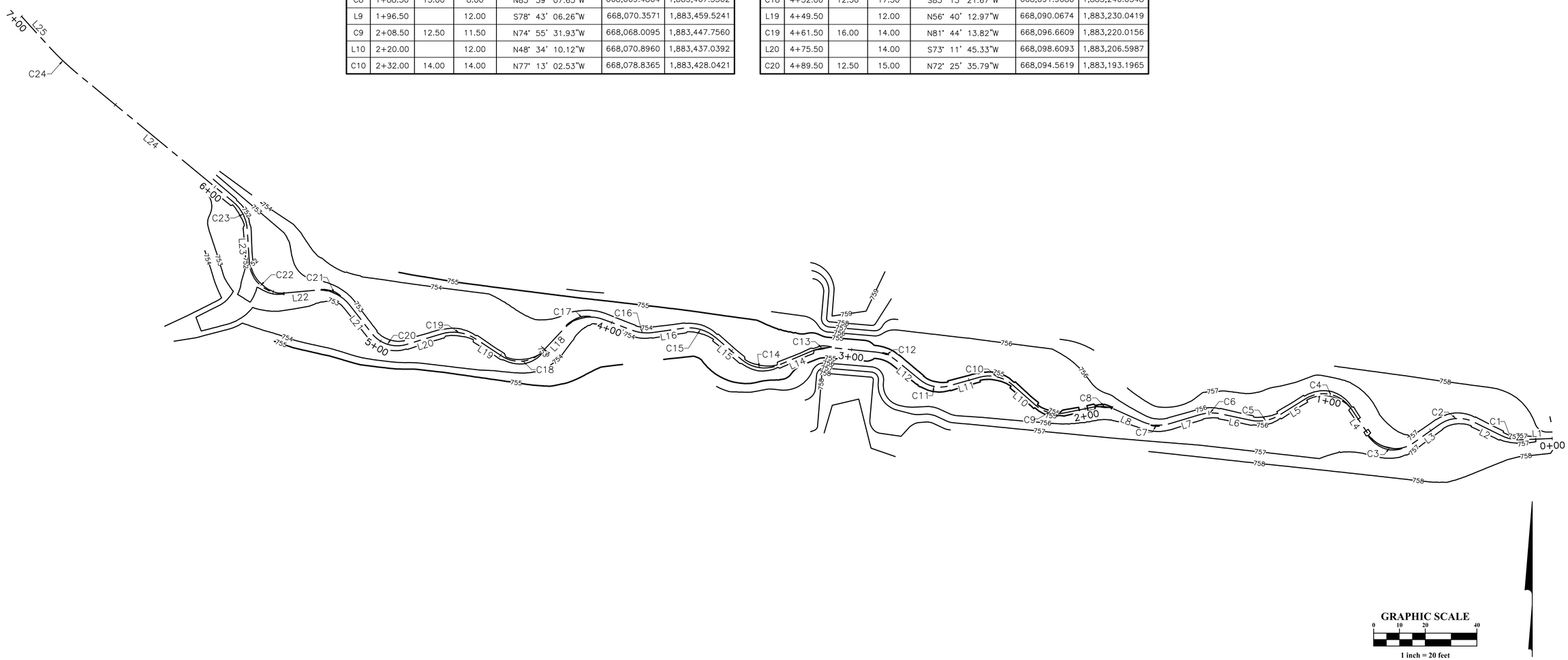
SHEET
28/61

A:\20241062\Dwg\04Sheets\SITE\14 STREAM RESTORATION SUPPLEMENTAL NOTES.dwg, Last Saved By: dbanks, 9/9/2025 2:39 PM Last Printed By: Banks, Annaliese, 9/15/2025 1:17 PM

ALIGNMENT GEOMETRY DATA TABLE						
ID	STATION	RADIUS	LENGTH	LINE/CHORD DIRECTION	NORTHING	EASTING
L1	0+00.00		12.00	S87° 33' 58.73"W	668,058.1460	1,883,637.0040
C1	0+12.00	16.00	8.00	N78° 06' 35.07"W	668,057.6364	1,883,625.0148
L2	0+20.00		12.00	N63° 47' 08.87"W	668,059.2676	1,883,617.2678
C2	0+32.00	13.00	14.00	S85° 21' 45.47"W	668,064.5684	1,883,606.5020
L3	0+46.00		12.00	S54° 30' 39.80"W	668,063.4904	1,883,593.2124
C3	0+58.00	12.50	20.00	N79° 39' 08.35"W	668,056.5238	1,883,583.4417
L4	0+78.00		12.00	N33° 48' 56.51"W	668,059.7451	1,883,565.7995
C4	0+90.00	13.00	20.00	N77° 53' 21.74"W	668,069.7151	1,883,559.1212
L5	1+10.00		12.00	S58° 02' 13.02"W	668,073.5094	1,883,541.4385
C5	1+22.00	15.00	11.50	S80° 00' 01.20"W	668,067.1569	1,883,531.2578
L6	1+33.50		12.00	N78° 02' 10.63"W	668,065.2086	1,883,520.2079
C6	1+45.50	16.00	8.00	S87° 38' 23.17"W	668,067.6961	1,883,508.4685
L7	1+53.50		12.00	S73° 18' 56.97"W	668,067.3701	1,883,500.5583
C7	1+65.50	15.50	11.00	N86° 21' 12.29"W	668,063.9249	1,883,489.0635
L8	1+76.50		12.00	N66° 01' 21.56"W	668,064.6099	1,883,478.3147
C8	1+88.50	13.00	8.00	N83° 39' 07.65"W	668,069.4864	1,883,467.3502
L9	1+96.50		12.00	S78° 43' 06.26"W	668,070.3571	1,883,459.5241
C9	2+08.50	12.50	11.50	N74° 55' 31.93"W	668,068.0095	1,883,447.7560
L10	2+20.00		12.00	N48° 34' 10.12"W	668,070.8960	1,883,437.0392
C10	2+32.00	14.00	14.00	N77° 13' 02.53"W	668,078.8365	1,883,428.0421

ALIGNMENT GEOMETRY DATA TABLE						
ID	STATION	RADIUS	LENGTH	LINE/CHORD DIRECTION	NORTHING	EASTING
L11	2+46.00		12.00	S74° 08' 05.07"W	668,081.8066	1,883,414.9509
C11	2+58.00	12.50	12.00	N78° 21' 47.82"W	668,078.5261	1,883,403.4080
L12	2+70.00		12.00	N50° 51' 40.71"W	668,080.8547	1,883,392.1008
C12	2+82.00	14.50	8.50	N67° 39' 17.64"W	668,088.4291	1,883,382.7934
L13	2+90.50		17.00	N84° 26' 54.57"W	668,091.6146	1,883,375.0437
C13	3+07.50	16.00	8.00	S81° 13' 39.23"W	668,093.2592	1,883,358.1234
L14	3+15.50		14.00	S66° 54' 13.03"W	668,092.0517	1,883,350.2991
C14	3+29.50	14.00	15.50	N81° 22' 44.67"W	668,086.5598	1,883,337.4213
L15	3+45.00		13.00	N49° 39' 42.36"W	668,088.7664	1,883,322.8672
C15	3+58.00	16.00	13.50	N73° 50' 00.33"W	668,097.1812	1,883,312.9581
L16	3+71.50		12.00	S81° 59' 41.71"W	668,100.8296	1,883,300.3732
C16	3+83.50	16.00	8.00	N83° 40' 52.09"W	668,099.1584	1,883,288.4901
L17	3+91.50		12.00	N69° 21' 25.89"W	668,100.0298	1,883,280.6213
C17	4+03.50	14.00	16.50	S76° 52' 45.21"W	668,104.2603	1,883,269.3917
L18	4+20.00		12.00	S43° 06' 56.30"W	668,100.7277	1,883,254.2365
C18	4+32.00	12.50	17.50	S83° 13' 21.67"W	668,091.9680	1,883,246.0348
L19	4+49.50		12.00	N56° 40' 12.97"W	668,090.0674	1,883,230.0419
C19	4+61.50	16.00	14.00	N81° 44' 13.82"W	668,096.6609	1,883,220.0156
L20	4+75.50		14.00	S73° 11' 45.33"W	668,098.6093	1,883,206.5987
C20	4+89.50	12.50	15.00	N72° 25' 35.79"W	668,094.5619	1,883,193.1965

ALIGNMENT GEOMETRY DATA TABLE						
ID	STATION	RADIUS	LENGTH	LINE/CHORD DIRECTION	NORTHING	EASTING
L21	5+04.50		14.00	N38° 02' 56.91"W	668,098.8239	1,883,179.7393
C21	5+18.50	15.00	15.00	N66° 41' 49.31"W	668,109.8487	1,883,171.1106
L22	5+33.50		12.00	S84° 39' 18.29"W	668,115.5384	1,883,157.9010
C22	5+45.50	12.50	20.00	N49° 30' 29.87"W	668,114.4206	1,883,145.9532
L23	5+65.50		13.07	N3° 40' 18.02"W	668,126.0658	1,883,132.3145
C23	5+78.57	15.00	12.27	N27° 06' 27.10"W	668,139.1102	1,883,131.4774
L24	5+90.84		78.56	N50° 32' 36.18"W	668,149.7312	1,883,126.0406
C24	6+69.40	100.00	14.29	N46° 27' 02.57"W	668,199.6534	1,883,065.3867
L25	6+83.68		16.32	N42° 21' 28.95"W	668,209.4879	1,883,055.0411



GRAPHIC SCALE
0 10 20 40
1 inch = 20 feet

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM HORIZONTAL CONTROL PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
1" = 20'

JOB NO.
20241062

SHEET
29/61

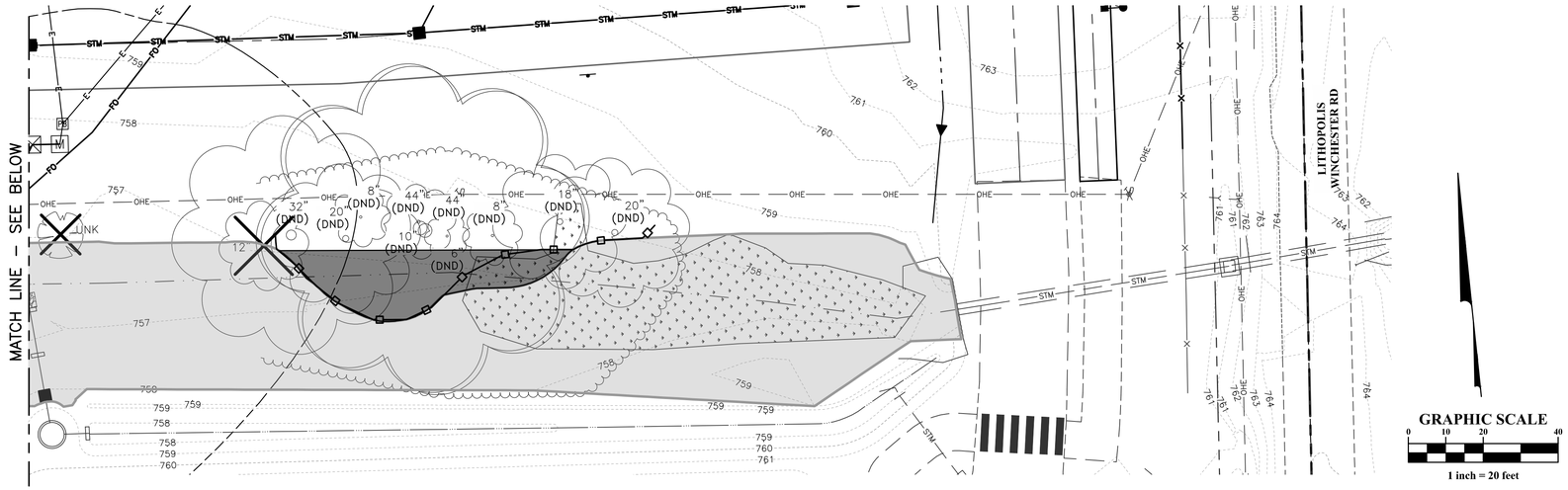
J:\20241062\Dwg\04Sheets\SITE\14 STREAM HORIZONTAL CONTROL PLAN.dwg, Last Saved By: dbanks, 9/9/2025 2:39 PM Last Printed By: Banks, Annalise, 9/15/2025 1:17 PM

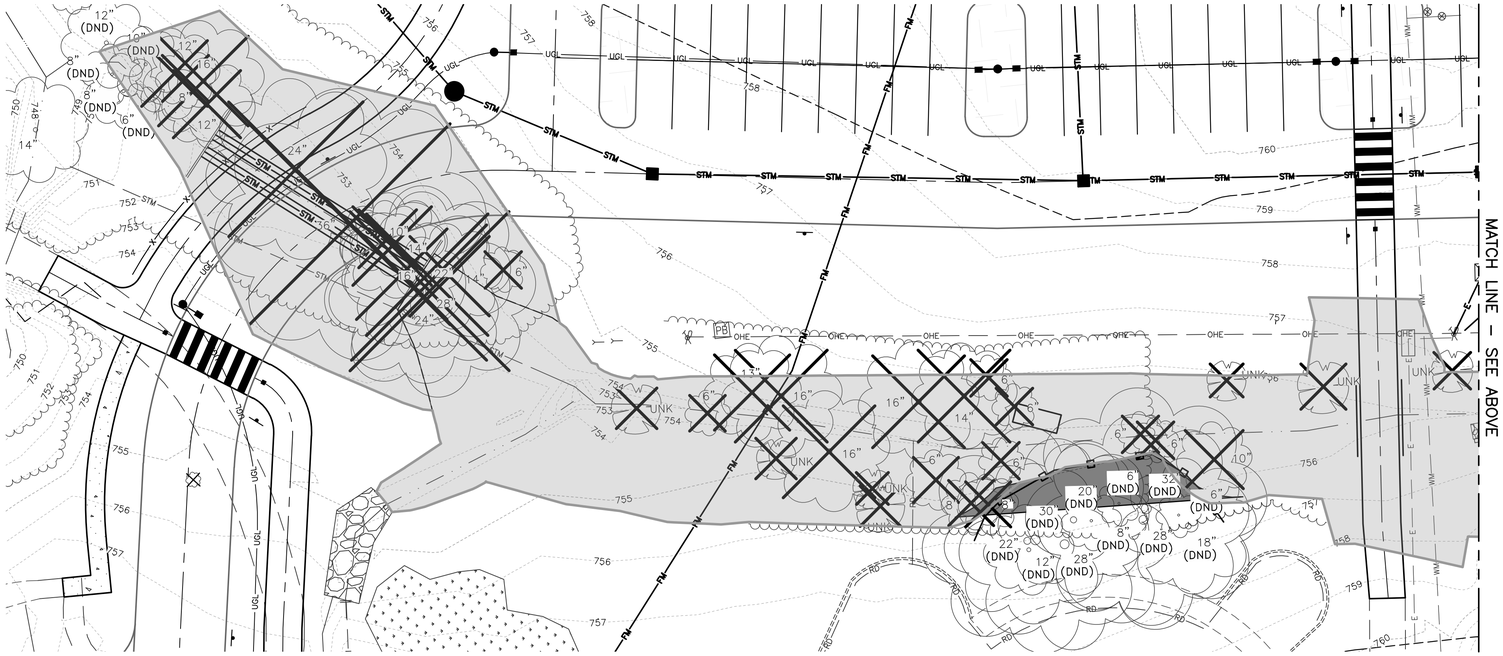
LEGEND

- Tree & Brush Removal Area (0.60 Ac.)
- Tree Preservation Area (0.02 Ac.)
- Known Tree Size
- Unknown Tree Size (Assume 24" for Cost)

NOTE:
The Tree Clearing Plan may not show all individual trees to be removed. All trees shown on this plan and not designated for removal shall be protected throughout the duration of the project. If there is any question about removal or protection of any tree, then the City shall be consulted for the final determination. The Contractor is responsible for reviewing site conditions, prior to bidding to evaluate the actual clearing requirements.

TREE REMOVAL QUANTITIES TABLE	
TREE OR STUMP DIAMETER	QUANTITY
6 inches to 12 inches	16
Over 12 inches to 24 inches	12
Over 24 inches to 36 inches	2
Over 36 inches to 60 inches	0
Unknown (Assume 24")	8





REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
TREE REMOVAL PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

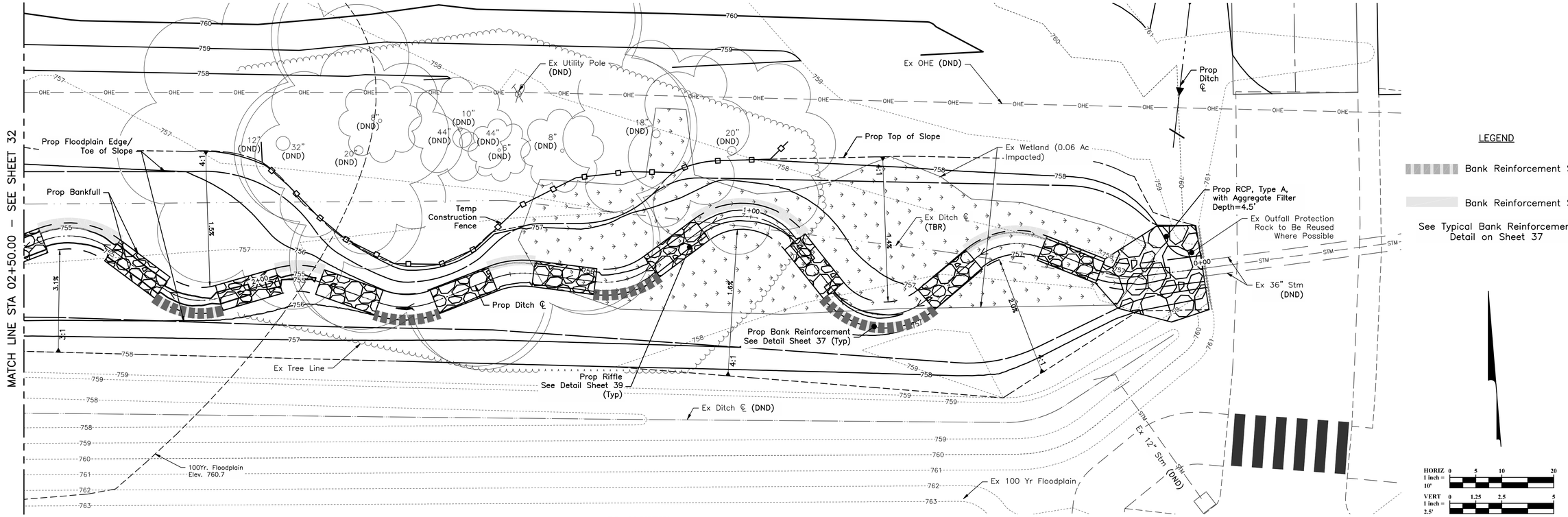
DATE
September 2025

SCALE
1" = 20'

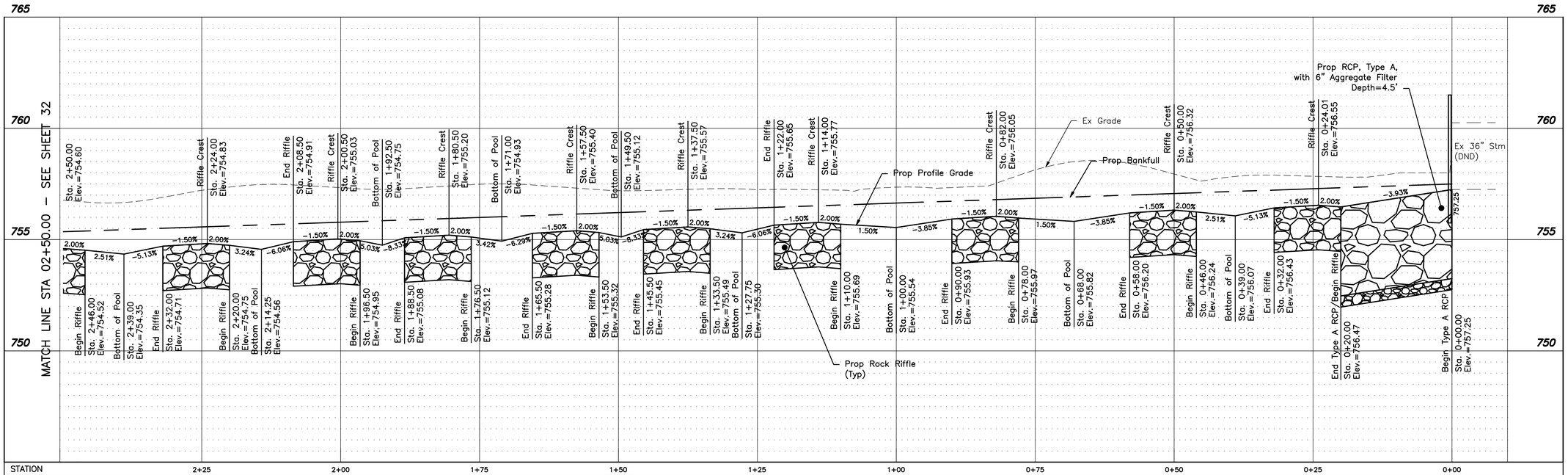
JOB NO.
20241062

SHEET
30/61

J:\20241062\Dwg\04Sheets\SITE\Tree Removal Plan.dwg, Last Saved By: abanks, 9/10/2025 1:08 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:18 PM
Xrefs: 20241062-CS-REFR-E, 20241062-CS-REFR-N



PLAN VIEW



STATION	2+25	2+00	1+75	1+50	1+25	1+00	0+75	0+50	0+25	0+00
EX GROUND	757.21	757.33	757.49	757.20	757.24	757.36	758.13	757.95	757.85	759.19
THALWEG	754.81	755.02	755.07	755.14	755.47	755.54	755.92	756.32	756.53	757.25
BANKFULL	755.57	755.78	756.00	756.21	756.43	756.64	756.86	757.07	757.29	757.50

PROFILE VIEW

MARK	DATE	REVISIONS DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION PLAN & PROFILE

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers Surveyors Planners Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

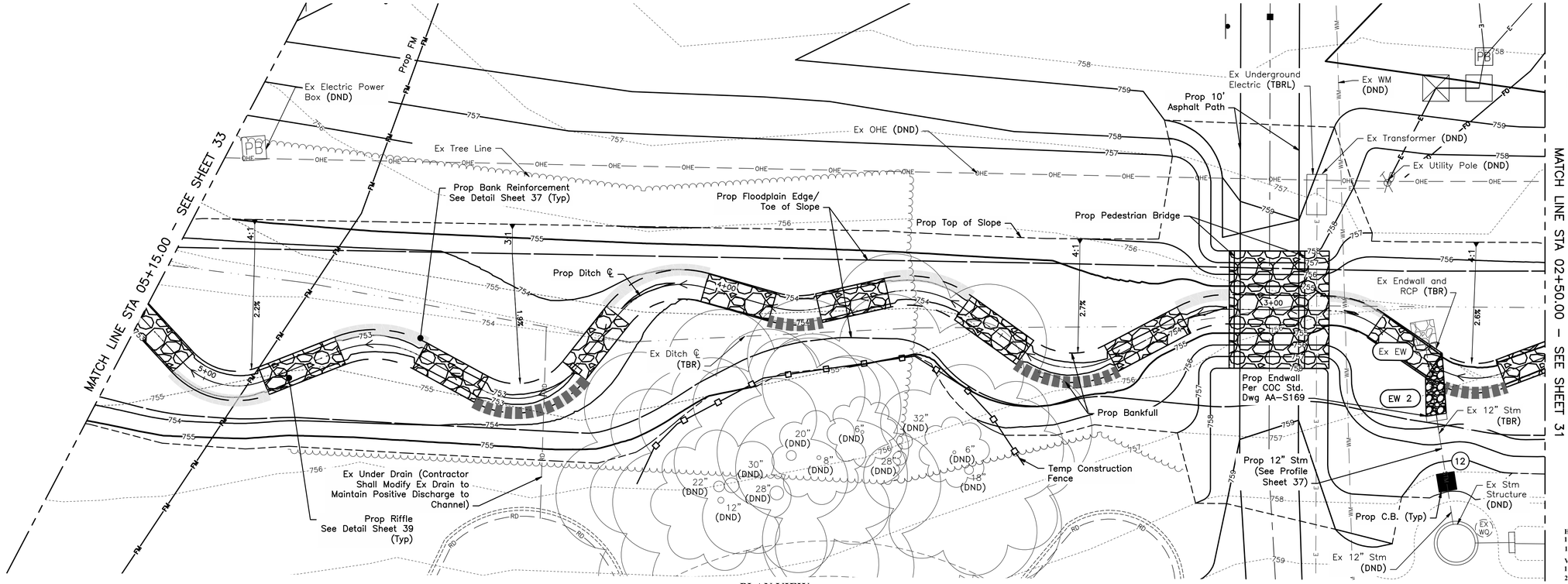
DATE
September 2025

SCALE
Horiz: 1" = 10'
Vert: 1" = 2.5'

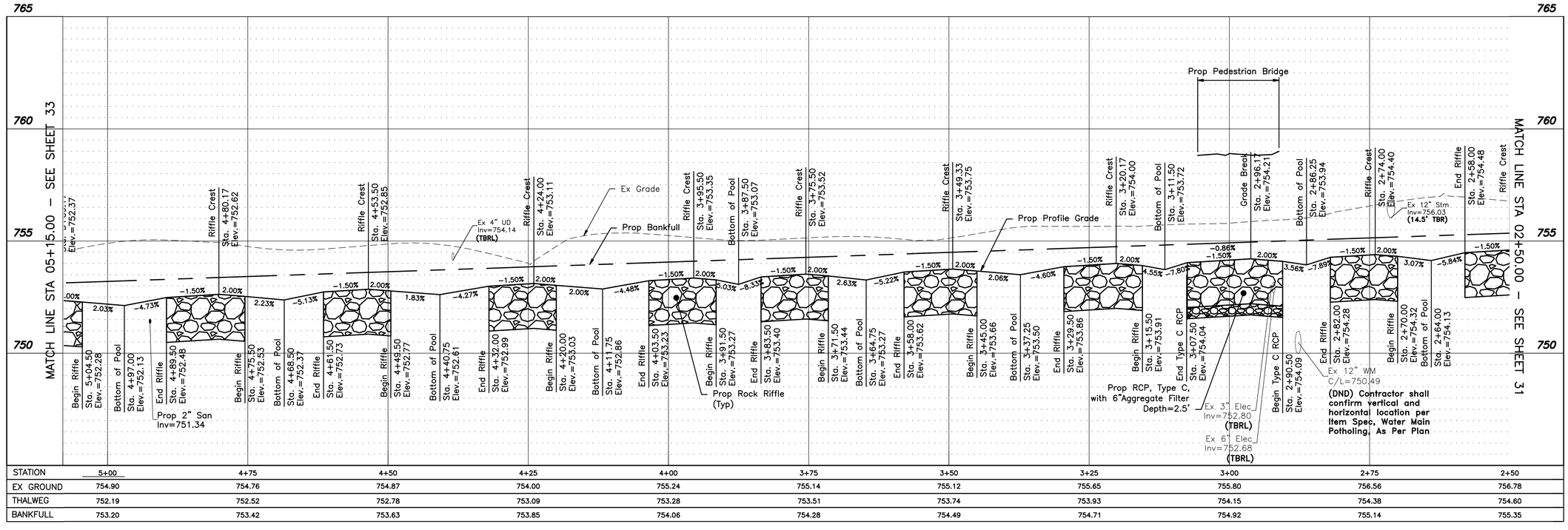
JOB NO.
20241062

SHEET
31/61

J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Plan & Profile.dwg, Last Saved By: dbanks, 9/10/2025 1:09 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:19 PM



PLAN VIEW



STATION	5+00	4+75	4+50	4+25	4+00	3+75	3+50	3+25	3+00	2+75	2+50
EX GROUND	754.90	754.76	754.87	754.00	755.24	755.14	755.12	755.65	755.80	756.56	756.78
THALWEG	752.19	752.52	752.78	753.09	753.28	753.51	753.74	753.93	754.15	754.38	754.60
BANKFULL	753.20	753.42	753.63	753.85	754.06	754.28	754.49	754.71	754.92	755.14	755.35

PROFILE VIEW

MARK	DATE	DESCRIPTION

REVISIONS

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

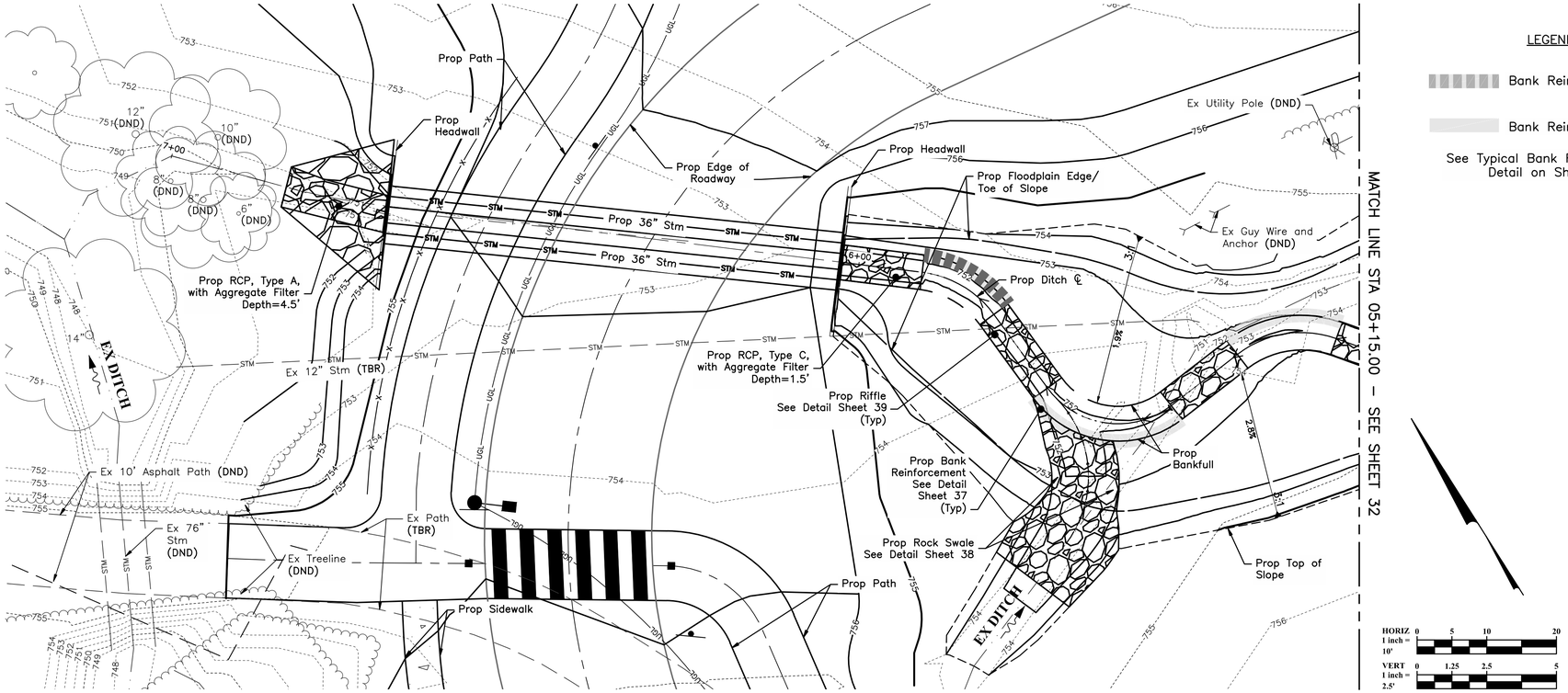
DATE
September 2025

SCALE
Horiz: 1" = 10'
Vert: 1" = 2.5'

JOB NO.
20241062

SHEET
32/61

J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Plan & Profile.dwg, Last Saved By: dbanks, 9/10/2025 1:09 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:19 PM



LEGEND

Bank Reinforcement Section 1

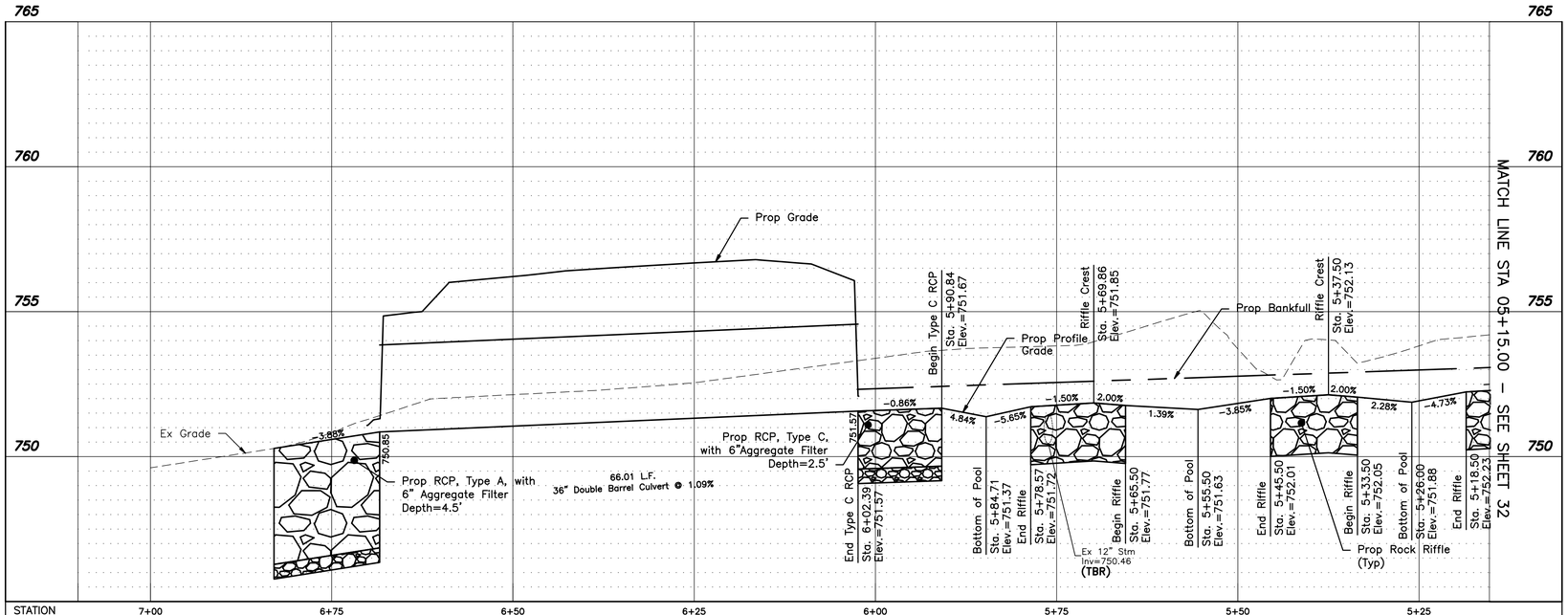
Bank Reinforcement Section 2

See Typical Bank Reinforcement Detail on Sheet 37

HORIZ 1 inch = 10' — 0, 5, 10, 20

VERT 1 inch = 2.5' — 0, 1.25, 2.5, 5

PLAN VIEW



STATION	7+00	6+75	6+50	6+25	6+00	5+75	5+50	5+25
EX GROUND	749.61	750.83	752.14	752.55	753.39	753.82	753.72	753.82
THALWEG					751.59	751.78	751.84	751.93
BANKFULL					752.34	752.56	752.77	752.99

PROFILE VIEW

REVISIONS			
MARK	DATE	DESCRIPTION	

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION PLAN & PROFILE

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

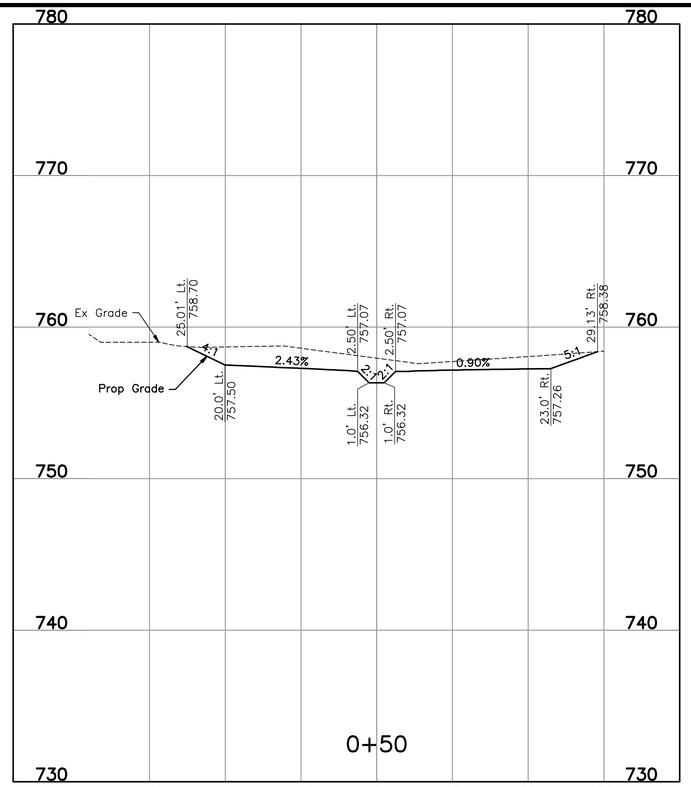
DATE: September 2025

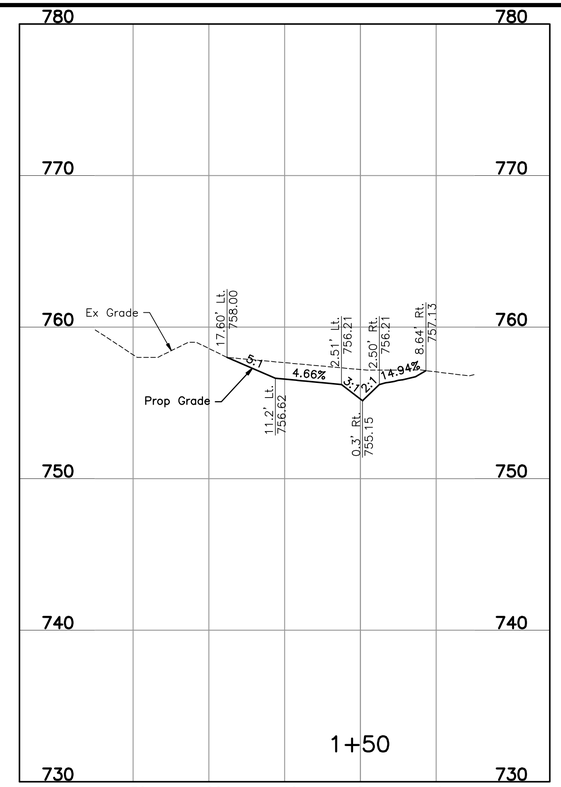
SCALE: Horiz: 1" = 10' Vert: 1" = 2.5'

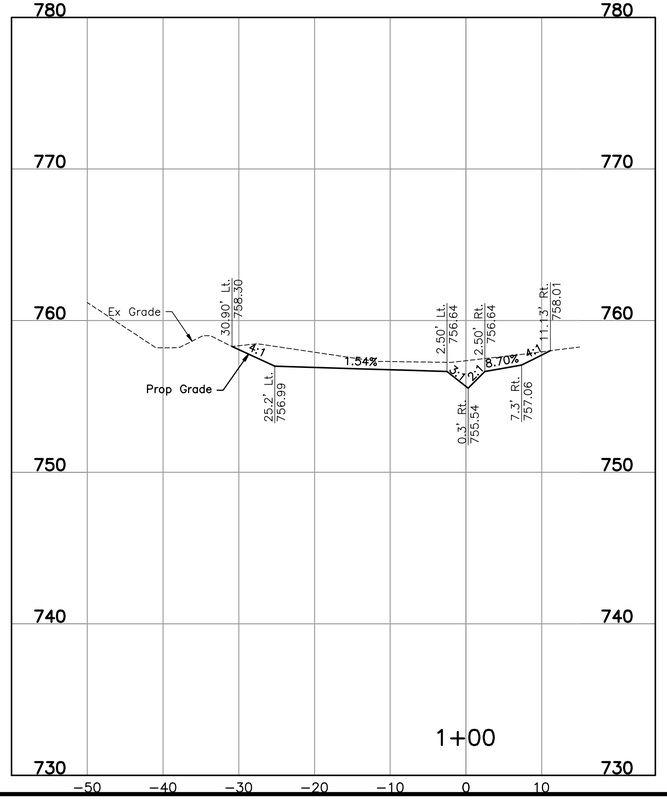
JOB NO.: 20241062

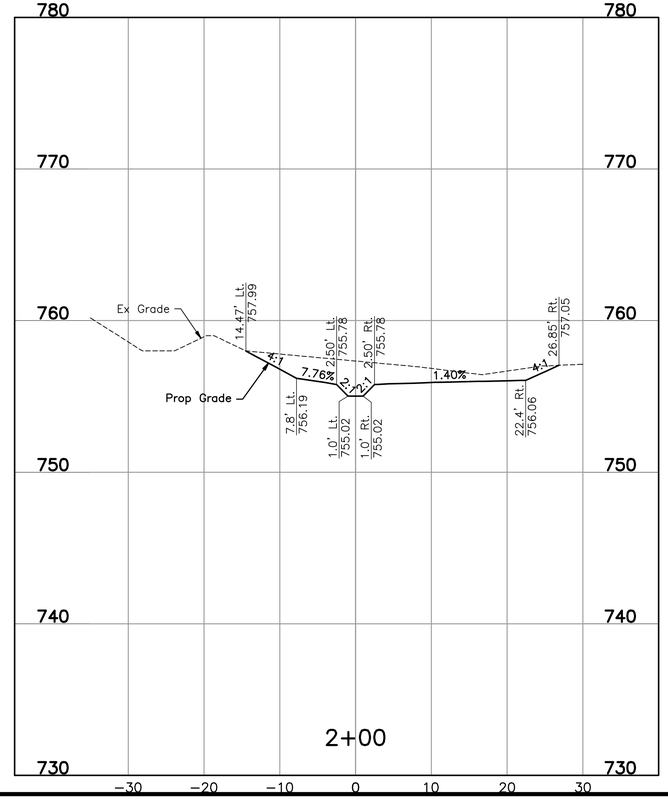
SHEET: 33/61

J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Plan & Profile.dwg, Last Saved By: abanks, 9/10/2025 1:09 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:19 PM









HORIZ 1 inch = 10 Feet (0, 5, 10, 20)

VERT 1 inch = 5 Feet (0, 2.5, 5, 10)

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B

STREAM CROSS SECTIONS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

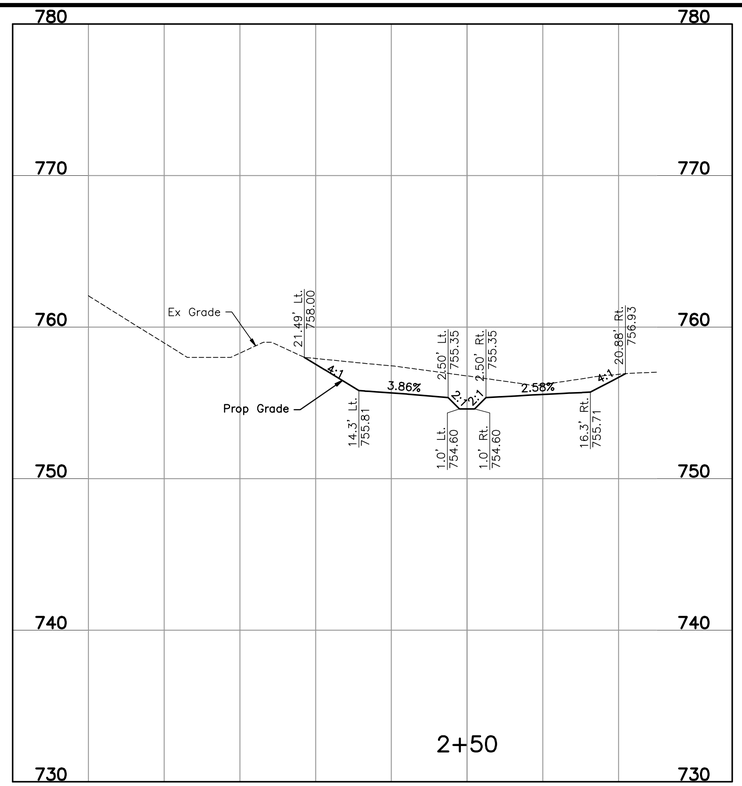
DATE
September 2025

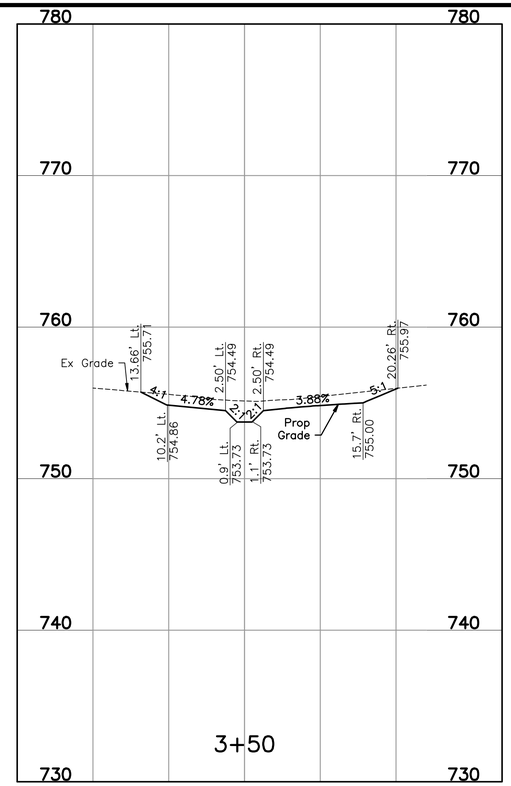
SCALE
Horiz: 1" = 10'
Vert: 1" = 5'

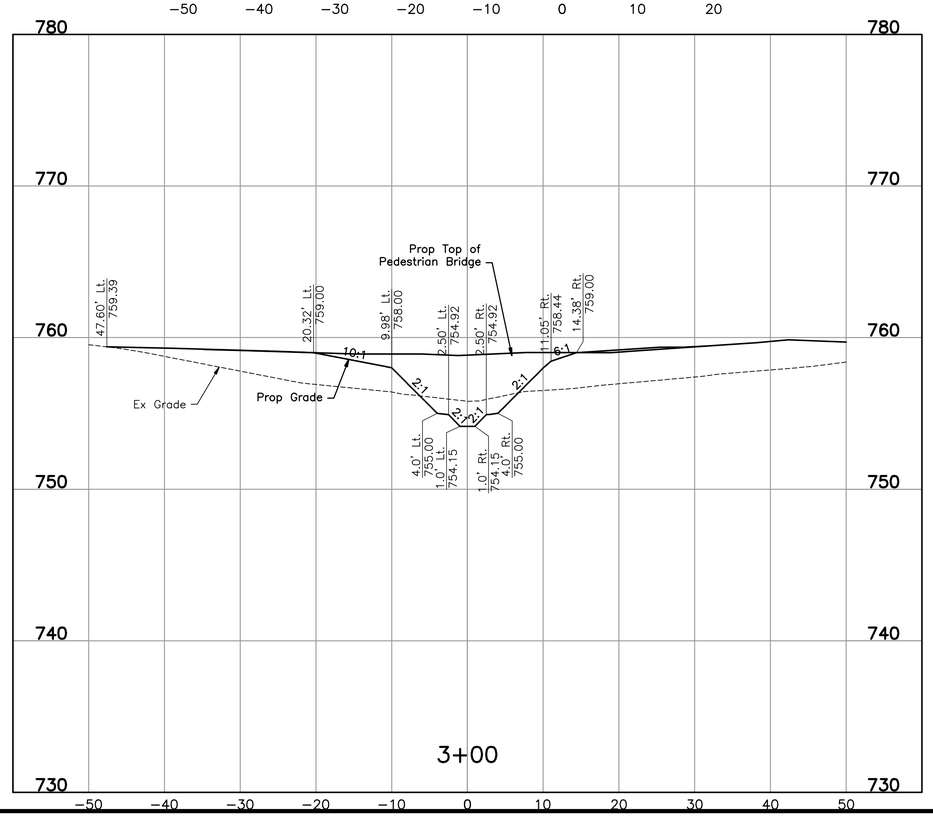
JOB NO.
20241062

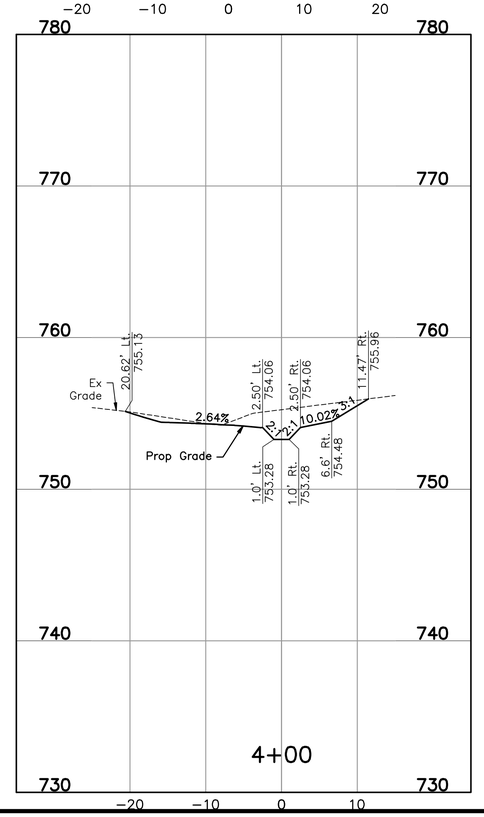
SHEET
34/61

J:\20241062\Dwg\04Sheets\SITE\Stream Cross Sections.dwg, Last Saved By: abanks, 9/9/2025 2:42 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:20 PM
r Xref: 20241062-CG-SECT-CHEK-N









HORIZ 1 inch = 10 Feet: 0, 5, 10, 20

VERT 1 inch = 5 Feet: 0, 2.5, 5, 10

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM CROSS SECTIONS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll free: 888.775.3448
emht.com

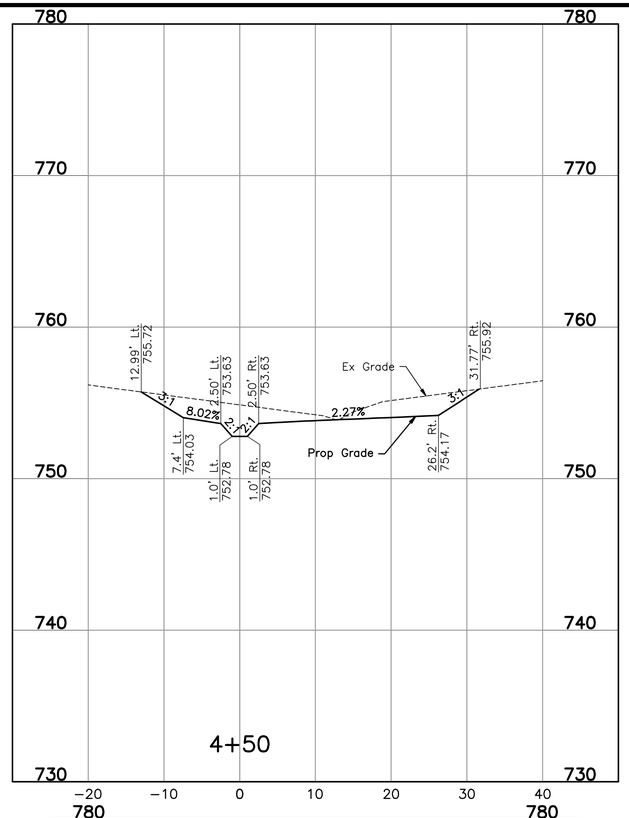
DATE
September 2025

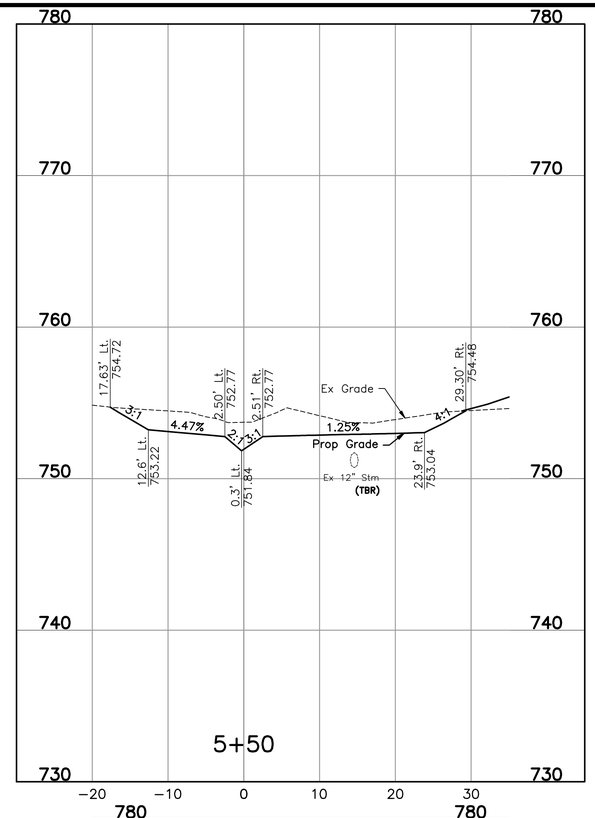
SCALE
Horiz: 1" = 10'
Vert: 1" = 5'

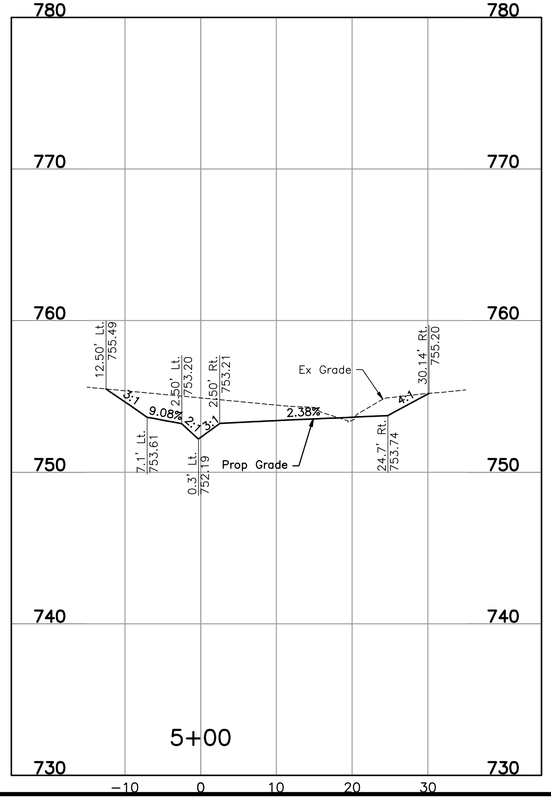
JOB NO.
20241062

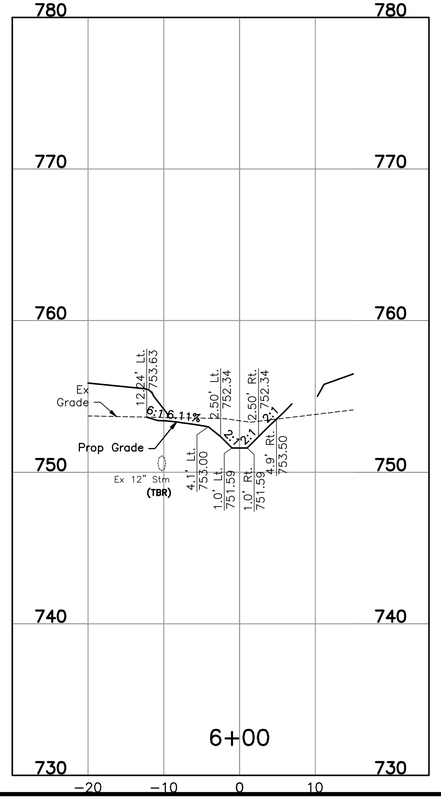
SHEET
35/61

J:\20241062\Dwg\04Sheets\SITE\Stream Cross Sections.dwg, Last Saved By: abanks, 9/9/2025 2:42 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:20 PM
t Xref: 20241062-CG-SECT-CHEK-N









HORIZ 1 inch = 10 Feet (0, 5, 10, 20)

VERT 1 inch = 5 Feet (0, 2.5, 5, 10)

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR

MCGILL PARK
PHASE 2B

STREAM CROSS SECTIONS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll free: 888.775.3448
emht.com

DATE
September 2025

SCALE
Horiz: 1" = 10'
Vert: 1" = 5'

JOB NO.
20241062

SHEET
36/61

J:\20241062\Dwg\04Sheets\SITE\Stream Cross Sections.dwg, Last Saved By: abanks, 9/9/2025 2:42 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:20 PM
Xref: 20241062-CG-SECT-CHEK-N

NOTES:

BOULDER TOE:
1.0 Material:
The boulder toe material may consist of quarried limestone. Recycled concrete is not permitted. The Contractor shall review samples of this material with the Engineer for approval prior to installation. The size of this material shall be consistent with the gradation of Type "C" Rock Channel Protection, per CMS Item 703.19.

2.0 Installation:
The boulder toe material shall be embedded into the channel along the toe of the stream outer bends, as depicted in the Typical Bank Reinforcement Detail (this sheet). Filter fabric material per ODOT Item 712.09, Type "B", shall be included in the construction of the boulder toe reinforcement, as demonstrated in the Typical Bank Reinforcement Detail.

GEOTEXTILES:
The specified geotextile shall meet the specifications identified on this plan, unless otherwise approved by the Engineer. Geotextile shall be placed in accordance with ODOT CMS Item 671, and manufacturer's recommendations.

The geotextile rolls shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Each roll shall be labeled or tagged to provide product identification sufficient for field inventory and quality control purposes. Rolls shall be stored in a manner which provides identification, as well as protection from the elements. If stored outdoors, the rolls shall be elevated and protected with a waterproof cover.

INSTALLATION:
- Slope Erosion Protection Mat shall be installed as part of the bank reinforcement along the outer meander bends and as part of the floodplain erosion control, as depicted in the Typical Bank Reinforcement Detail (this sheet and Typical Channel Section (Sheet 38).
- Staple matting to soil at density of 3.75 staples per square yard.

SEEDING:
See seeding notes on Sheet 28 and seeding zones and native grass seeding table on Sheet 41.

PLANTING:
See planting notes on Sheets 42–43, planting details on Sheet 41, and planting plan on Sheet 41.

TOPSOIL:
See topsoil notes on Sheet 28. Depth of topsoil placed shall be as follows:

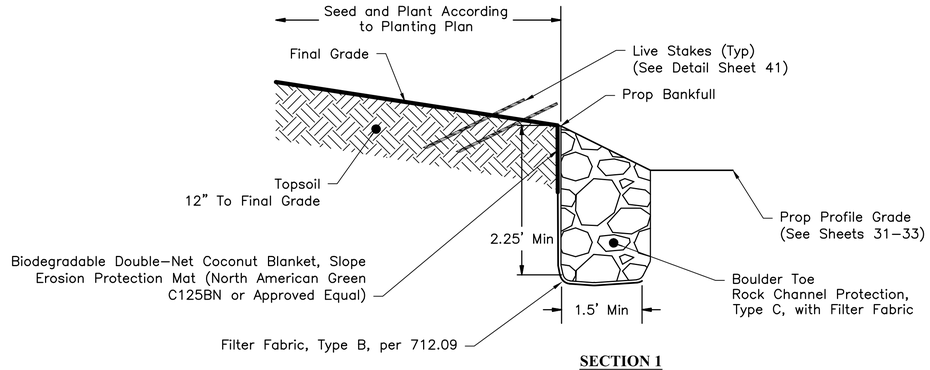
Floodplain Bench, Embankment Side Slopes (as shown in the Typical Channel Section Detail):
– 12" Min

Areas Outside of the Stream Grading But Within the Preservation Area:
– 12" Min

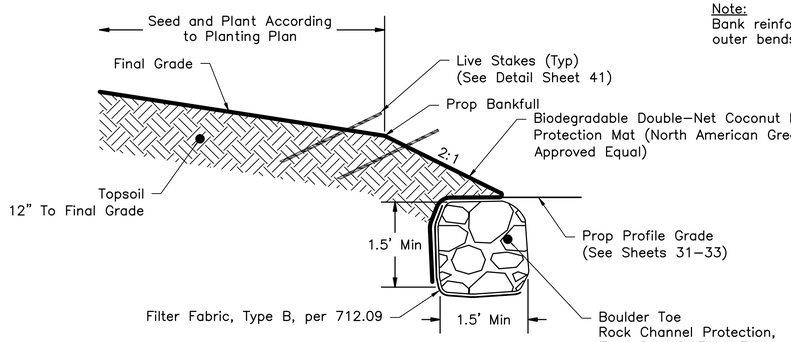
LIVE STAKES:
See Sheet 43 for live stake planting notes. Refer to the Live Stake Detail (Sheet 41) for installation specifications and refer to the Typical Bank Reinforcement Detail (this sheet) for a schematic of the location of the live stakes with respect to the other bank reinforcement materials.

RIPRAP MATERIAL:
Recycled concrete is not permitted for use as riprap (rock channel protection) on this project.

STOCKPILE COBBLE MATERIAL:
Remove and stockpile any available cobble stream bed material through the reach of the existing stream channel to be relocated. Stockpiled material shall be replaced within the relocated stream bed, as directed by the Engineer.

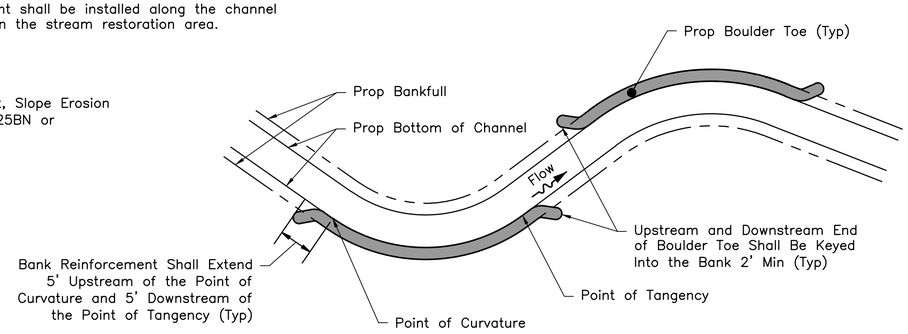


SECTION 1
(SEE SHEETS 31-33 FOR LOCATIONS)



SECTION 2
(SEE SHEETS 31-33 FOR LOCATIONS)

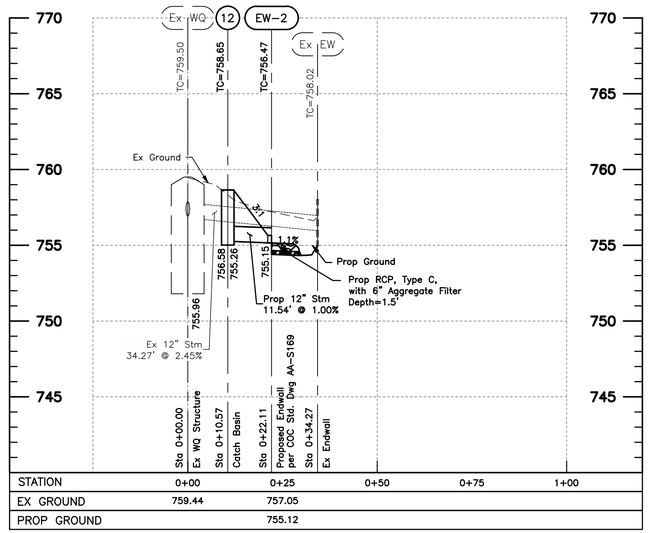
Note:
Bank reinforcement shall be installed along the channel outer bends within the stream restoration area.



PLAN

DETAIL
TYPICAL BANK REINFORCEMENT

Not to Scale



HORIZ 1 inch = 20 Feet: 0 10 20 40
VERT 1 inch = 5 Feet: 0 2.5 5 10

REVISIONS

MARK	DATE	DESCRIPTION

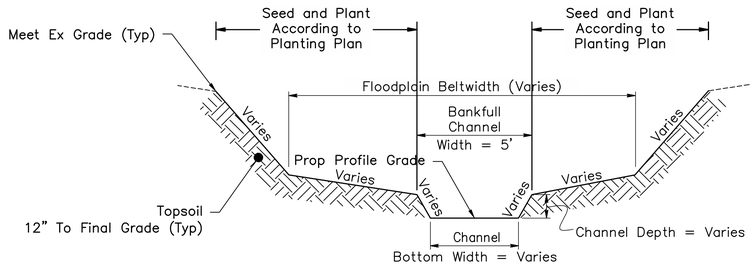
CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION DETAILS & STORM SEWER PROFILE

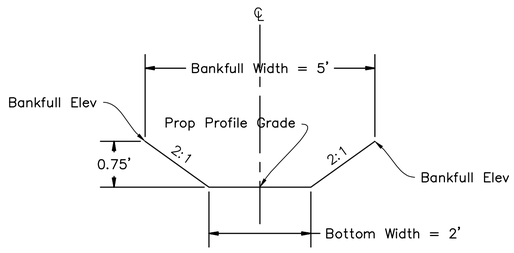
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE: September 2025
SCALE: AS NOTED
JOB NO.: 20241062
SHEET: 37/61

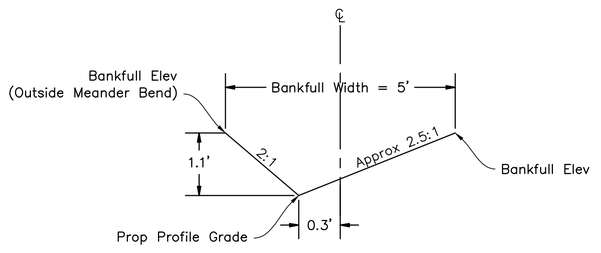
J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Details.dwg, Last Saved By: dbanks, 9/9/2025 2:43 PM Last Printed By: Banks, Annaliss, 9/15/2025 1:20 PM (No Xrefs)



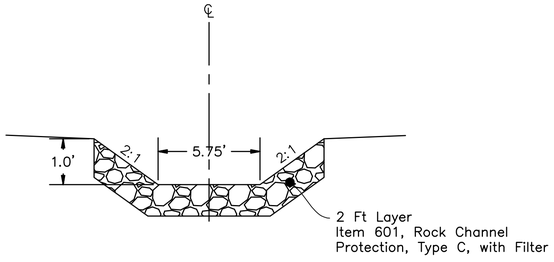
DETAIL
TYPICAL CHANNEL SECTION Not to Scale



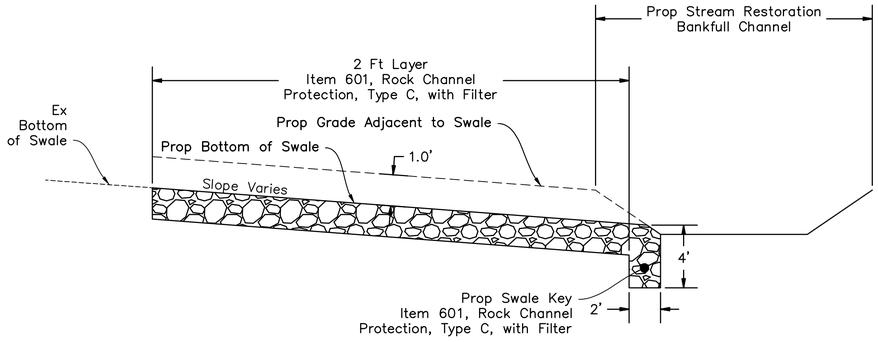
DETAIL
TYPICAL RIFFLE SECTION (AT CREST) Not to Scale



DETAIL
TYPICAL BOTTOM OF POOL SECTION (AT MIDPOINT) Not to Scale



CROSS SECTION



PROFILE

DETAIL
TYPICAL ROCK SWALE Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION DETAILS

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
38/61

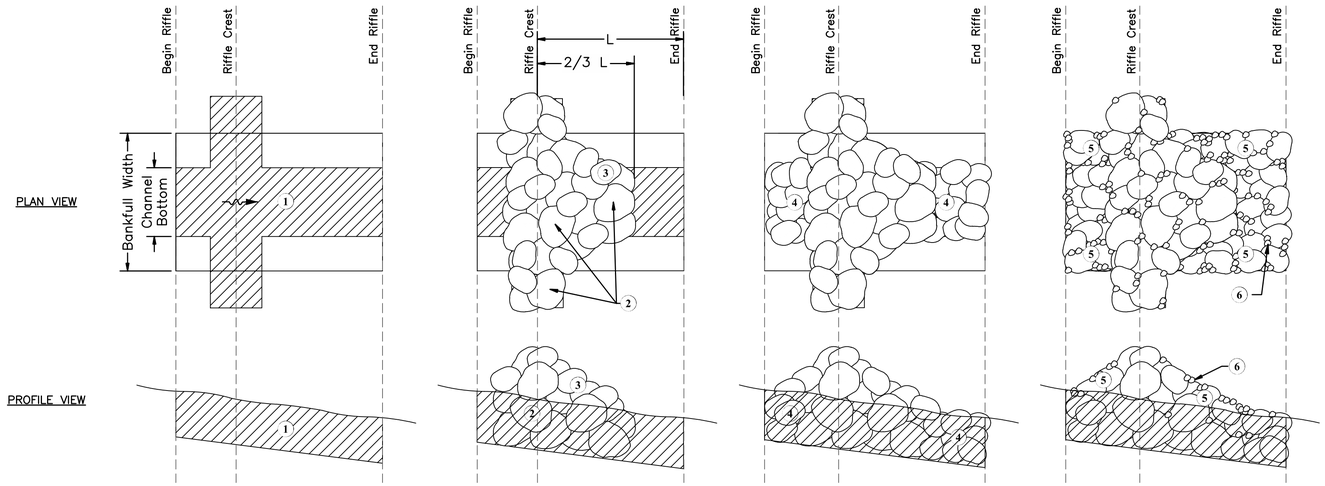
J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Details.dwg, Last Saved By: dbanks, 9/9/2025 2:43 PM Last Printed By: Banks, Annalise, 9/15/2025 1:20 PM (No Xrefs)

ROCK RIFFLES

No construction rubble is permissible. Support and crest stone may be quarried limestone material. All other material used to construct the rock riffle shall be river rock, consisting of rounded stone with natural hues. The Contractor shall review samples of this material with the Engineer for approval prior to installation. See Riffle Material Table (this sheet) for descriptions and sizes of materials.

ROCK RIFFLE CONSTRUCTION PROCEDURE

(Flow Direction is from Left to Right)
(Not to Scale)



1. Excavation for Rock Riffle Placement:
Excavate the channel bottom along the entire riffle length to a depth 2 feet below the proposed channel invert (for embedment of the crest and support stone) and excavate 2 feet into the banks only at the crest location (for embedment of the crest stone into the banks).

2. Crest Stone Installation:
Embed crest stone in channel bottom at crest location and extend crest stone 2/3L feet downstream to protect against scour when flow passes over the weir crest. Embed crest stone into channel banks at crest location. Final placement of the crest stone must concentrate flows away from the bank and toward the center of the riffle.

3. Support Stone Installation, Part 1:
Place support stone in voids of crest stone. A combination of the crest and support stone shall be used to achieve the final riffle crest elevation (see proposed profile grade on Sheets 31–33 for final grade of riffle crest) and provide support to the crest stone.

4. Support Stone Installation, Part 2:
Embed support stone into channel bottom along remaining length of riffle (upstream and downstream of the crest). Support stone must be placed tightly on both sides of crest stone, paying close attention to the fit on the downstream side. Proper elevation of the support stone must be maintained according to the profile grade (See Sheets 31–33).

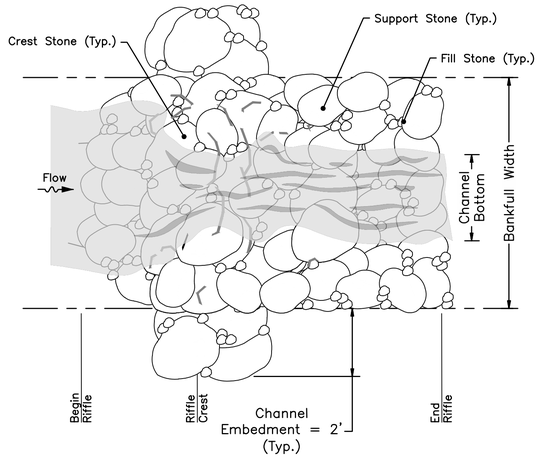
5. Support Stone Installation, Part 3:
Place support stone along the bank, extending from the bottom of the bank up to the bankfull elevation. Support stone shall be pressed into the bank (excavation for embedment not necessary). Final placement of the support stone must concentrate flows away from the bank and toward the center of the riffle.

6. Fill Stone Installation:
After installation of the crest and support stones, fill all voids along entire riffle and over support stone with fill stone material.

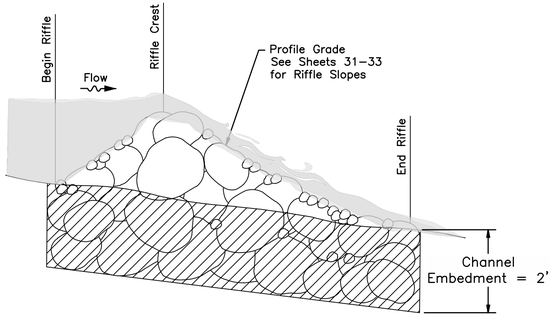
CONSTRUCTED ROCK RIFFLE PLAN AND PROFILE

(Flow Direction is from Left to Right)

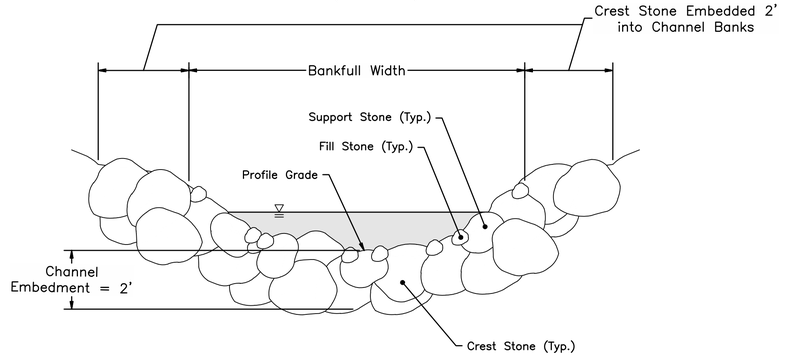
PLAN VIEW
(Not to Scale)



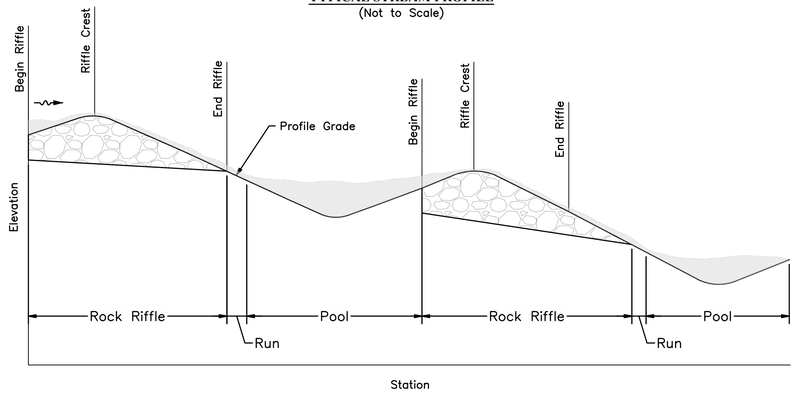
PROFILE VIEW
(Exaggerated – Not to Scale)



TYPICAL RIFFLE CROSS SECTION AT CREST
(Not to Scale)



TYPICAL STREAM PROFILE
(Not to Scale)



RIFFLE MATERIAL TABLE

ID	DESCRIPTION	SYMBOL (Not to Scale)	SIZE	% OF RIFFLE VOLUME
Crest Stone	Crest stone should be angular in shape		Rock Channel Protection, Type C, As Per Plan. Type C should consist of sizes such that at least 85% of the total material by weight shall be larger than a 6–inch but less than an 18–inch square opening. At least 50% of the total material by weight shall be larger than a 12–inch square diameter opening. No stone shall be larger than 18–inches in diameter.	50%
Support Stone	Angular stone that supports crest stone		Rock Channel Protection, Type D, As Per Plan. Support stone shall have gradation of sizes such that at least 85% of the material by weight shall be between 3–inches and 12–inches in diameter, 50% of which shall be larger than 6–inches in diameter. No stone shall be larger than 12–inches in diameter.	30%
Fill Stone	Stone to fill voids between larger stone: cobble – rounded river rock		Fill stone shall have a gradation of sizes such that at least 85% of the material by weight shall be between 1–inch and 6–inches in diameter, 50% of which shall be larger than 3–inches in diameter.	20%

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

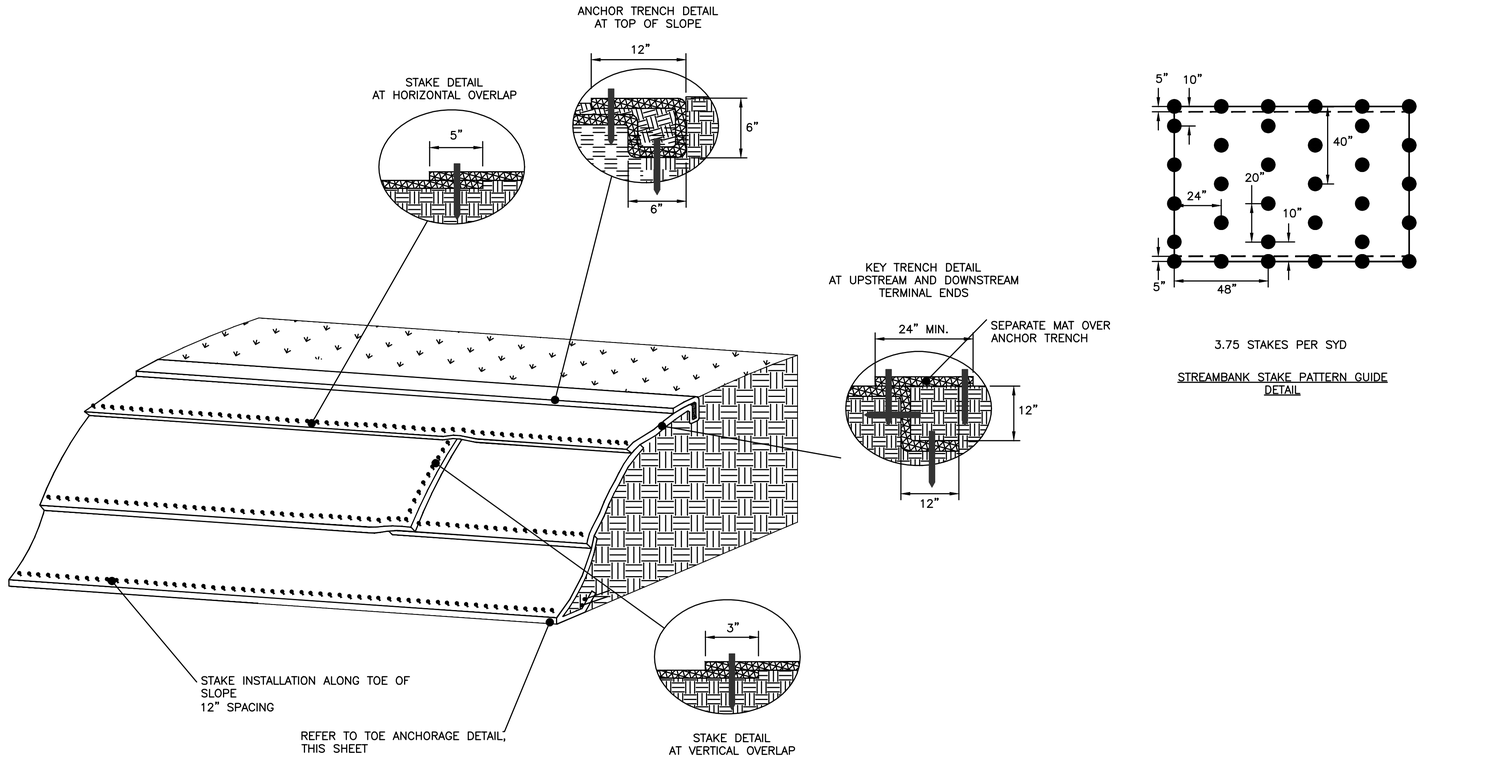
JOB NO.
20241062

SHEET
39/61

J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Details.dwg, Last Saved By: dbanks, 9/9/2025 2:43 PM Last Printed By: Banks, Annalise, 9/15/2025 1:20 PM (No Xrefs)

Item 670, Slope Erosion Protection Mat, As Per Plan Installation Notes:

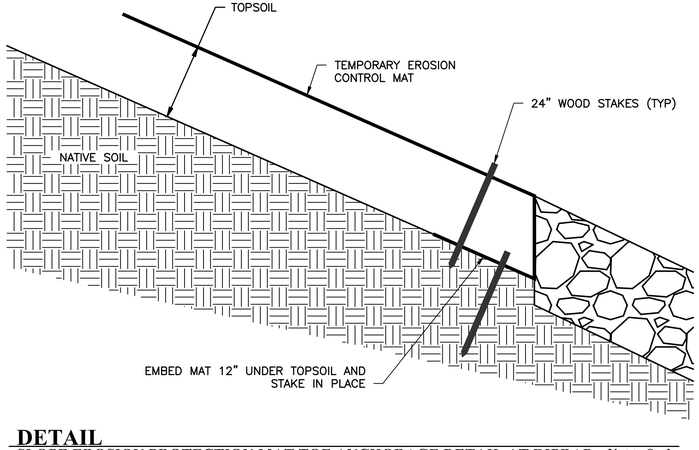
1. Install topsoil to final grade, as shown on the plans.
2. Install seed mix with fertilizer.
3. Begin at the toe of slope. Unroll mat parallel to the stream channel. Ensure mat is flat on the ground. Anchor matting in toe trench with 2x2x24 inch wood stakes or 2x2x24 wedges. Refer to Detail, This Sheet.
4. Unroll matting over topsoil and affix firmly to the slope with stakes placed in appropriate locations as shown in the stake pattern guide.
5. Stake through the matting at the toe of slope, approximately 12 inches apart across entire mat length.
6. Consecutive sections of matting spliced upstream to downstream must be end–over–end (shingle style) with an approximate 3 inch overlap. Stake through overlapped area, approximately 12 inches apart across entire mat width.
7. At the upstream and downstream terminal ends of the matting, provide an anchor trench to key matting into the soil. Provide a 12 inch wide x 24 inch deep trench with a row of stakes approximately 12 inches apart. Backfill and compact the trench after staking. Apply seed and fertilizer. Install separate minimum 24 inch wide mat over anchor trench, secure mat with stakes spaced 24 inches apart along both sides of the trench.
8. The edges of parallel sections of matting must be staked with an approximately 5 inch overlap. Overlap the mat section from higher on the slope over the mat positioned lower on the slope. Space stakes 12 inches apart along the mat overlap.
9. Anchor the matting along the top of slope in a 6 inch deep x 6 inch wide trench with approximately 12 inches of matting extended beyond the upslope portion of the trench. Anchor the matting with a row of stakes approximately 12 inches apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed and fertilizer to the compacted soil and fold the remaining 12 inch portion of matting back over the seed and compacted soil. Secure matting over compacted soil with a row of stakes spaced approximately 12 inches apart across the length of the matting.
10. Product Standard: Details and Notes are based on the North American Green C125BN Erosion Control Mats. Substitute Biodegradable products that provide equal erosion protection will be considered as outlined in the specifications.



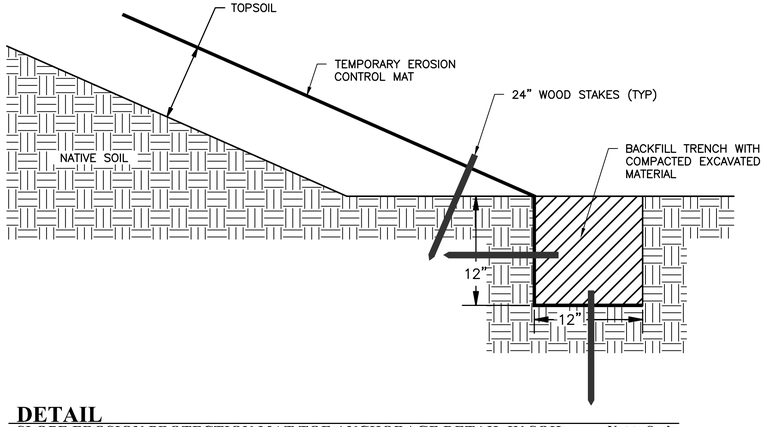
3.75 STAKES PER SYD

STREAMBANK STAKE PATTERN GUIDE DETAIL

DETAIL
SLOPE EROSION PROTECTION MAT INSTALLATION DETAIL Not to Scale



DETAIL
SLOPE EROSION PROTECTION MAT TOE ANCHORAGE DETAIL AT RIPRAP Not to Scale



DETAIL
SLOPE EROSION PROTECTION MAT TOE ANCHORAGE DETAIL IN SOIL Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM RESTORATION DETAILS

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

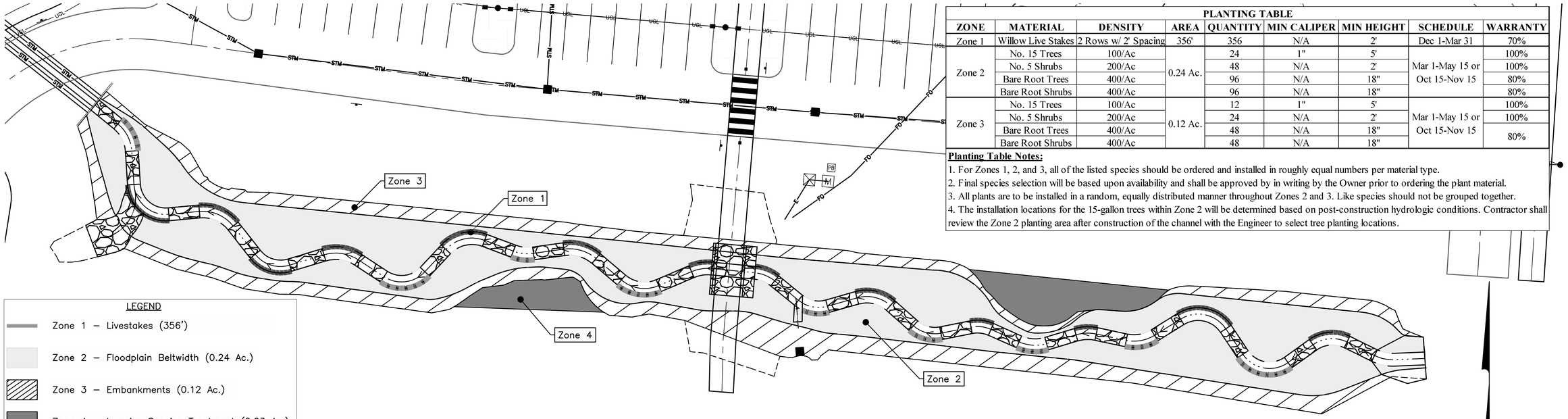
DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
40/61

J:\20241062\Dwg\04Sheets\SITE\Stream Restoration Details.dwg, Last Saved By: dbanks, 9/9/2025 2:43 PM Last Printed By: Banks, Annalise, 9/15/2025 1:20 PM (No Xrefs)



PLANTING TABLE								
ZONE	MATERIAL	DENSITY	AREA	QUANTITY	MIN CALIPER	MIN HEIGHT	SCHEDULE	WARRANTY
Zone 1	Willow Live Stakes	2 Rows w/ 2' Spacing	356'	356	N/A	2'	Dec 1-Mar 31	70%
Zone 2	No. 15 Trees	100/Ac	0.24 Ac.	24	1"	5'	Mar 1-May 15 or Oct 15-Nov 15	100%
	No. 5 Shrubs	200/Ac		48	N/A	2'		100%
	Bare Root Trees	400/Ac		96	N/A	18"		80%
	Bare Root Shrubs	400/Ac		96	N/A	18"		80%
Zone 3	No. 15 Trees	100/Ac	0.12 Ac.	12	1"	5'	Mar 1-May 15 or Oct 15-Nov 15	100%
	No. 5 Shrubs	200/Ac		24	N/A	2'		100%
	Bare Root Trees	400/Ac		48	N/A	18"		80%
	Bare Root Shrubs	400/Ac		48	N/A	18"		

Planting Table Notes:

1. For Zones 1, 2, and 3, all of the listed species should be ordered and installed in roughly equal numbers per material type.
2. Final species selection will be based upon availability and shall be approved by in writing by the Owner prior to ordering the plant material.
3. All plants are to be installed in a random, equally distributed manner throughout Zones 2 and 3. Like species should not be grouped together.
4. The installation locations for the 15-gallon trees within Zone 2 will be determined based on post-construction hydrologic conditions. Contractor shall review the Zone 2 planting area after construction of the channel with the Engineer to select tree planting locations.

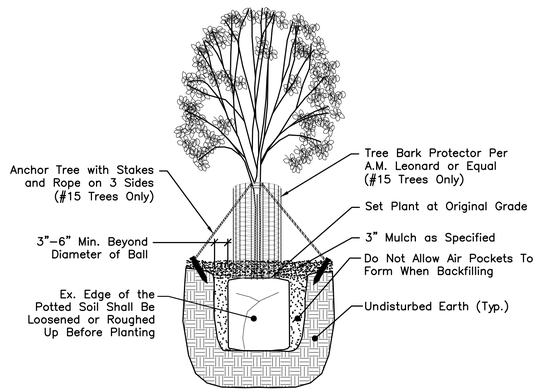
LEGEND

- Zone 1 – Livestakes (356')
- Zone 2 – Floodplain Beltwidth (0.24 Ac.)
- Zone 3 – Embankments (0.12 Ac.)
- Zone 4 – Invasive Species Treatment (0.03 Ac.)

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet



DETAIL
#5 AND #15 POTTED PLANTING DETAIL — Not to Scale

SEEDING TABLE					
ZONE	PAY ITEM	TYPE	APPLICATION RATE	APPLICATION DATES	COVER
Zones 2 & 3	Item 659, Seeding And Mulching, Zones 2 and 3, As Per Plan	**Overseed, Zones 2 and 3:** Winter Rye (Grain) (Secale Cereale) OR Grain Oats (Avena sativa)	30 lbs/acre	Sep 15 - Oct 31 OR Mar 15 - May 31	Erosion Control Matting
		***Permanent Seed, Zones 2 and 3:** Riparian Buffer Mix (ERNMX-178)	20 lbs/acre	Sep 15 - Oct 31 or Mar 15 - May 31	
*Permanent seeding shall occur throughout Zones 2 and 3 and within all other disturbed areas.					

Seeding Table Notes:

1. Overseed (cover crop) shall be applied with the permanent seed to quickly stabilize the site. This is required because the permanent seed takes much longer to germinate than the cover crop. The Zone 2 and 3 seed mixes listed specify the required cover crop, depending on the application dates.
2. Contractor is expected to install the Permanent Seed prior to installation of erosion control matting. If this seed mix is installed under matting after October 31 and before March 15, the application rate will be 150% of normal rates listed in the table. For example in Zone 2, the application rate would be 30 lbs/acre if seeding occurs between October 31 and March 15.
3. For any buffer or disturbed areas not receiving matting protection, the October 31 cutoff date for permanent seeding will remain in effect. Seeding shall not occur June 1 to September 14.

WOODY PLANT LIST

Zone 1: Outside Meander Bends

Live Stakes

Common Name	Scientific Name
Peachleaf willow	*Salix amygdaloides*
Pussy willow	*Salix discolor*
Sandbar willow	*Salix interior*
Black willow	*Salix nigra*

Zone 2: Floodplain Trees & Shrubs

Trees

Common Name	Scientific Name
American sycamore	*Platanus occidentalis*
Eastern Cottonwood	*Populus deltoides*
Red Maple	*Acer rubrum*
Swamp white oak	*Quercus bicolor*
Pin oak	*Quercus palustris*

Shrubs

Common Name	Scientific Name
Black chokeberry	*Aronia melanocarpa*
Buttonbush	*Cephalanthus occidentalis*
Silky dogwood	*Cornus amomum*
Red-osier dogwood	*Cornus sericea*
Winterberry	*Ilex verticillata*
Northern spicebush	*Lindera benzoin*
Common ninebark	*Physocarpus opulifolius*
Silky willow	*Salix sericea*
Elderberry	*Sambucus canadensis*
Swamp rose	*Rosa palustris*
Southern arrow-wood	*Viburnum dentatum*
Nannyberry	*Viburnum lentago*
Possumhaw	*Viburnum nudum*

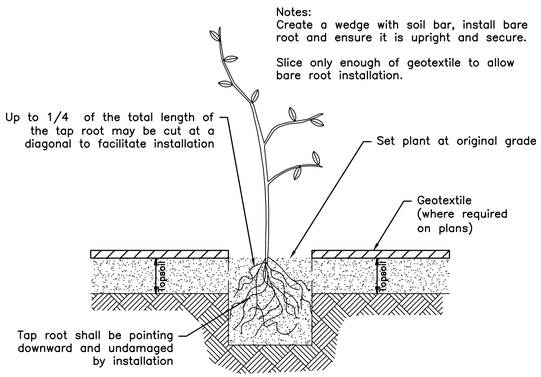
Zone 3: Embankment Trees & Shrubs

Trees

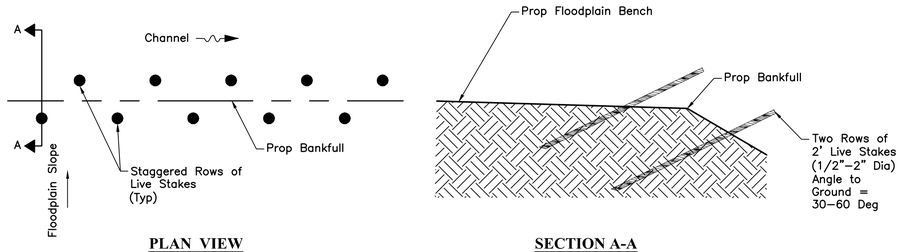
Common Name	Scientific Name
Red maple	*Acer rubrum*
Sugar maple	*Acer saccharum*
Honey Locust (Thornless)	*Gleditsia triacanthos 'Inermis'*
Ohio buckeye	*Aesculus glabra*
Black Walnut	*Juglans nigra*
American beech	*Fagus grandifolia*
Tulip tree	*Liriodendron tulipifera*
Black cherry	*Prunus serotina*
Swamp white oak	*Quercus bicolor*
Bur oak	*Quercus macrocarpa*
Pin oak	*Quercus palustris*
Red oak	*Quercus rubra*

Shrubs

Common Name	Scientific Name
Serviceberry	*Amelanchier laevis*
Common hackberry	*Celtis occidentalis*
Eastern redbud	*Cercis canadensis*
Gray dogwood	*Cornus racemosa*
Red-Osier Dogwood	*Cornus stolonifera*
Cockspur hawthorn	*Crataegus crus-galli*
Eastern wahoo	*Euonymus atropurpureus*
Fragrant sumac	*Rhus aromatica*
Staghorn sumac	*Rhus typhina*
Pasture rose	*Rosa carolina*
Southern Arrow-Wood	*Viburnum dentatum*
Nanny-Berry	*Viburnum lentago*
Blackhaw	*Viburnum prunifolium*



DETAIL
BARE ROOT — Not to Scale



PLAN VIEW — SECTION A-A

DETAIL
LIVE STAKE — Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM PLANTING PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll free: 888.775.3648
emht.com

DATE: September 2025

SCALE: 1" = 20'

JOB NO.: 20241062

SHEET: 41/61

J:\20241062\Dwg\04Sheets\SITE\Stream Planting Plan.dwg, Last Saved By: abanks, 9/10/2025 1:15 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:20 PM
r Xref: 20241062-CS-REFR-N

SITE PREPARATION AND TOPSOIL PLACEMENT

1. SUBMITTALS:

1.1. Contractor shall submit topsoil test results according to Item 652, Placing Stockpiled Topsoil, As Per Plan.

1.2. Contractor shall submit topsoil test results according to Item 653, Topsoil Furnished and Placed, As Per Plan.

1.3. Prior to placing topsoil, the Contractor shall have approval of subgrade elevations according to Item Spec, Grade Checking, As Per Plan.

1.4. Prior to seeding, the Contractor shall have approval of final grade elevations according to Item Spec, Grade Checking, As Per Plan.

2. CONSTRUCTION METHODS:

2.1. Contractor shall prepare the site in conformance with Item 652, Placing Stockpiled Topsoil, As Per Plan and Item 653, Topsoil Furnished and Placed, As Per Plan.

PLANTING TREES AND SHRUBS

3. SUBMITTALS

3.1. Prior to the start of work on this item, the Contractor shall submit the nursery order and bill of lading from the nursery to the City for review and approval.

3.1.1. Within thirty (30) days of the award of the contract, the Contractor shall submit a complete listing of the proposed planting materials to be provided under this section to the City for approval. The City will review the submitted materials. If deficient, as solely determined by the City, additional information shall be forwarded to the City. Any problems with obtaining any of the specified plant materials shall be forwarded in writing to the City. The cause of the acquisition problems shall be discussed in full and a list of vendors contacted shall be included. The Contractor shall be aware that more than one (1) vendor may be required to obtain all the necessary plant materials. Suggestions concerning appropriate substitutions may be included with this correspondence; however, only the City may approve such substitutions.

4. MATERIALS

4.1. The stream corridor shall be planted with a variety of native, cold–hardy tree and shrub species in accordance with the Planting Table on Sheet 41. Final species selection shall be approved by the City in writing prior to purchasing the materials. All plants shall be healthy, vigorous, stress–free specimens free from harmful defects, decay, disfigured stems and roots, plant diseases, and insect pests.

4.2. No material is to be delivered until Landscaper and City are in agreement that the particular zone is ready for planting.

4.3. For each zone and for each material category, all of the listed species should be ordered and installed in roughly equal numbers.

4.4. Plant quality and size: All plants shall be true to type and nomenclature and typical of their species or variety. Ensure that all plant materials conform to the current edition of the American Standard for Nursery Stock, as published by the American Nursery and Landscape Association. They shall have a normal habit of growth with well–developed branch systems and vigorous root systems. They shall be sound, healthy, and vigorous plants, free from visible defects, disfiguration, injury, recognizable disease of any kind, insect eggs, borers, and any infestation. All plants shall be nursery grown in a suitable growth medium. It is the responsibility of the Contractor to inspect the plants before removal from the nursery where they have been grown to make sure that the plants meet these requirements.

4.5. All plants shall conform to all sizes and measurements detailed in these specifications and indicated on the plans. Unacceptable plants shall be culled at the nursery prior to being packed. No substitutions for any materials shall be made unless agreed to in writing by the City. With the approval of the City, plants larger in size than specified may be utilized, but such plants shall not increase the contract price. Larger plants shall not be cut back to meet size specifications. Plants shall have a form and architecture that is easily planted for the stock specified.

4.6. The Contractor shall install the trees and shrubs as shown in the Planting Table on Sheet 41.

4.7. CONTAINER TREE AND SHRUB SPECIFICATIONS:

4.7.1. Plants shall be established and well rooted in removable containers.

4.7.2. Container class size shall conform to ANSI Z60.1 for container plants for each size and type of plant.

4.8. BARE ROOT SPECIFICATIONS:

4.8.1. Harvest bare root plants while the plant is dormant and a minimum of 4 weeks prior to leaf out (bud break).

4.8.2. The root dimensions of the harvested plants shall conform to ANSI Z60.1 for nursery grown bare root plants for each size and type of plant.

4.8.3. Bare root trees and shrubs shall meet the minimum height requirements and shall be at least 2–year aged seedlings. Documentation from supplier must include height and age when requesting approvals from the City.

4.8.4. Keep the plants in a cool dark space for storage and delivery. If daytime outside temperatures exceed 70 degrees F, utilize a refrigerated storage area with temperature between 35 and 60 degrees.

5. NOMENCLATURE (FOR ALL PLANTS)

5.1. A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland: Volume II; The Biota of North America (Kartesz and Kartesz, University of North Carolina Press, 1980, or later edition) shall be the authority for plant names. The Contractor shall supply certification from the suppliers that the plants supplied are the plants specified or agreed to under substitution. No compensation shall be made for materials or the cost of installation for plants species that are not specified.

6. INSPECTION

6.1. The Contractor shall be responsible for all certificates of inspection of plant materials that may be required by federal, state, or other authorities to accompany shipments of plants.

7. SCHEDULE

7.1. Plant deciduous, woody plants within the planting window shown on the plans whenever the temperature is between 32 degrees F and 65 degrees F and the soil is in a workable condition, unless otherwise approved in writing. Planting shall be after the permanent seed mix has been installed throughout the preservation area.

7.2. Except for container–grown material, the time limitation from digging to installing plant material shall be a maximum 21 days.

8. DELIVERY, STORAGE, AND HANDLING

8.1. No material is to be delivered until Landscaper and City are in agreement that the particular zone is ready for planting.

8.2. All plants shall be packed, transported, and handled with utmost care to ensure adequate protection against injury or damage to the root ball and desiccation. Plants must be protected from excessive vibrations. Plants shall not be thrown or bounded off a truck or loader to the ground. Plants shall not be dragged, lifted, or pulled by the trunk or braces in a manner that will damage the branches or loosen the roots in the ball.

8.3. Plant materials transported in vehicles shall be protected from wind whipping either by use of covered vehicles or secure tarps. Failure to protect plant materials during transport to the site will result in rejection of plant materials.

8.4. Plants will be delivered as close as possible to the date planting will actually begin.

8.5. Upon shipment arrival, plants will be unpacked and roots will be checked to ensure they are moist. Roots will be watered if they appear dry.

9. PRE–INSTALLATION INSPECTION

9.1. The Contractor shall meet with the City during delivery of plant materials at the project site. Each item shall be labeled with the product name (genus, species, variety, and cultivar), material size, and vendor. The Contractor shall provide the City with copies of all shipping manifests for the materials. The City shall verify the materials delivered are in a healthy and vigorous condition, and are consistent with the plan requirements in regards to quantity, species, and size.

9.2. The City shall be the sole judge of the conditions of quality and acceptability and will direct all corrections to the Contractor in writing. All rejected materials shall be immediately removed from the site and replaced with specified materials at the Contractor's expense.

10. INSTALLATION GENERAL

10.1. The Contractor shall not proceed with installation without written direction from the City if the actual time of installation does not comply with the installation periods listed in the Planting Table.

10.2. The Contractor shall mark all planting areas with stakes. The City shall approve the layout before planting begins.

10.3. Prior permission from the City is required for planting trees and shrubs if the majority of the planting area is excessively wet (areas >0.5–inch inundation) or exceedingly dry.

10.4. If an area is planted in a monoculture or an inappropriate mix, as solely determined by the City, at the direction of the City, the planting or a segment of the planting shall be removed and the plants discarded. The area will then be replanted as specified. No compensation for the discarded plants, the cost of the installation of the discarded plants, or the cost of the removal of the discarded plants shall be made to the Contractor.

10.5. The Contractor shall ensure all utilities within the planting area are located and marked prior to plant installation.

10.6. Observe each plant after delivery and prior to installation for damage of other characteristics that may cause rejection of the plant. Notify the City of any condition observed.

10.7. No more plants shall be distributed about the planting area than can be planted and watered on the same day.

10.8. ROOT SYSTEM

10.8.1. The root system of each plant, regardless of root ball package type, shall be observed by the Contractor, at the time of planting to confirm that the roots meet the requirements for plant root quality. The Contractor shall undertake, at the time of planting, all modifications to the root system required by the City to meet these quality standards.

10.8.2. Modifications, at the time of planting, to meet the specifications for the depth of the root collar and removal of stem girdling roots and circling roots may make the plant unstable or stress the plant to the point that the City may choose to reject the plant rather than permitting the modification.

10.8.3. Any modifications required by the City to make the root system conform to the plant quality standards, outlined in Special Planting Requirements (Sheet 43), shall not be considered as grounds to modify or void the plant warranty.

10.8.4. The resulting root ball may need additional staking and water after planting. The City may reject the plant if the root modification process makes the tree unstable or if the tree is not healthy at the end of the warranty period. Such plants shall still be covered under the warranty.

10.8.5. The Contractor remains responsible to confirm that the grower has made all required root modifications noted during any nursery observations.

10.8.6. Container and boxed root ball shaving: The outer surfaces of all plants in containers and boxes, including the top, sides and bottom of the root ball shall be shaved to remove all circling, descending, and matted roots. Shaving shall be performed using saws, knives, sharp shovels or other suitable equipment that is capable of making clean cuts on the roots. Shaving shall remove a minimum of one –inch of root mat or up to 2–inches as required to remove all root segments that are not growing reasonably radial to the trunk.

10.8.7. Exposed stem tissue after modification: The required root ball modifications may result in stem tissue that has not formed trunk bark being exposed above the soil line. If such condition occurs, wrap the exposed portion of the stem in a protective wrapping with a white filter fabric. Secure the fabric with biodegradable masking tape. Do not use string, twine, green nursery ties or any other material that may girdle the trunk if not removed.

10.9. EXCAVATION

10.9.1. Excavation of the planting space: Using hand tools or tracked mini–excavator, excavate the planting hole into the planting soil to the depth of the root ball measured after any root ball modification to correct root problems, and wide enough for working room around the root ball or to the size indicated on the drawing or as noted below.

10.9.2. For trees and shrubs planted in soil areas that are not tilled or otherwise modified to a depth of at least 12–inches over a distance of more than 10 feet radius from each tree, or 5 feet radius from each shrub, the soil around the root ball shall be loosened as defined below or as indicated on the drawings.

10.9.2.1. The area of loosening shall be a minimum of 3 times the diameter of the root ball at the surface sloping to 2 times the diameter of the root ball at the depth of the root ball.

10.9.2.2. Loosening is defined as digging into the soil and turning the soil to reduce the compaction. The soil does not have to be removed from the hole, just dug, lifted and turned. Lifting and turning may be accomplished with a tracked mini excavator, or hand shovels.

10.9.2.3. If an auger is used to dig the initial planting hole, the soil around the auger hole shall be loosened as defined above for trees and shrubs planted in soil areas that are not tilled or otherwise modified.

10.9.3. The measuring point for root ball depth shall be the average height of the outer edge of the root ball after any required root ball modification.

10.9.4. If motorized equipment is used to deliver plants to the planting area over exposed planting beds, or used to loosen the soil or dig the planting holes, all soil that has been driven over shall be tilled to a depth of 6–inches.

10.9.5. For trees to be planted in prepared planting soil that is deeper than the root ball depth, compact the soil under the root ball using a mechanical tamper to assure a firm bedding for the root ball. If there is more than 12–inches of planting soil under the root ball excavate and tamp the planting soil in lifts not to exceed 12–inches.

10.10. Set top outer edge of the root ball at the average elevation of the proposed finish. Set the plant plumb and upright in the center of the planting hole. The tree graft, if applicable, shall be visible above the grade. Do not place soil on top of the root ball.

10.11. The City may request that plant orientation be rotated when planted based on the form of the plant.

10.12. Backfill the space around the root ball with the same planting soil or existing soil that was excavated for the planting space.

10.13. Brace root ball by tamping planting soil around the lower portion of the root ball. Place additional planting soil around base and sides of ball in six–inch (6") lifts. Lightly tamp each lift using light foot pressure or hand tools to settle backfill, support the tree and eliminate voids. Do not over compact the backfill or use mechanical or pneumatic tamping equipment. Over compaction shall be defined as greater than 85% of maximum dry density, standard proctor or greater than 250 psi as measured by a cone penetrometer when the volumetric soil moisture is lower than field capacity.

10.13.1. When the planting hole has been backfilled to three quarters of its depth, water shall be poured around the root ball and allowed to soak into the soil to settle the soil. Do not flood the planting space. If the soil is above field capacity, allow the soil to drain to below field capacity before finishing the planting. Air pockets shall be eliminated and backfill continued until the planting soil is brought to grade level.

10.14. Thoroughly water the planting soil and root ball immediately after planting.

10.15. Remove all nursery plant identification tags and ribbons as per City's instructions.

10.16. Remove corrugated cardboard trunk protection after planting.

10.17. Follow additional requirements for the permitted root ball packages.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM PLANTING NOTES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
42/61

J:\20241062\Dwg\04Sheets\SITE\Stream Planting Plan.dwg, Last Saved By: abanks, 9/10/2025 1:15 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:20 PM
r Xref: 20241062-CS-REFR-N

SPECIAL PLANTING REQUIREMENTS

11. CONTAINER PLANTS

(Includes boxed and above–ground fabric containers)

11.1. This specification assumes that most container plants have significant stem girdling and circling roots, and that the root collar is too low in the root ball.

11.2. Containered plants shall be carefully removed from the containers prior to installation. Plants shall not be pulled from the container by the trunk. Any plant materials observed to be removed from containers by the trunk may be rejected by the City.

11.3. Perform root ball shaving as defined above.

11.4. Remove all roots and substrate above the root collar and the main structural roots.

11.5. Remove all substrate at the bottom of the root ball that does not contain roots.

11.6. Using a hose, power washer or air excavation device, wash out the substrate from around the trunk and top of the remaining root ball and find and remove all stem girdling roots within the root ball above the top of the structural roots.

11.7. The excavated hole for #5 and #15 containers shall be a diameter that is at least 6–inches larger than the diameter of the container.

12. BARE ROOT PLANTS

12.1. INSTALLATION

12.1.1. Before seedlings are taken to the planting site, the roots will be dampened. The seedlings will then be repacked in boxes and roots covered with moist packing material and enclosed in a plastic bag.

12.1.2. At the planting site, the unplanted seedlings will be kept moist, out of sunlight, and protected from wind.

12.1.3. Root pruning is prohibited for all seedlings with stems longer than 18–inches.

12.1.4. Root pruning is permissible for seedlings with stems shorter than 18–inches. The total root length after pruning must exceed 8–inches when measured from the root collar. Roots will be pruned at an angle with only a sharp knife, hatchet, or clippers. Bare root seedlings with roots less than 8–inches in length may not be pruned.

12.1.5. The roots of all bare root trees and shrubs shall be dipped into a mycorrhizal fungi solution immediately prior to installation. Use 'PHC Root Dip' or equivalent material. Landscaper to provide photo documentation of this process during installation.

12.1.6. If trees are hand planted, the planter may only carry as many seedlings in hand that can be planted within three minutes. All remaining seedlings will be carried with the planter in a planting bag or dipped in water gel and carried in a bucket. Seedlings must not be carried in a bucket of water or have roots submerged at any time.

12.1.7. Dig the planting hole to the diameter of the spread of the roots to a depth in the center that maintains the root collar at or slightly above the elevation of the surrounding finished grade. The hole should be large enough to accommodate the entire root system. Spread all roots out radial to the trunk in the prepared hole making the hole wider where needed to accommodate long roots. Root tips shall be directed away from the trunk. Prune any broken roots removing the least amount of tissue possible. The roots need to be straight within the hole, not twisted or bent (J–rooted).

12.1.8. Maintain the trunk plumb while backfilling soil around the roots.

12.1.9. Lightly tamp the soil around the roots to eliminate voids and reduce settlement.

12.1.10. The soil should be firmly packed around the seedling to avoid air pockets, which can cause the roots to dry out causing seedling death. If there is any vertical movement after planting when the stem is gently pulled upwards, the seedling will be identified as a failed planting. The planting hole will subsequently be repacked until no movement is observed while maintaining the proper root collar position relative to the soil surface.

13. ACCEPTANCE

13.1. Upon written notice from the Contractor, the City shall review the planting work and make a determination if the planting work is substantially complete. Acceptance of the plant installation by the City shall be based on proper site preparation and installation, and satisfactory completion of required watering, if any. Acceptance of the work by the City shall not relieve the Contractor from any obligations of the contract. If planting occurs during the fall or winter months, the City may request seedlings be replanted if the spring walkover performed by the City identifies excessive planting failure as the result of frost heaving.

13.2. If material specified in Zone 2 and Zone 3 is installed in the fall, Landscaper will be required to inspect the corridor during the first February post–installation and reset any planted material that has been affected by frost heaving or wind.

14. DAMAGED AREAS

14.1. All areas where the installed plants have been disturbed or destroyed by the Contractor's negligent actions or inactions, as solely determined by the City, shall be replanted in accordance with these specifications by the Contractor at his own expense. Replanting shall occur at the next available planting window and shall not be delayed until the end of the warranty period.

PLANTING LIVE STAKES

15. SUBMITTALS

15.1. Prior to the start of work on this item, the Contractor shall submit the nursery order and bill of lading from the nursery to the City for review and approval.

15.1.1. The Contractor shall submit the following items to the City for review at least 30 calendar days prior to the planned date of installation: product sheet indicating quantities, size, and species of live stakes proposed for installation and source (vendor) of the material.

16. MATERIALS

16.1. Native live stake species shall be in accordance with the Planting Table on Sheet 41. Final species selection shall be approved by the City in writing prior to purchasing the materials.

16.2. Live stakes are dormant cuttings taken in late winter or early spring before buds have opened. Live stakes shall be of the specified diameter and length, with visible buds.

16.3. Stakes shall be ½ to 2–inches in diameter, 2 feet in length, and living based on the presence of young buds and/or green bark. Prior to installation, the stakes shall be cut so that they are angled on the bottom and flush on the top.

16.4. Live stake material shall be dormant and gathered locally (within or in proximity to the project site) or purchased from a reputable commercial supplier. The Contractor may contact Ernst Conservation Seeds at 814–336–2404 or 800–873–3321 (fax: 814–336–5191) as a supplier of live stake material or approved equal. This material shall be planted only during its natural dormancy period as shown in the Planting Table on Sheet 41.

16.5. All harvested or purchased live stake material shall be preserved in a cool, moist environment until installation. Stakes must not be allowed to dry out. They must either be packed in moist sawdust or placed angled end down within a bucket/tub of water, wetland or pond edge. If storing in a wetland or pond edge, live stakes must be secured so they do not fall over or float away. Plant material that has been allowed to dry out or is not preserved in a dormant state prior to installation shall be discarded and replaced.

17. INSTALLATION

17.1. The Contractor shall install live stakes according to the Planting Table (Sheet 41) and Live Stake Detail (Sheet 41).

17.2. Stakes shall not be installed in frozen ground.

17.3. Contractor is advised that pilot holes are required in most installations. To install the live stakes, use a drill, rebar, or landscaping pin to create a pilot hole. Install the live stake on an angle to the channel bank between 30 and 60 degrees, as shown on the plan details, to assist in the installation. Vertical installation is not acceptable and will be rejected. At least three–fourths of the live stake length shall be buried with at least two leaf buds exposed above the ground. Live stakes that become bent or broken during installation shall be discarded and replaced.

17.4. Remove all nursery plant identification tags and ribbons as per City's instructions.

18. ACCEPTANCE

18.1. Upon written notice from the Contractor, the City shall review the live staking planting work and make a determination if the planting work is substantially complete. Acceptance of the plant installation by the City shall be based on proper site preparation and installation, and satisfactory completion of required watering, if any. Acceptance of the work by the City shall not relieve the Contractor from any obligations of the contract.

19. DAMAGED AREAS

19.1. All areas where the installed live stakes have been disturbed or destroyed by the Contractor's negligent actions or inactions, as solely determined by the City, the live stakes shall be replanted with new materials in accordance with these specifications by the Contractor at his/her own expense. Replanting shall occur at the next available planting window and shall not be delayed until the end of the warranty period.

WARRANTY PERIOD

20. The Contractor shall be held to the warranty percent survival rate for each plant material type according to the Planting Table on Sheet 41 and for the seed as specified below.

21. The warranty period for the seeding and planting work shall extend for a minimum of one calendar year and include at least one full continuous growing season consisting of the full months of June through October, inclusive.

22. Following installation and throughout the warranty period, the Contractor shall actively maintain the installed planting work. This work includes removing debris accumulated in the planting area, resetting trees and shrubs to upright positions, reseeding bare soil areas, removing and replacing dead trees and shrubs, watering, and controlling invasive species and weeds during establishment period.

23. The Contractor shall perform maintenance visits to the project site at the following time intervals. Additional maintenance visits may be performed at the Contractor's discretion and expense.

23.1. 30 days following written acceptance of all planting work

23.2. 3 months following the previous maintenance visit.

24. The warranty inspection will be conducted at least 12 months from the date of installation between April 1 and November 15. Landscaper will meet with the City in the field and review the project areas to determine both adequate grass cover and vegetation survival in accordance with this plan. All dead material, regardless of cause, will be subject to the warranty replacement in accordance with the survivability rates on Sheet 41. All missing material, regardless of cause (including but not limited to beavers, deer, flooding), shall be considered dead. Any material that is missing 50% or more of its original living branches present during installation (stunted branches, frost damage, leaf loss, etc.) shall be considered dead and will be subject to replacement.

25. The determination of planted material survivability shall occur within a portion of each planting area shown on this plan, agreed upon between the City and the Landscaper. The determined areas shall comprise no less than 30% of the individual planting areas. the determination of adequate grass cover shall apply to the entire project area,

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
STREAM PLANTING NOTES

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
43/61

J:\20241062\Dwg\04Sheets\SITE\Stream Planting Plan.dwg, Last Saved By: abanks, 9/10/2025 1:15 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:20 PM
r Xref 20241062-CS-REFR-N

LIGHTING GENERAL NOTES

1. The entire installation shall be in accordance with the ODOT CMS 625, National Electrical Code NFPA 70, the National Electrical Safety Code ANSI C2, and all State and Local Codes and Ordinances.

2. All wire to be stranded copper with 600 volt, XHHW insulation, RHW insulation where noted, No. 10 minimum for power and No. 14 minimum for control. All connections shall be made in enclosures by means of compression or bolted type mechanical connectors or equipment terminals as applicable and proper insulation. Splices in underground pull boxes shall be water resistant kits in accordance with ANSI C 119.1 and ODOT 725.15. Use terminal blocks for all control wiring. Identify conductors with wire markers at each termination.

3. Install all wiring in conduit unless otherwise shown. All exposed conduits and conduits to first bend underground shall be galvanized threaded rigid steel. Underground conduits shall be rigid non–metallic schedule 40 PVC with manufacturer's solvent cement joints. Minimum conduit size shall be 3/4". Provide water tight conduit fittings. Provide lockouts and bushings at all conduit terminations in enclosures and boxes.

4. Provide a continuously grounded and bonded electrical raceway, equipment and support system in accordance with the National Electrical Code. Provide a separate ground wire in all conduits. Provide all mechanical connections above ground and Cadweld connections underground.

5. Mount equipment so that sufficient access and working space are provided for ready and safe operation and maintenance. Securely fasten equipment, enclosures and boxes to poles and structural supports on which they ere mounted. Provide all galvanized steel supports. Use galvanized steel materials for miscellaneous hardware. Use galvanized steel materials for all conduit supports.

6. Provide nameplates for the lighting controller at all circuit breakers, contactors, control devices and other equipment that identify the new equipment and its function. Nameplates shall be engraved laminated plastic with black letters and numbers engraved on a white background. Attach nameplates using stainless steel screws. Provide legend plates on all control devices.

GROUNDING AND BONDING

The requirements of the State of Ohio Department of Transportation Construction and Material Specifications (C&MS) and the HL series of Standard Construction Drawings are modified as follows:

1. All metallic parts containing electrical conductors shall be permanently joined to form an Effective Ground Fault Current Path back to the grounded conductor in the power service disconnect switch.
   a. Provide an equipment grounding conductor in metallic conduits (725.04) in addition to the conductors specified and bond the conduit to this grounding conductor.
   b. When an equipment grounding conductor is required in plastic conduit (725.05), the installation shall include a separate equipment grounding conductor in addition to the conductors specified.
   c. Metal pull box lids shall be bonded by attachment of the equipment grounding conductor to the frame diagonal as provided on HL–30.11.
2. Conduits
   a. The 725.04 conduit shall have grounding bushings installed at all termination points. The bushing material shall be compatible with galvanized steel conduit and the grounding lug material shall be compatible for use with copper wire. Threaded or compression type bushings may be used.
   b. The 725.05 conduit shall have the inside and outside diameters of the conduit deburred at all termination points.
   c. Both ends of metallic conduit shall be bonded to the equipment grounding conductor.
   d. Metallic conduit may be bonded to metallic boxes through the use of conduit fittings UL approved for this type of connection, with the box bonded to the equipment grounding conductor.
3. Wire for Grounding and Bonding
   a. Use insulated, copper wire for the equipment grounding conductor. Bonding jumpers in boxes and enclosures may be bare or insulated copper wire. The insulation shall be green or green with yellow stripe(s). For 4 AWG or larger, insulation may also be black with green tape/labels installed at all access points.
   b. In a roadway lighting system, the equipment grounding conductor shall be the minimum conductor size of 4 AWG. Bonding jumpers will be minimum size 4 AWG.
4. Ground rod
   a. A 3/4 inch Schedule 40 PVC conduit will be used in foundations and concrete walls for the grounding conductor (ground wire) raceway to the ground rod. Should metallic conduit be used, both ends of the conduit shall be bonded to the grounding conductor.
   b. The typical grounding conductor (ground wire) shall be 4 AWG insulated, copper.
5. Power Service and Disconnect Switch
   a. At the power service location, the grounding conductor (ground wire) from the disconnect switch neutral (AC–) bar to the ground rod shall be a continuous, unspliced conductor. If spliced, it shall be an exothermic weld butt splice.
   b. The power service neutral shall only be connected to ground at the power service disconnect switch.
6. Payment
   a. All materials and work required to complete the effective ground fault current path system are incidental to the conductors installed by the contract.

ITEM 625 POWER SERVICE, AS PER PLAN

In addition to the requirements of Item 625, the Contractor shall contact the service provider and make arrangements for the connection of power. The Contractor shall contact the power service provider a minimum of 60 calendar days in advance of the need for power. Power shall be supplied by South Central Power Company via a ground mounted transformer. Power shall be 120/240 VAC. Power service shall be from the approximate location(s) as shown on the plans. Contact South Central Power Company Business Service Representative (800–282–5064).

Obtain meter sockets from the utility company. The Contractor shall mount a meter socket on the pedestal. Coordiante all service requirements with South Central Power (SCP).

Provide a heavy duty service entrance rated main switch with quick make, quick break operating mechanism, 240 volt, single throw fusible, 3 wire consisting of 2 poles and 1 solid neutral, equipment ground kid, sized as shown, safety padlocking handle, and NEMA 3R steel enclosure. Main switch shall be Square D Class 3110 or approved equal. Provide Bussman Low–Peak LPN–RK or approved equal fuses sized as shown in main switch and two spare fuses.

Provide a secondary surge arrestor, Square D, Class 6671 or approved equal. Connect to main switch as shown.

Provide a pedestal support as shown and mount equipment so that sufficient access and working space are provided for ready and safe operation and maintenance. Securely fasten equipment to channels. Provide galvanized steel channel supports for electrical equipment mounting. Use galvanized steel material for miscellaneous hardware.

Provide engraved laminated plastic nameplates with white face and black letters for the main switch. Attach all nameplates with stainless steel screws.

The meter base, main disconnect enclosure, pedestal support(s), and above ground conduits shall be finished black and meet the City of Canal Winchester requirements.

Provide an Arc Flash Hazard Warning sign on the outside front doors of the enclosures in accordance with the current National Electrical Code paragraph 110.16. Provide an Available Fault Current sign on the outside of the front door of the service disconnect enclosure in accordance with the current National Electrical Code paragraph 110.24.

Payment shall be made lump sum for the power service.

ITEM 625 LIGHTING, MISC.: POWER FEED TO PARKING LOT LIGHT POLES AND PUMP STATION

Power feed shall be obtained from the 120/240V main breaker panel located within the proposed shelter building and furnished by others. The Contractor shall utilize the following circuit breakers furnished by others for the new circuits:

–Pump Station: 40A, 2 Pole Circuit Breaker
–Parking Lot Light Poles: 20A, 2 Pole Circuit Breaker
–Pole Mounted Receptacles: 20A, 1 Pole Circuit Breaker

It shall be the Contractor's responsibility to provide all conduit, circuit cable, and conduit mounting equipment from the panel to a point located outside of the shelter. Payment for the complete power system, including but not limited to conduits, wiring, conduit risers, junction boxes, any pertinent mounting hardware, and any materials required to make the electrical connection in the panel shall be included with this item. All underground conduit and wiring installed outside of the shelter building shall be itemized separately.

This item shall include all control equipment shown in the single line power diagram including the contactor with HOA switch, photocell, conduits, all required control wiring, enclosures, and mounting equipment required to install the control equipment.

Payment shall be as per Item 625 to provide a complete and fully functional power system to the parking lot light poles, the parking lot light pole mounted receptacles, and the pump station.

ITEM 625 CONDUIT, 2", 725.051, AS PER PLAN
ITEM 625 CONDUIT, 2", 725.051, CONCRETE ENCASED, AS PER PLAN
ITEM 625 CONDUIT, 3", 725.051, CONCRETE ENCASED, AS PER PLAN

In addition to the requirements of Item 625, all conduits shall be installed at 36" below the finished grade, and the following plastic caution tape shall be provided: The location of the conduit in the trench shall be marked by the use of a continuous identifying tape buried in that trench above the line. The identifying tape shall be an inert material approximately 6" wide composed of polyethylene plastic and shall be highly resistant to alkalis, acids, and other chemical components likely to be encountered in soils. The tape shall be red with the words 'Electric Line Buried Below' printed in black letters on one side only. It shall be supplied in continuous rolls with the identifying lettering repeated for the full length of the tape. The Contractor shall bury the tape in the trench with one strip placed approximately down the centerline and 8" to 12" below the final grade. It shall be placed in the trench with the printed side up and shall be essentially parallel to the finished surface. The Contractor shall take any necessary precautions to ensure that the tape is not pulled, distorted or otherwise misplaced in completing the trench backfilling.

Payment shall be as per Item 625.

ITEM 625 LIGHT POLE, AS PER PLAN

In addition to the requirements of Item 625, light poles shall be manufactured by Hapco, and conform to the details included herein. The light pole shall include a pole mounted receptacle.

Light pole shall be painted black similar to General Standard 595–B, Color No. 27040.

Payment shall be as per Item 625.

ITEM 625 LUMINAIRE, 112W LED, 240V, TEAR DROP, AS PER PLAN

In addition to the requirements of Item 625, luminaires shall be Teardrop style, 240 volt, 112 watt, LED 2700K CCT. Luminaires shall be in accordance with MIS Specification No. 801 except the luminaires shall be coated to match its respective support pole (black). Paint samples shall be submitted with the luminaire drawings for review.

Provide a shorting cap for the photo–electric receptacle.

In addition, the luminaire shall be Holophane: ESL3–P35S–27K–MVOLT–TG3–QSM–BK or an approved equal.

Payment shall be as per Item 625.

PAINT CHIP SUBMITTAL

Prior to any painting, the Contractor shall submit paint samples to the Engineer and Canal Winchester. Paint samples shall be representative of the color, type and manufacture that will be used for finishing the various items. The Engineer and Canal Winchester shall review the paint samples prior to the commencement of the finishing process.

Paint samples shall be submitted for all proposed street lighting items called for in this plan set, including meter and main disconnect pedestal, poles, and luminaires.

LIGHTING ESTIMATE OF QUANTITIES

ITEM NO.	QTY	UNIT	ITEM DESCRIPTION
625	24	EA	Connection, Fused Pull Apart (HL-60.11)
625	8	EA	Connection, Unfused Pull Apart (HL-60.11)
625	6	EA	Connection, Unfused Permanent
625	5	EA	Pull Box, 725.08, 24" (HL-30.11)
625	8	EA	Light Pole, As Per Plan
625	8	EA	Light Pole Foundation, 24" x 6' Deep (HL-20.11)
625	774	LF	No. 3/0 AWG, 600 Volt Distribution Cable RHW (Power)
625	3117	LF	No. 4 AWG, 600 Volt Distribution Cable (Lighting)
625	3582	LF	No. 8 AWG, 600 Volt Distribution Cable (Receptacles And Pump Station)
625	630	LF	No. 12 AWG, 600 Volt Distribution Cable (Control)
625	1008	LF	No. 10 AWG, Pole and Bracket Cable, 600 Volt (HL-60.11)
625	192	LF	No. 12 AWG, Pole and Bracket Cable, 600 Volt (HL-60.11)
625	1084	LF	Conduit, 2", 725.051, As Per Plan
625	248	LF	Conduit, 2", 725.051, Concrete Encased, As Per Plan
625	159	LF	Conduit, 3", 725.051, Concrete Encased, As Per Plan
625	12	EA	Luminaire, 112W LED, 240V, Tear Drop, As Per Plan
625	1491	LF	Trench (HL-20.11)
625	1491	LF	Underground Warning/Marking Tape (HL-20.11)
625	11	EA	Ground Rod (HL-60.11)
625	1	LS	Lighting, Misc.: Power Feed To Parking Lot Light Poles and Pump Station
625	1	LS	Power Service, As Per Plan

STATE OF OHIO
WILLIAM CLIFFORD MESS
38390
REGISTERED PROFESSIONAL ENGINEER

William C. Mess

William C. Mess, Date 9/10/2025

For Power Distribution and Grounding Only on Sheets 44 through 46.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
LIGHTING AND ELECTRICAL NOTES

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

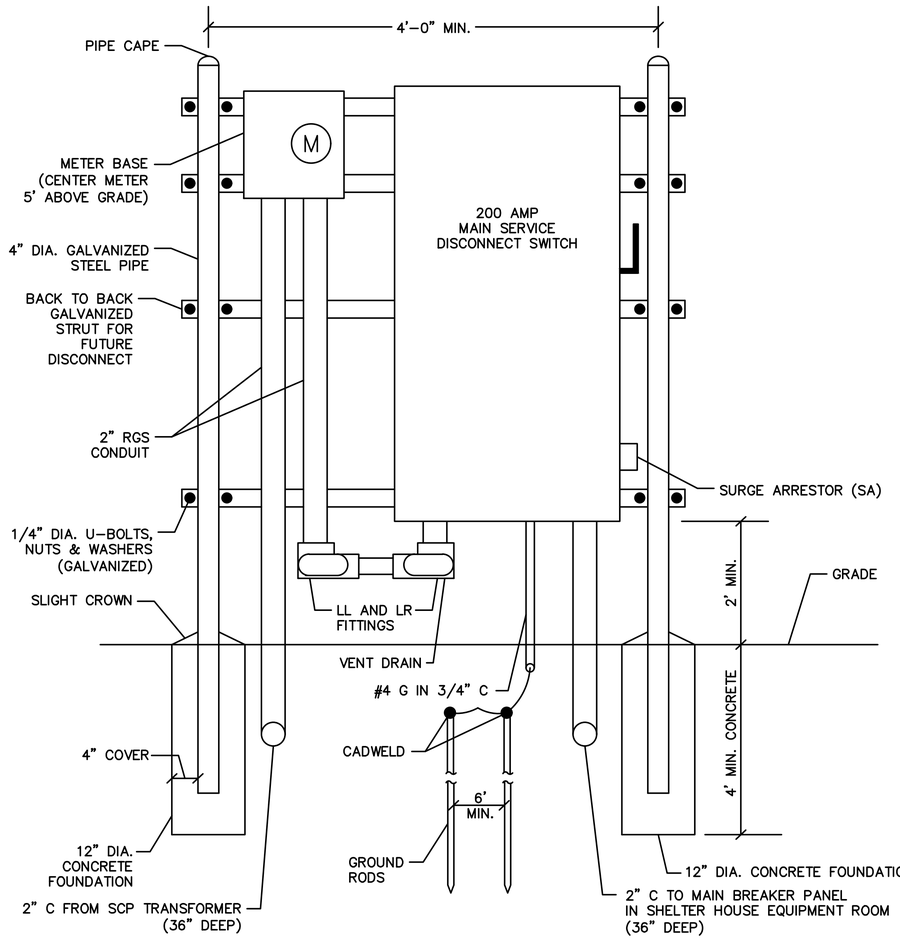
DATE
September 2025

SCALE
NONE

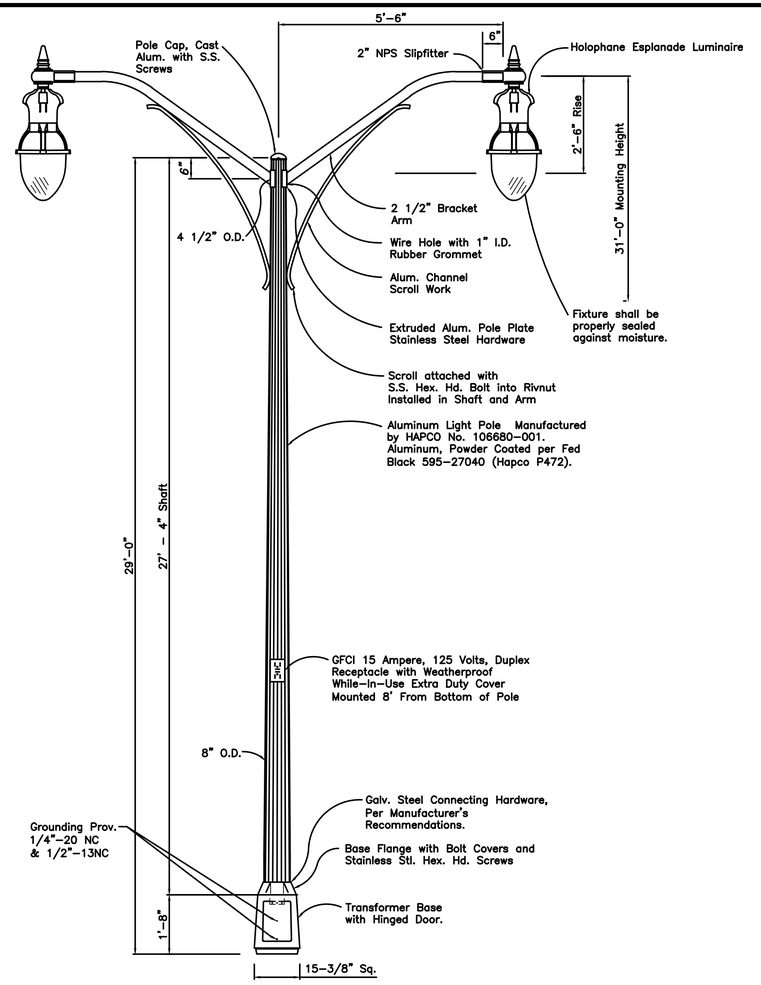
JOB NO.
20241062

SHEET
44/61

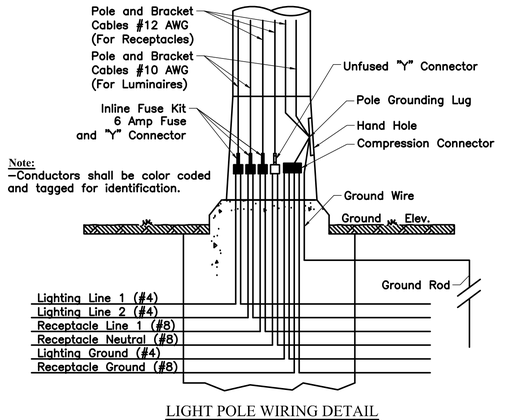
J:\20241062\Dwg\04Sheets\SITE\Lighting and Electrical Notes.dwg, Last Saved By: dmcconn, 9/11/2025 7:48 AM Last Printed By: Banks, Annaliso, 9/15/2025 1:21 PM
3 Xrefs: 20241062-CS-REFR-E, 20241062-CS-REFR-N, 20241062-LS-REFR-N



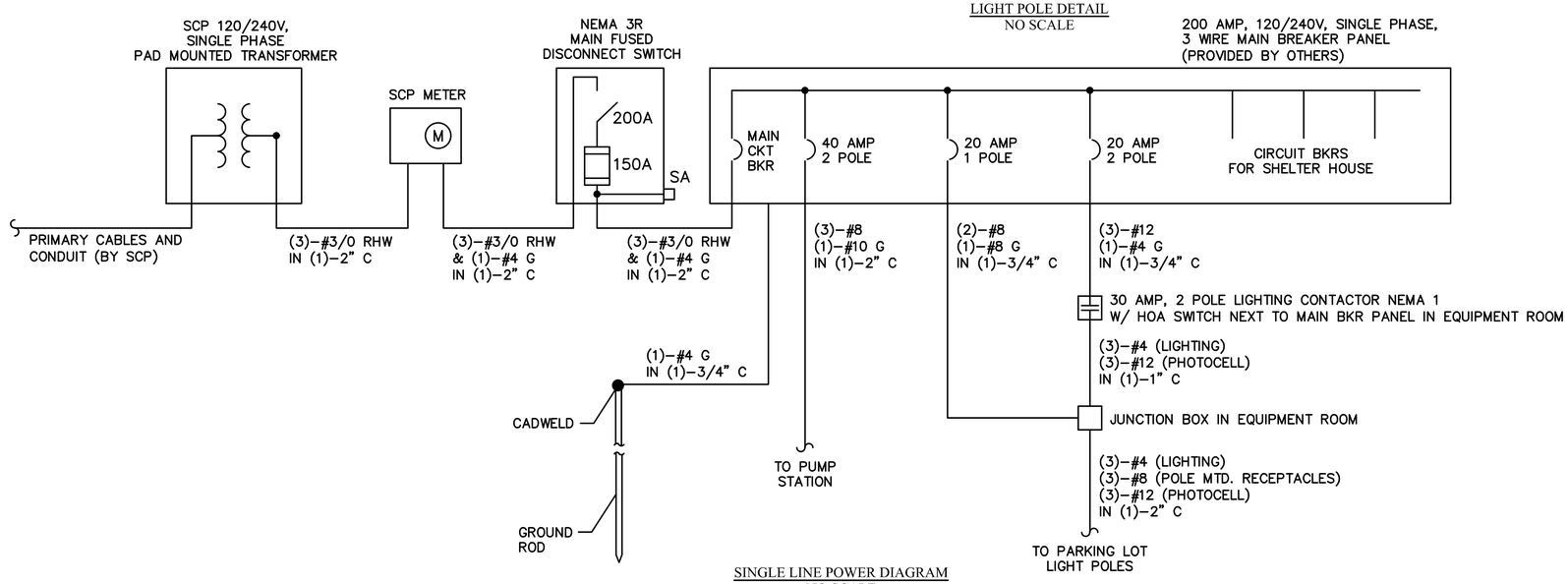
METER AND MAIN DISCONNECT PEDESTAL DETAIL
NO SCALE



LIGHT POLE DETAIL
NO SCALE



LIGHT POLE WIRING DETAIL
(240 VOLT, PLUS GROUND, SIX-WIRE, 3 #4 AWG & 3 #8 AWG, 600V)
NO SCALE



SINGLE LINE POWER DIAGRAM
NO SCALE

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
LIGHTING AND ELECTRICAL DETAILS

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 toll free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
45/61

J:\20241062\Dwg\04Sheets\SITE\Lighting and Electrical Notes.dwg, Last Saved By: dmcconn, 9/11/2025 7:48 AM Last Printed By: Banks, Annaliss, 9/15/2025 1:21 PM
3 Xrefs: 20241062-CS-REFR-E, 20241062-CS-REFR-N, 20241062-LS-REFR-N

LIGHTING LEGEND

- PROPOSED LIGHTING CONDUIT (SIZE AS NOTED) W/ CIRCUIT CABLES (TYPE AS NOTED)
- PROPOSED ELECTRICAL CONDUIT (SIZE & ENCASED WHERE NOTED) W/ POWER FEED CABLES (TYPE AS NOTED)
- PROPOSED LIGHT POLE W/ (1)–LED LUMINAIRE
- PROPOSED LIGHT POLE W/ (2)–LED LUMINAIRES
- PROPOSED PULL BOX
- EX. LIGHT POLE (TO REMAIN)
- EX. LIGHTING PULL BOX (TO REMAIN)
- EX. LIGHTING CONDUIT/CIRCUIT (TO REMAIN)

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (2)–PROP. 112W LED LUMINAIRES
N: 668187.4180
E: 1883363.5020

PROPOSED PULL BOX, 24"
W/ FEED TO PUMP STATION
N: 668259.4470
E: 1883501.2217

(1)–2" PVC CONDUIT
W/ (3)–#8 AWG (PUMP STATION)
W/ (1)–#10 AWG (GROUND)

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (2)–PROP. 112W LED LUMINAIRES
N: 668177.4709
E: 1883481.0209

PROP. PUMP STATION CONTROL PANEL

PROP. PUMP STATION

PROPOSED PULL BOX, 24"
N: 668284.0887
E: 1883410.7196

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (2)–PROP. 112W LED LUMINAIRES
N: 668194.9473
E: 1883274.5478

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (1)–PROP. 112W LED LUMINAIRE
N: 668213.6041
E: 1883142.8684

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (1)–PROP. 112W LED LUMINAIRE
N: 668156.2134
E: 1883054.0703

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (1)–PROP. 112W LED LUMINAIRE
N: 668028.7500
E: 1883053.8750

(1)–2" PVC CONDUIT
W/ (3)–#8 AWG (PUMP STATION)
W/ (1)–#10 AWG (GROUND)

PROP. SHELTER HOUSE (BY OTHERS)
W/ 120/240V MAIN BREAKER PANEL (INSTALLED INSIDE SHELTER HOUSE BY OTHERS)
W/ (1)–40A, 2 POLE CIRCUIT BREAKER (PUMP STATION)
W/ (1)–20A, 2 POLE CIRCUIT BREAKER (PARKING LOT LIGHT POLES)
W/ (1)–20A, 1 POLE CIRCUIT BREAKER (POLE MTD. RECEPTACLES)

(1)–2" PVC CONDUIT, ENCASED
W/ (3)–#3/0 RHW (POWER FEED TO PROPOSED SHELTER HOUSE MAIN BEAKER PANEL)
W/ (1)–#4 AWG (GROUND)

PROPOSED PULL BOX, 24"
N: 668273.3218
E: 1883516.0789

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)
W/ (3)–#12 AWG (PARKING LOT LIGHTING CONTROL)

PROPOSED PULL BOX, 24"
W/ (6)–CABLE SPLICES (PARKING LOT LIGHTING AND POLE MTD. RECEPTACLES)
N: 668253.9351
E: 1883561.8885

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)
W/ (3)–#12 AWG (PARKING LOT LIGHTING CONTROL)

PROP. LIGHT POLE
W/ (1)–PROP. PHOTOCELL
W/ (2)–PROP. 112W LED LUMINAIRES
N: 668173.5773
E: 1883600.1893

(1)–2" PVC CONDUIT
W/ (3)–#4 AWG (PARKING LOT LIGHTING)
W/ (3)–#8 AWG (POLE MTD. RECEPTACLES)

PROP. LIGHT POLE
W/ (1)–PROP. 112W LED LUMINAIRE
N: 668133.6544
E: 1883689.8620

SEE DETAIL A

Ex. Light Pole (TO REMAIN)

Ex. Pickleball Court Light Poles (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

Ex. Light Pole (TO REMAIN)

LITHOPOLIS-WINCHESTER ROAD

(1)–3" PVC CONDUIT, ENCASED
(EMPTY FOR FUTURE POWER FEED TO BASEBALL FIELD)

PROPOSED PULL BOX, 24"
N: 668132.5898
E: 1883404.9252

PRIMARY CABLES AND CONDUIT (BY SCP)

DETAIL A
SCALE: 1" = 20'

(1)–2" PVC CONDUIT, ENCASED
W/ (3)–#3/0 RHW (POWER FEED TO PROPOSED SHELTER HOUSE MAIN BEAKER PANEL)
W/ (1)–#4 AWG (GROUND)

PROPOSED METER AND MAIN DISCONNECT PEDESTAL
N: 668173.5773
E: 1883600.1893

(1)–2" PVC CONDUIT, ENCASED
W/ (3)–#3/0 RHW (POWER SERVICE TO MAIN DISCONNECT PEDESTAL)

PROPOSED 120/240V SINGLE PHASE
PAD MTD. TRANSFORMER (BY SCP)
(APPROXIMATE LOCATION SHOWN)

GRAPHIC SCALE
0 20 40 80
1 inch = 40 feet

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
LIGHTING AND ELECTRICAL PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

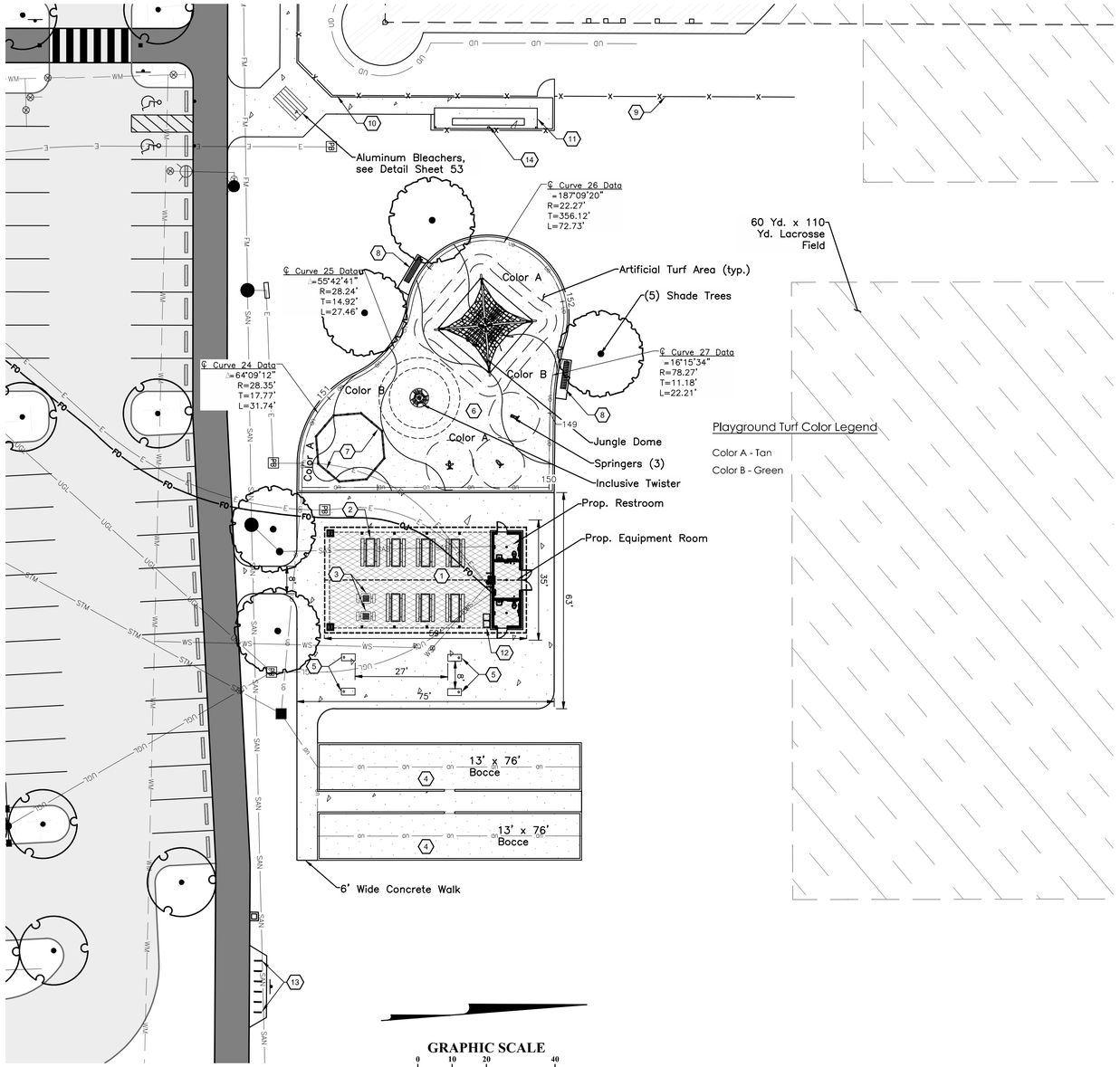
DATE
September 2025

SCALE
1" = 40'

JOB NO.
20241062

SHEET
46/61

J:\20241062\Dwg\04Sheets\SITE\Lighting and Electrical Notes.dwg, Last Saved By: dmccann, 9/11/2025 7:48 AM Last Printed By: Banks, Annaliso, 9/15/2025 1:21 PM
3 Xrefs: 20241062-CS-REFR-E, 20241062-CS-REFR-N, 20241062-LS-REFR-N



PLAY EQUIPMENT AND SURFACING GENERAL NOTES

1. Playground equipment shall be by Kompan per Park Vision Quote #EJ–06925–2. Contact Eric Jones at Park Vision, Inc. 614–527–7238.
2. Main Play Structure shall be Park Vision – Kompan Jungle Dome (NR0836–1201).
3. Twisting Play Structure shall be Park Vision – Kompan Inclusive Twister (COR203301–1101).
4. Minor Play elements shall be Kompan Forest Bug Springer (NR0223–0401), Kompan Bee Springer (NR0118–0601) and Kompan Snail Springer (NR0115–0601).
5. All playground equipment and artificial turf surfacing, including aggregate base and underdrains shall be furnished and installed by a single installer for warranty coverage and service.
6. Playground equipment and surfacing installer shall be an experienced installer who has completed playground equipment and surfacing installations similar in design, material and extent to those indicated for this Project and whose work has resulted in construction with a record of successful performance. Installer shall be continuously engaged in installation of playground equipment and surfacing of similar type to that indicated, with a minimum of 10 years successful experience.
7. Colors of playground equipment and surfacing shall be selected by City from manufacturer's full range. Submit samples for selection.
8. Submit product data and installation details for all play equipment and surfacing to City for review prior to ordering. Identify any options that require City selection.
9. All play equipment and surfacing materials including labor, layout, excavation, coordination, subgrade preparation, aggregate base, concrete curb, underdrains and Playground Grass Artificial Turf shall be paid for in Item Special – Playground and Equipment, Complete as per Plan. No separate payments will be made.

CURVE DATA PC & PT

Curve 24

	Station	Northing	Easting
PC	150+83.29	668334.39	1883587.64
PT	151+16.71	668315.15	1883612.84

Curve 25

	Station	Northing	Easting
PC	151+16.71	668315.15	1883612.84
PT	151+42.71	668298.56	1883631.52

Curve 26

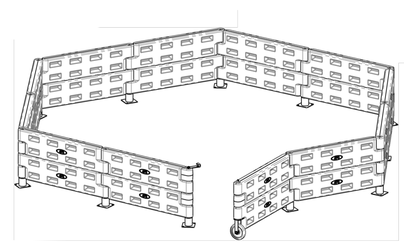
	Station	Northing	Easting
PC	151+42.71	668298.56	1883631.52
PT	152+20.34	668253.27	1883617.40

Curve 27

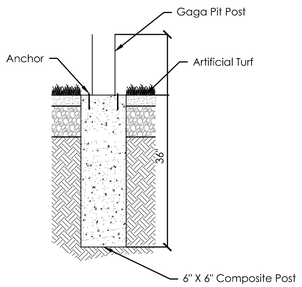
	Station	Northing	Easting
PC	152+20.34	668253.27	1883617.40
PT	152+42.14	668258.24	1883596.25

REFERENCE NOTES SCHEDULE

CODE	DESCRIPTION
1	Park Shelter with Restrooms and Equipment Storage Room, See Romtec Drawings for Detail
2	6' Galvanized Picnic Table
3	Checkerboard Table
4	13' x 76' Bocce Court
5	24" x 48" Concrete Cornhole Boards
6	Playground Grass Synthetic Turf by ForeverLawn. See Sheet 47 for Color Pattern.
7	20' Inground High–Walled GaGa Ball Pit with ADA Gate by Park Vision or Equal
8	8' Heritage Bench
9	Chainlink Fence
10	Backstop Fence
11	Dugout Enclosure
12	Trash Recepticle
13	Bicycle Rack
14	21' All Aluminum Team Bench



20' Gaga Pit by Action Play Systems or equal

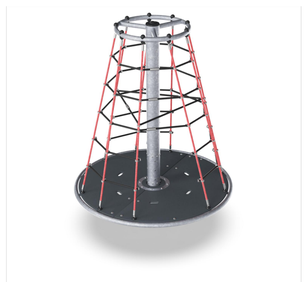


Gaga Pit Post Mounting Detail

Forest Bug Springer by Kompan or equal

Bee Springer by Kompan or equal

Snail Springer by Kompan or equal



Inclusive Twister by Kompan or equal

Jungle Dome by Kompan or equal

MARK	DATE	DESCRIPTION

REVISIONS

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
PLAY AREA ENLARGEMENT

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Architects • Planners • Surveyors
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

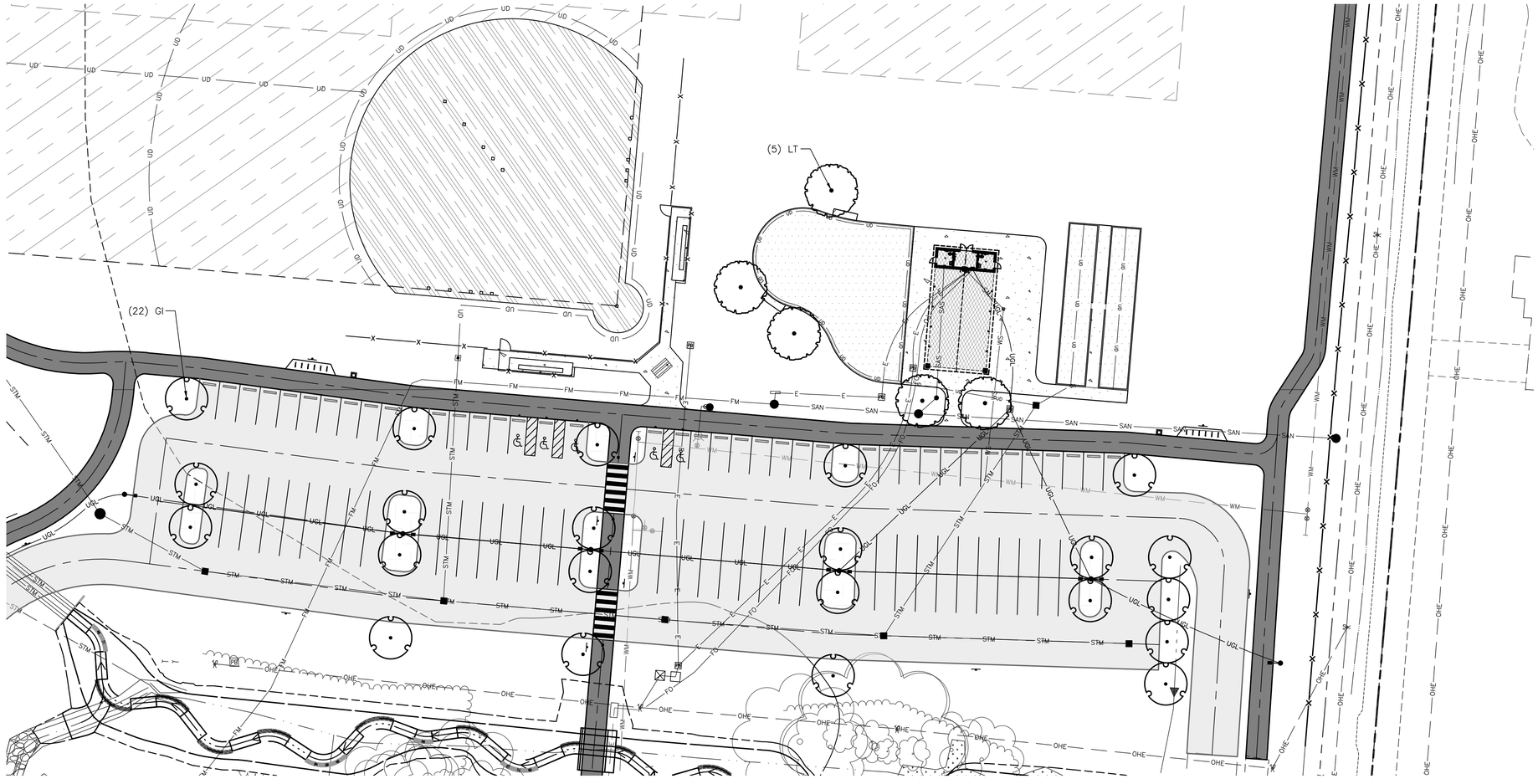
DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
47/61

Date: 9/15/2025 1:21 PM (No Xrefs)
AA\20241062\Dwg\45Sheets\SITE PLAY AREA ENLARGEMENT.dwg Last Saved By: jsimpson 9/10/2025 10:28 AM Last Plotted By: Banks, Annalisa 9/15/2025



GRAPHIC SCALE

0 15 30 60

1 inch = 30 feet

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
PARKING LOT TREES						
	GI	22	Gleditsia triacanthos inermis	Thornless Honey Locust	2" Cal.	B&B
SHADE TREES						
	LT	5	Liriodendron tulipifera	Tulip Poplar	2" Cal.	B&B

LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Full-Depth Asphalt Pavement
	Proposed 5-Inch Concrete Slab, As Per Plan
	Proposed Athletic Field Area
	Proposed Clay Infield
	Proposed Turf
	Proposed Stone Mulch

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
LANDSCAPE PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers, Surveyors, Planners, Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

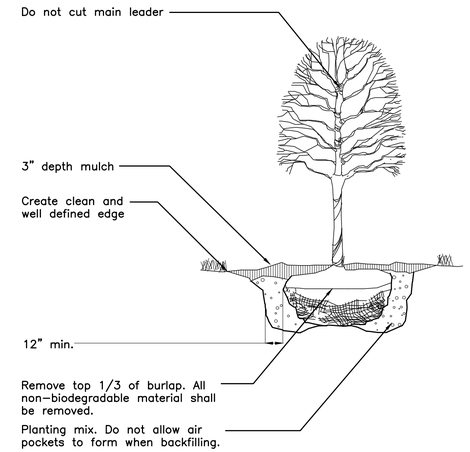
DATE
September 2025

SCALE
AS NOTED

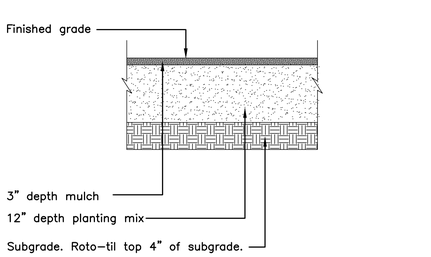
JOB NO.
20241062

SHEET
48/61

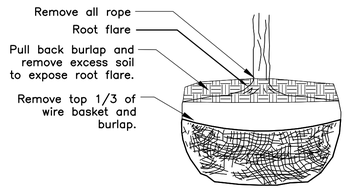
J:\20241062\Dwg\04Sheets\SITE\LANDSCAPE DETAILS.dwg, Last Saved By: obanks, 9/9/2025 2:46 PM Last Printed By: Banks, Annaliisa, 9/15/2025 1:22 PM
Xrefs: 20241062_LS_REFR.dwg, 20241062_LS_REFR_E_20241062_LS_REFR.dwg, 20241062_LS_REFR_N



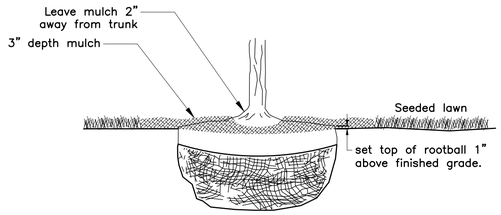
1 DETAIL
Deciduous Tree Planting
Not to Scale



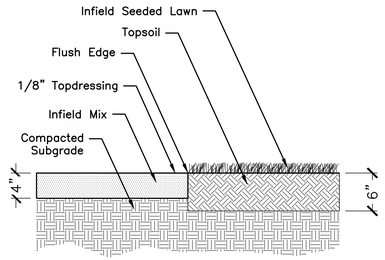
2 DETAIL
Planting Area Establishment
Not to Scale



3 DETAIL
Rootball Preparation
Not to Scale



4 DETAIL
Rootball Setting
Not to Scale



Notes:
1. Infield Mix shall be KB Infield Mix by Kurtz Bros. 6279 Houchard Rd., Dublin, OH, 614-873-2000 or City approved equal. Sand content shall be 60% to 80%. Sand, Clay & Silt content to be determined during construction. Submit proposed mix for City review. Compact Infield Mix and Subgrade to 85%-90% Standard Proctor density.
2. Topdressing shall be DuraEdge FairBall Calcined Clay Topdressing by Beacon Athletics or City approved equal. Install per manufacturer's specifications.
3. Create clean, defined and flush edge between Seeded Lawn and Infield Mix. Edge shall be a consistent radius with straight lines as shown on the plan.

6 DETAIL
Infield Clay
Not to Scale

GENERAL NOTES

1. Prior to installation, the landscape contractor shall inspect the general site conditions and verify the subgrade, elevations, utility locations and topsoil provided by general contractor. The landscape contractor shall notify the general contractor of any unsatisfactory conditions and work shall not proceed until such conditions have been corrected and are acceptable to the landscape contractor.
2. All plants shall meet or exceed standards set in the American Standard for Nursery Stock, ANSI Z60.1, current edition. All plants shall equal or exceed the measurements and sizes specified in the schedule.
3. Substitutions shall only be permitted with notification and written approval from the Owner. Substituted material shall be equivalent or greater in size than the specified plant. Substituted plants shall have the same essential characteristics and growth habit of the specified plant.
4. Confirm location of all utilities and subsurface drain lines prior to plant installation.
5. A pre-installation conference shall be conducted prior to planting operations with Owner and Contractor present.
6. Contractor may slightly field adjust plant locations as necessary to avoid utilities. Finished planting beds shall be graded to provide positive drainage.
7. Irrigation system, if applicable, shall be complete and operational prior to landscape planting.
8. Contractor shall repair all lawn areas disturbed during construction with seed and warrant a healthy, weed free lawn prior to project acceptance.
9. Seed all areas within contract limits that are not covered by paving, buildings or planting beds unless otherwise noted. Seeding shall not begin until area has received topsoil and finished grade.
10. Mulch planting beds with shredded hardwood mulch of uniform dark brown color. It shall be free of twigs, leaves, disease, pest or other material unsightly or injurious to plants. Average applied thickness shall be 3" depth. Mulch hedges in a continuous bed.
11. Planting beds shall be covered with pre-emergent herbicide applied at product specified rate unless otherwise noted.
12. Bed edge shall be smooth, consistent, hand trenched 4" deep and "V" shaped unless otherwise noted. All excavated material shall be removed from the bed edge and planting bed.
13. All planting bed edges to be smooth flowing arcs or straight lines as shown on plan. Plant locations and layout of beds shall be located by Contractor and approved by Landscape Architect prior to planting.
14. Install all plants in accordance with planting details and specifications.
15. Parking lot and street trees shall have a clear canopy height of 6' min.
16. Trees shall be placed a minimum of 3' from sidewalks and curbs.
17. Planting Mix shall be blended, manufactured soil consisting of three (3) parts topsoil, one (1) part compost, one (1) part sand. Topsoil shall be per ASTM D5268, ph range of 5.5 to 7, min. 4 percent organic material, free of stones and soil clumps 3/4 inch and larger. Compost shall be yard waste compost from an EPA rated Class IV compost facility or Com-til compost from City of Columbus Department of Public Utilities. Sand shall be per Item ASTM C33. Proprietary manufactured Planting Mix such as Kurtz Bros. Professional Blend or Jones SuperSoil may be used. Submit product data for review by Owner. Place Planting Mix in settled 6 inch lifts.
18. Mix Mycorrhizal Fungi into Planting Mix during placement of Planting Mix. Application rate shall be according to manufacturer's written recommendations. Mycorrhizal Fungi shall be a dry, granular inoculant containing vesicular-arbuscular mycorrhizal fungi and ectomycorrhizal fungi.
19. Excavate planting beds to a depth of 12 inches, unless otherwise indicated. Roto-til subgrade of excavation to a depth of 4 inches, unless otherwise indicated. Incorporate a 6 inch lift of planting mix into subrade. Place remaining Planting Mix in settled 6 inch lifts.
20. Planting beds, including mulch, shall be no higher than 6 inches above adjacent grade and shall not impede surface drainage.
21. Lawn areas shall be backfilled with Planting Mix to a minimum settled thickness of 6 inches. Roto-Til subgrade below lawns to a depth of 4 inches, unless otherwise indicated, prior to placement of Planting Mix.
22. All trees and shrubs shall be fertilized with controlled release tablets of 20-10-5 composition. Size and number of tablets shall be per manufacturer's instructions.
23. Composition and application rate of lawn fertilizer shall be sufficient to amend soil according to recommendations of a qualified soil testing agency. Submit soil test results and amendment recommendations to Owner. Lawn fertilizer shall be in a dry granular form.
24. Contractor to determine plant list quantities from the plan. Graphic representation on plan supersedes in case of discrepancy with quantities on schedule.
25. Any item or areas damaged during construction shall be repaired or replaced to its original condition at the contractor expense.
26. Contractor shall thoroughly water all plants at time of installation and as needed until project acceptance by owner. Contractor shall guarantee all plants installed for one full year from date of acceptance by the Owner. All plants shall be alive and at a vigorous rate of growth at the end of the guarantee period.
27. Lawn seed mix shall proportioned by weight as follows: 10 percent NuBlue or Blue Chip Kentucky Bluegrass; 10 percent Caddieshack or GoalKeeper Perennial Ryegrass; 80 percent Quest, Inferno, Arid 3 and/or Pixie Tall Fescue (select 2). Seeding rate shall be 8 to 10 pounds per 1000 square feet.
28. Lawn seed shall not have less than 98 percent purity and not have less than 90 percent germination.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
LANDSCAPE DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers, Surveyors, Planners, Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

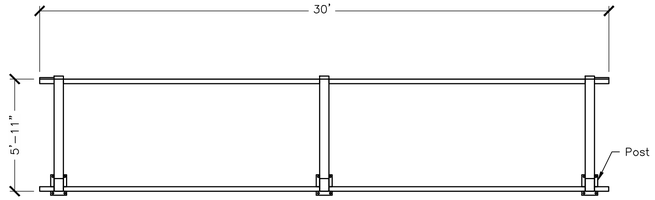
DATE
September 2025

SCALE
AS NOTED

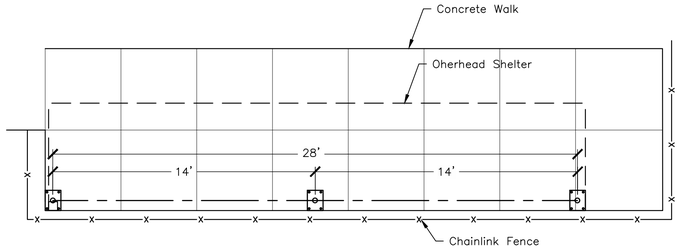
JOB NO.
20241062

SHEET
49/61

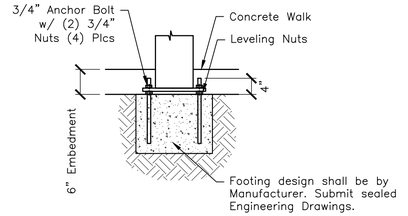
J:\20241062\Dwg\04Sheets\SITE\LANDSCAPE DETAILS.dwg, Last Saved By: abanks, 9/9/2025 2:46 PM Last Printed By: Banks, Annaliss, 9/15/2025 1:22 PM
Xrefs: 20241062-LS-BEFR.dwg, 20241062-PS-BEFR-F 20241062-PS-BEFR-N



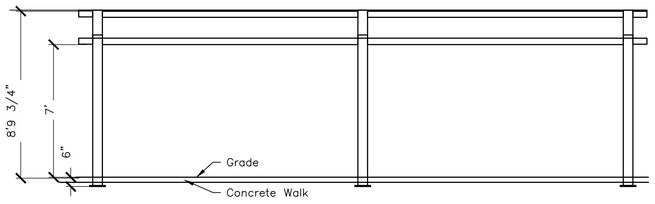
1 DETAIL
Dugout Shelter Frame Plan View Not to Scale



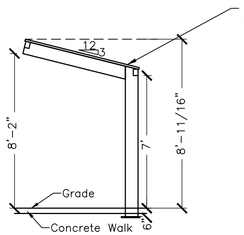
2 DETAIL
Dugout Shelter Post Spacing Not to Scale



3 DETAIL
Dugout Shelter Base Connection Not to Scale



4 DETAIL
Dugout Shelter Front View Not to Scale



Dugout Shelter Type
MC6X30-7M-P3 by Icon
Shelter Systems or equal.

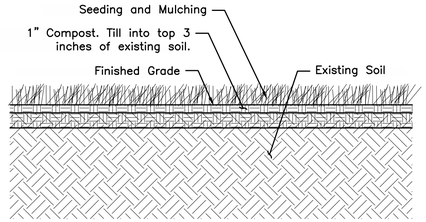
All Structural Components
will be:
Tube: ASTM A500 Grade B
Plate: ASTM A36
Bolts: ASTM A325
Nuts: ASTM A563
Welding: GMAW

Column Size: HSS 8x6x$\frac{3}{16}$

Foundation Design by
Manufacturer

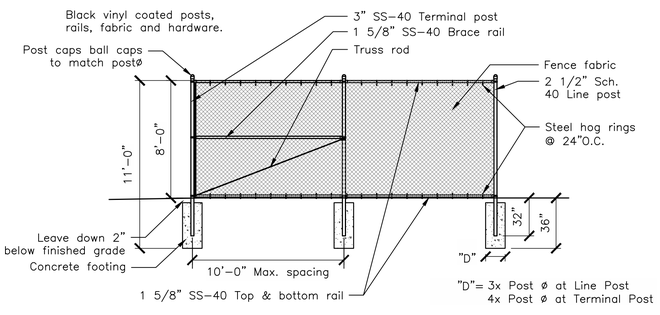
5 DETAIL
Dugout Shelter Side View Not to Scale

NOTES
1. Item Spec – Dugout Shade Structure, Complete as per Plan shall include the material and labor for the installation of posts and overhead panel and structural components as shown in the detail.

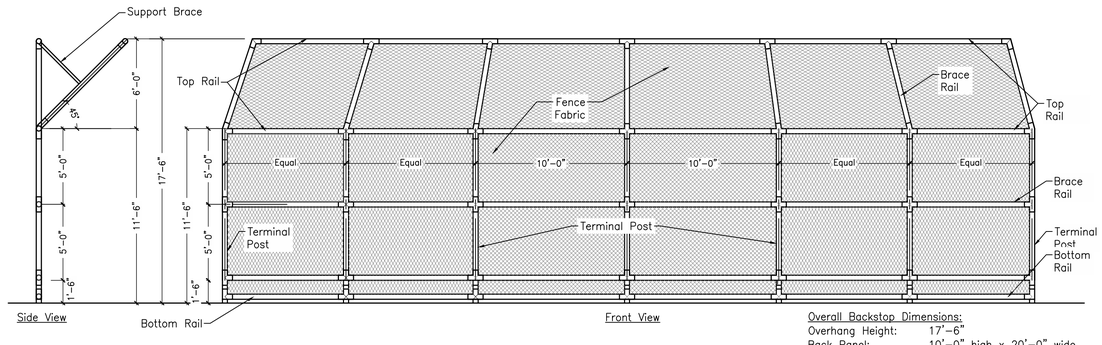


5 DETAIL
Multi-Purpose Field Soil Preparation Not to Scale

NOTES
1. Item Spec – Infield Mix shall include the preparation, material and labor for the installation of Multi-Purpose Field Soil Preparation.



7 DETAIL
Typical Chainlink Fence Not to Scale



NOTES
1. Item Spec – Baseball Field Fence (Backstop, Dugout and Foul Line), Complete as per Plan shall include the material and labor for the installation of posts, rails, fencing and concrete footing and structural components as shown in the detail.

Overall Backstop Dimensions:
Overhang Height: 17'-6"
Back Panel: 10'-0" high x 20'-0" wide
Side Panels: 10'-0" high x with varies, see plan

Notes:
1. Black vinyl coated posts, rails, fabric and accessories.
2. Submit shop drawings for review prior to construction.

8 DETAIL
Backstop Not to Scale

Beacon Athletics
Rodgers "Change-Up"
Breakaway Base Set
Size: Youth
Install per Manufacturer's
recommendations.

9 DETAIL
Base Set Not to Scale

Beacon Athletics
ODS Anchored Major League
Home Plate
Install per Manufacturer's
recommendations.

10 DETAIL
Home Plate Not to Scale

Beacon Athletics
6-Inch Junior Portable Game
Mound – Pitch Pro 486
Size: 6"H x 4'W x 8'L
Weight 125 lbs.
Install per Manufacturer's
recommendations.

11 DETAIL
Portable Pitcher's Mound Not to Scale

Beacon Athletics
21' All Aluminum Team Bench
Portable Mount with Backrest.
Install per Manufacturer's
recommendations.

12 DETAIL
21' Dugout Bench Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
BASEBALL FENCE & DUGOUT

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

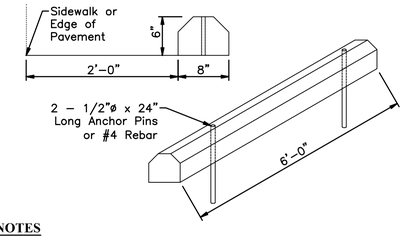
DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

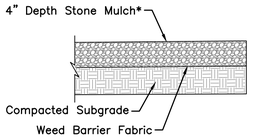
SHEET
50/61

A:\20241062\Dwg\04Sheets\SITE\RECREATION AREA DETAIL.dwg, Last Saved By: jsampson, 9/15/2025 12:59 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:22 PM



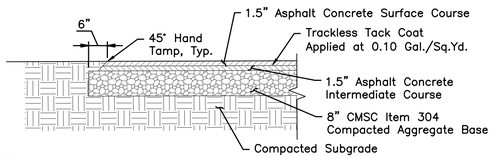
NOTES
1. Center parking block in parking stall.
2. Refer to Site Plan Sheets (6–9) for locations of parking blocks.

A DETAIL
PARKING BLOCK — Not to Scale

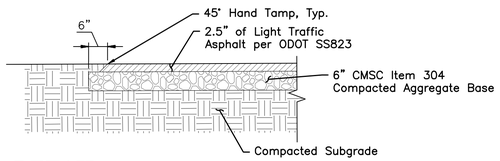


*** NOTE**
Stone Mulch to be Washed River Gravel material to be rounded river gravel, washed and clean of dust and fines. Size range 2" minimum and 4" maximum.

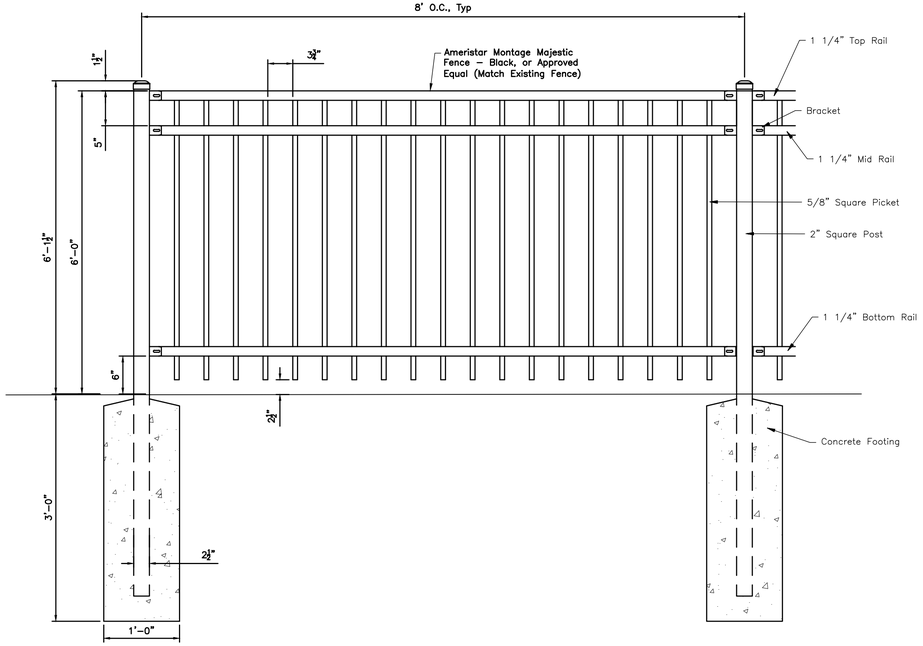
B DETAIL
STONE MULCH — Not to Scale



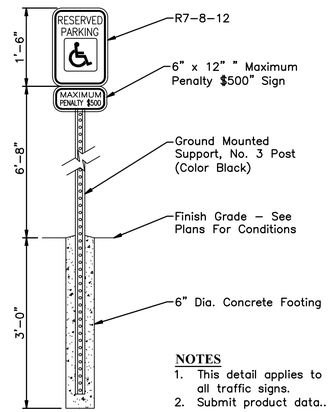
C DETAIL
PARKING LOT/DRIVE PAVEMENT SECTION — Not to Scale



D DETAIL
ASPHALT PATH PAVEMENT SECTION — Not to Scale

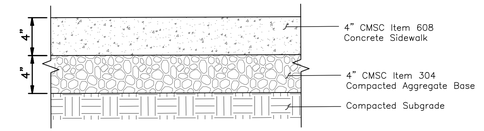


E DETAIL
DECORATIVE FENCE — Not to Scale

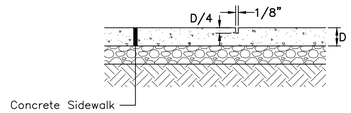


NOTES
1. This detail applies to all traffic signs.
2. Submit product data..

F DETAIL
HANDICAP SIGN — Not to Scale

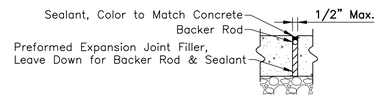


G DETAIL
CONCRETE SIDEWALK SECTION — Not to Scale



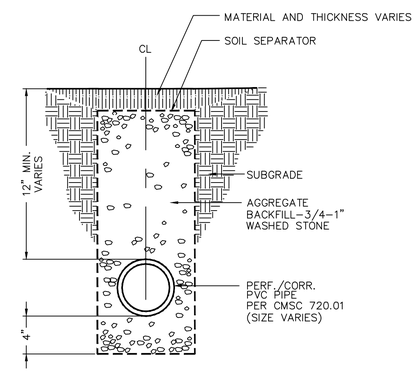
NOTES
1. Divide concrete walks into equally spaced blocks at ±5'–0" invervals.
2. Joints shall be saw cut.

H DETAIL
CONTROL JOINT - CONCRETE SIDEWALKS — Not to Scale



NOTES
1. Place isolation joints where new concrete slab abuts existing or new concrete, buildings, catch basins, curbs or other fixed objects, and as noted on the plans.
2. Seal joint with polyurethane silicon sealant. Single component low–modulus, neutral–curing, self–leveling polyurethane sealant complying with ASTM c920, Type S, Grade P. TREMCO VULKEM 45 SSL, limestone color or equal. Submit sample for color approval. Preformed expansion joint filler–non–impregnated type, closed cell resilient polyethylene foam, 1/2" thick unless otherwise noted.

I DETAIL
ISOLATION JOINT - CONCRETE SIDEWALK — Not to Scale



NOTES
1. Slope pipe to drain.

J DETAIL
Perforated Trench Drain/ Underdrain — Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
SITE DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

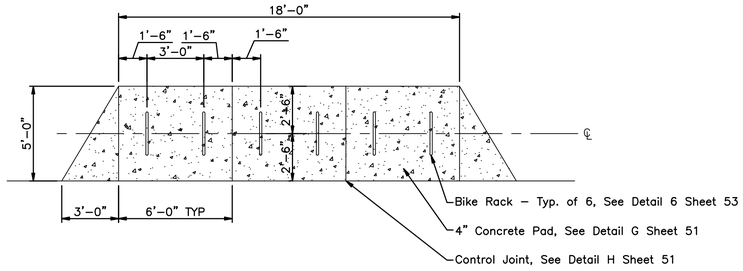
DATE
September 2025

SCALE
AS NOTED

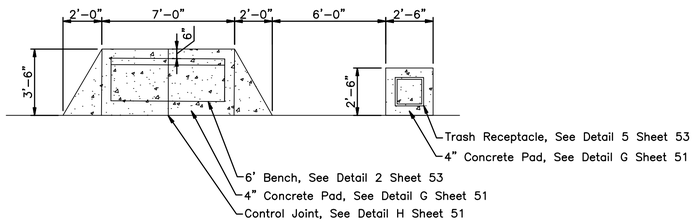
JOB NO.
20241062

SHEET
51/61

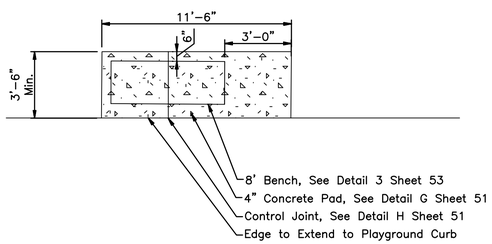
J:\20241062\Dwg\04Sheets\SITE\SITE DETAILS.dwg, Last Saved By: dbanks, 9/10/2025 1:54 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:22 PM (No Xrefs)



K DETAIL
BICYCLE RACK CONCRETE PAD Not to Scale



L DETAIL
BENCH & TRASH RECEPTACLE CONCRETE PAD Not to Scale



M DETAIL
8' BENCH CONCRETE PAD Not to Scale

NOTES

1. Item Spec – Furnishings 6' & 8' Benches, Item Spec – Bike Rack, and Item Sepc – Trash Receptacles shall include the material and labor for the installation of the appropriately sized concrete pad in addition to the furnishing itself.

REVISIONS		
MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
SITE DETAILS

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Eastwood Corporate Center
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

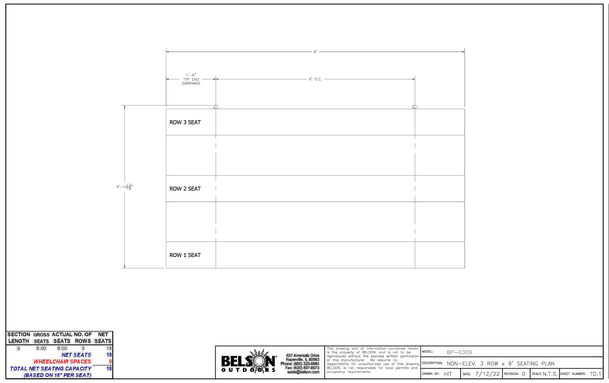
DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
52/61

J:\20241062\Dwg\04Sheets\SITE\SITE DETAILS.dwg, Last Saved By: dbanks 9/10/2025 1:54 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:22 PM (No Xrefs)

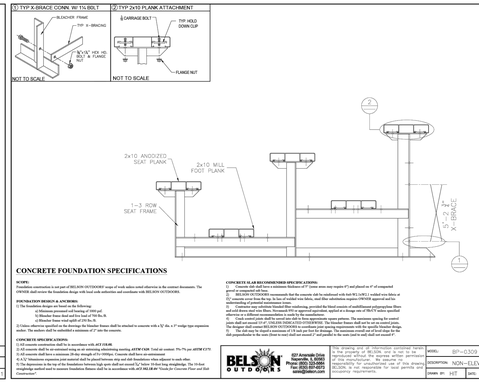


SECTION LENGTH	GROSS SEATS	ACTUAL NO. OF SEATS	ROWS	NET SEATS
9	9.00	6.00	3	18
NET SEATS				18
WHEELCHAIR SPACES				0
TOTAL NET SEATING CAPACITY (BASED ON 18" PER SEAT)				18

BELSON OUTDOORS
837 Arrowside Drive
Howell, MI 48843
Phone: (800) 323-5664
Fax: (800) 837-8073
sales@belson.com

The drawing and all information contained herein is the property of BELSON, and is not to be reproduced without the express written permission of BELSON. BELSON is not responsible for unauthorized use of this drawing. BELSON is not responsible for local permits and governing requirements.

MODEL: BP-0309
DESCRIPTION: NON-ELEV. 3 ROW x 9' SEATING PLAN
DRAWN BY: HT | MFG. 7/12/22 | REVISION: 0 | SCALE: N.T.S. | SHEET NUMBER: TD.1



CONCRETE FOUNDATION SPECIFICATIONS

NOTES:
Foundation construction is not part of BELSON OUTDOORS' scope of work unless noted otherwise in the contract documents. The OWNER shall review the foundation design with local code authorities and coordinate with BELSON OUTDOORS.

FOUNDATION DESIGN & ANCHORS:
1) The foundation designs are based on the following:
   a) Minimum pressured soil bearing of 1000 psf.
   b) Minimum depth of frost cover of 42 in. for the IL.
   c) Bleacher frame stud uplift of 250 lbs./ft.
2) Unless otherwise specified on the drawings the bleacher frame shall be attached to concrete with a ¾" dia. x 4" wedge type expansion anchor. The anchors shall be embedded a minimum of 4" into the concrete.

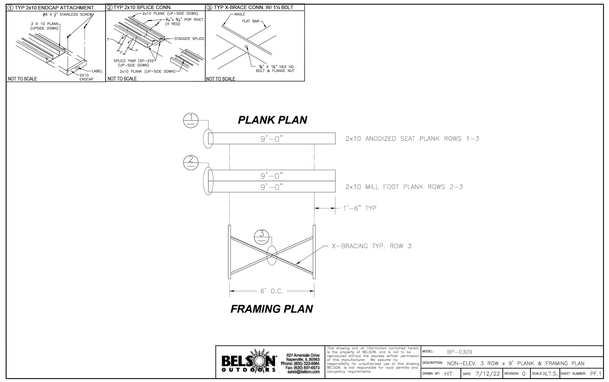
CONCRETE SPECIFICATIONS:
1) All concrete shall be proportioned and placed in accordance with **ACI 318.05**.
2) All concrete shall have an estimated using an air entraining admixturing meeting **ASTM C620**. Total air content: 5%-7% per ASTM C173.
3) All concrete shall have a minimum 28-day strength of f'c=3500psi. Concrete shall have air-entrainment.
4) Concrete shall be consolidated by vibrating during placing. Over-vibration which causes segregation is to be avoided.
5) The depressions in the top of the foundation between legs were shall not exceed ¾ Inches 16-feet long straightedge. The 16-foot straightedge method used to measure foundation flatness shall be in accordance with **ACI 302.1R-89 "Guide for Concrete Floor and Slab Construction"**.

CONCRETE SLAB RECOMMENDED SPECIFICATIONS:
1) Concrete slab shall be 4" thick minimum. Control joints may require 6" and placed at 6' of compacted gravel or crushed stone base.
2) Concrete slab shall be reinforced with reinforcement for concrete slab by traditional with 6x6 W2.1xW2.1 welded wire fabric at 1½" concrete cover from the top. In lieu of welded wire fabric, steel fiber substitution requires OWNER approval and less reinforcement than traditional reinforcement.
3) Contractor may substitute Standard fiber reinforcing, provided the blend consists of randed/fibrated polypropylene fibers and mild fibrous steel wire fibers. Fibermesh 350 or approved equivalent, applied at a dosage rate of 5lbs/CY unless specified otherwise by the manufacturer's recommendations for the project conditions.
4) Each control joint shall be sawed cut slab to form opposite-face square patterns. The awareness spacing for control joints shall not exceed 30 times the slab thickness. Joints shall be sawed cut as soon as the concrete has hardened sufficiently.
The designer shall contact BELSON OUTDOORS to coordinate joint spacing requirements with the specific bleacher design.
5) Slab shall be finished to a level surface, free of humps or depressions, and shall be sloped uniformly at ¼" per foot for all proportionalities to the outer (front to rear) shall not exceed ¼" and parallel to the outer (end to end) shall not exceed ¼".

BELSON OUTDOORS
837 Arrowside Drive
Howell, MI 48843
Phone: (800) 323-5664
Fax: (800) 837-8073
sales@belson.com

The drawing and all information contained herein is the property of BELSON, and is not to be reproduced without the express written permission of BELSON. BELSON is not responsible for unauthorized use of this drawing. BELSON is not responsible for local permits and governing requirements.

MODEL: BP-0309
DESCRIPTION: NON-ELEV. 3 ROW x 9' ASSEMBLY SECTION VIEW
DRAWN BY: HT | MFG. 7/12/22 | REVISION: 0 | SCALE: N.T.S. | SHEET NUMBER: BA.2



BELSON OUTDOORS
837 Arrowside Drive
Howell, MI 48843
Phone: (800) 323-5664
Fax: (800) 837-8073
sales@belson.com

The drawing and all information contained herein is the property of BELSON, and is not to be reproduced without the express written permission of BELSON. BELSON is not responsible for unauthorized use of this drawing. BELSON is not responsible for local permits and governing requirements.

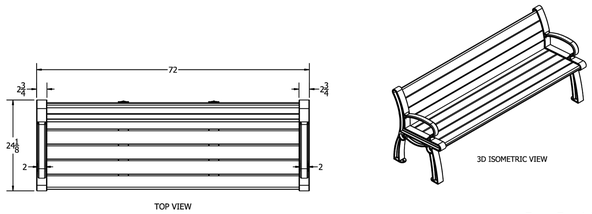
MODEL: BP-0309
DESCRIPTION: NON-ELEV. 3 ROW x 9' PLANK & FRAMING PLAN
DRAWN BY: HT | MFG. 7/12/22 | REVISION: 0 | SCALE: N.T.S. | SHEET NUMBER: PF.1

Belson Outdoors
Preferred Series Aluminum Bleachers
9' Length, 5' Depth
1-800-323-5664

1 DETAIL
Aluminum Bleachers — Not to Scale

32 Gallon Kolor Can Trash Can by Trashcans Unlimited
Model S7801A, Flat Top Lid, 10" Opening With Liner
Size: 38"H x 18"W x 186"L
Color: Beige Grainite
https://trashcansunlimited.com/32-gallon-kolor-can-indoor-outdoor-trash-can-s7801a-7-lid-options-13-colors/

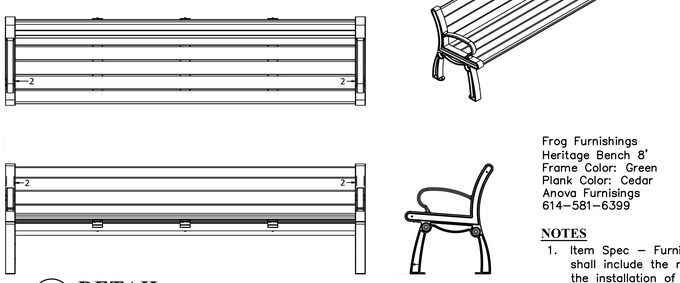
5 DETAIL
Trash Recepticle — Not to Scale



Frog Furnishings
Heritage Bench 6'
Frame Color: Green
Plank Color: Cedar
Anova Furnisings
614-581-6399

NOTES
1. Item Spec – Furnishings 6' Benches shall include the material and labor for the installation of the appropriately sized concrete pad in addition to the furnishing itself.

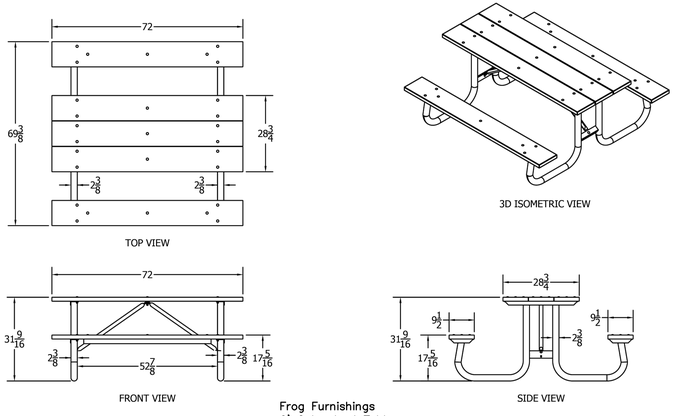
2 DETAIL
6' Bench — Not to Scale



Frog Furnishings
Heritage Bench 8'
Frame Color: Green
Plank Color: Cedar
Anova Furnisings
614-581-6399

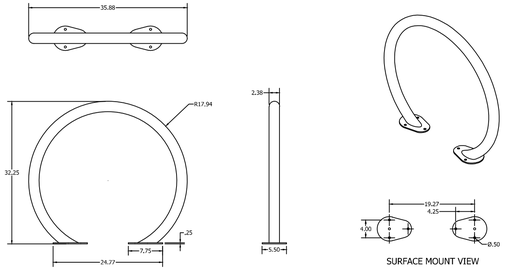
NOTES
1. Item Spec – Furnishings 8' Benches shall include the material and labor for the installation of the appropriately sized concrete pad in addition to the furnishing itself.

3 DETAIL
8' Bench — Not to Scale



Frog Furnishings
6' Galvanized Table
Frame Color: Green
Plank Color: Cedar
Anova Furnisings
614-581-6399

4 DETAIL
Picnic Table — Not to Scale



Anova Tandem Bike Rack by Upbeat Furnishings
Powder Coated, Surface Mount
Size: 32"H x 6"W x 36"L
Weight: 22 lbs./ea.
https://www.anovafurnishings.com/collections/tandem/tandem-powder-coated-bike-rack-surface-mount

6 DETAIL
Bicycle Rack — Not to Scale

Outdoor Concrete Games by Doty & Sons
Square Table with Checkerboard – T6205
Size: 68" Square x 30-1/2" High
Weight: 935 lbs./ea.
https://outdoorconcretegames.com/product/square-table-with-optional-checkerboard-t6205/
Or Equal

7 DETAIL
Checkerboard Table — Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
SITE FURNISHINGS

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

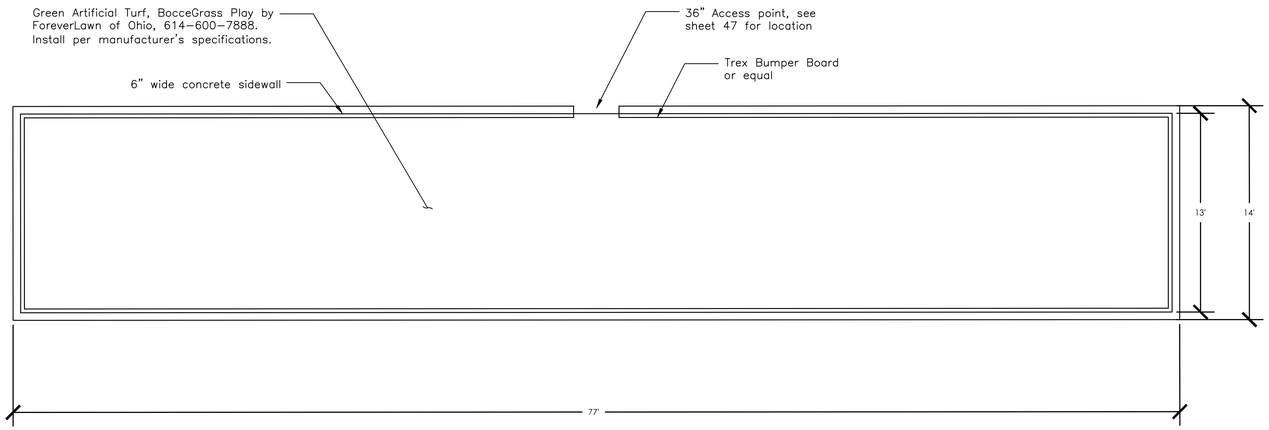
DATE
September 2025

SCALE
1" = 40'

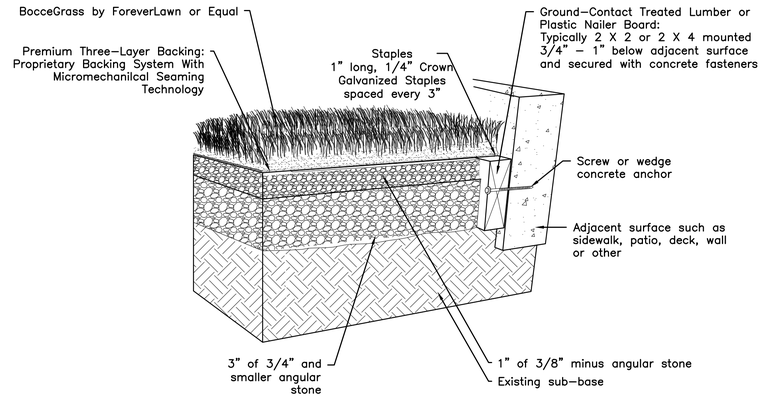
JOB NO.
20241062

SHEET
53/61

J:\20241062\Dwg\04Sheets\SITE\RECREATION AREA DETAIL.dwg, Last Saved By: jsampson, 9/15/2025 12:59 PM Last Printed By: Banks, Annalisa, 9/15/2025 1:22 PM

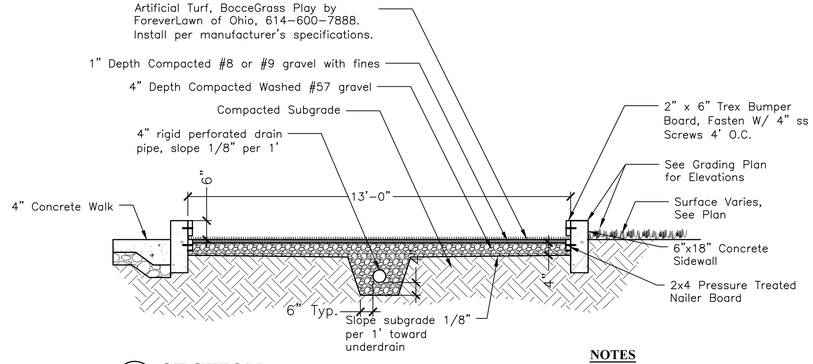


1 DETAIL
Bocce Court Not to Scale



PERSPECTIVE

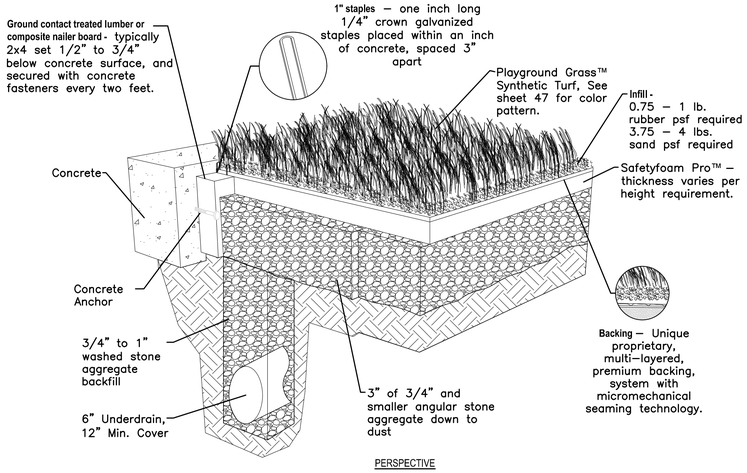
2 DETAIL
Boccegrass Play Artificial Turf Placement Not to Scale



3 SECTION
Bocce Court Not to Scale

NOTES

1. Item Spec – Bocce Court, Complete as per Plan shall include the material and labor for the installation of gravel, underdrain, sidewall, bumper board and fasteners.



PERSPECTIVE

4 DETAIL
Playground Artificial Turf Placement Not to Scale

Park Vision
Concrete Cornhole Game Set – UP14100
Size: 48"L x 24"W
Weight: 633 lbs./ea.
Or Equal

5 DETAIL
Cornhole Board Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK PHASE 2B
TURF DETAIL FOR BOCCE BALL

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Landscape Architects
5500 New Albany Road Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

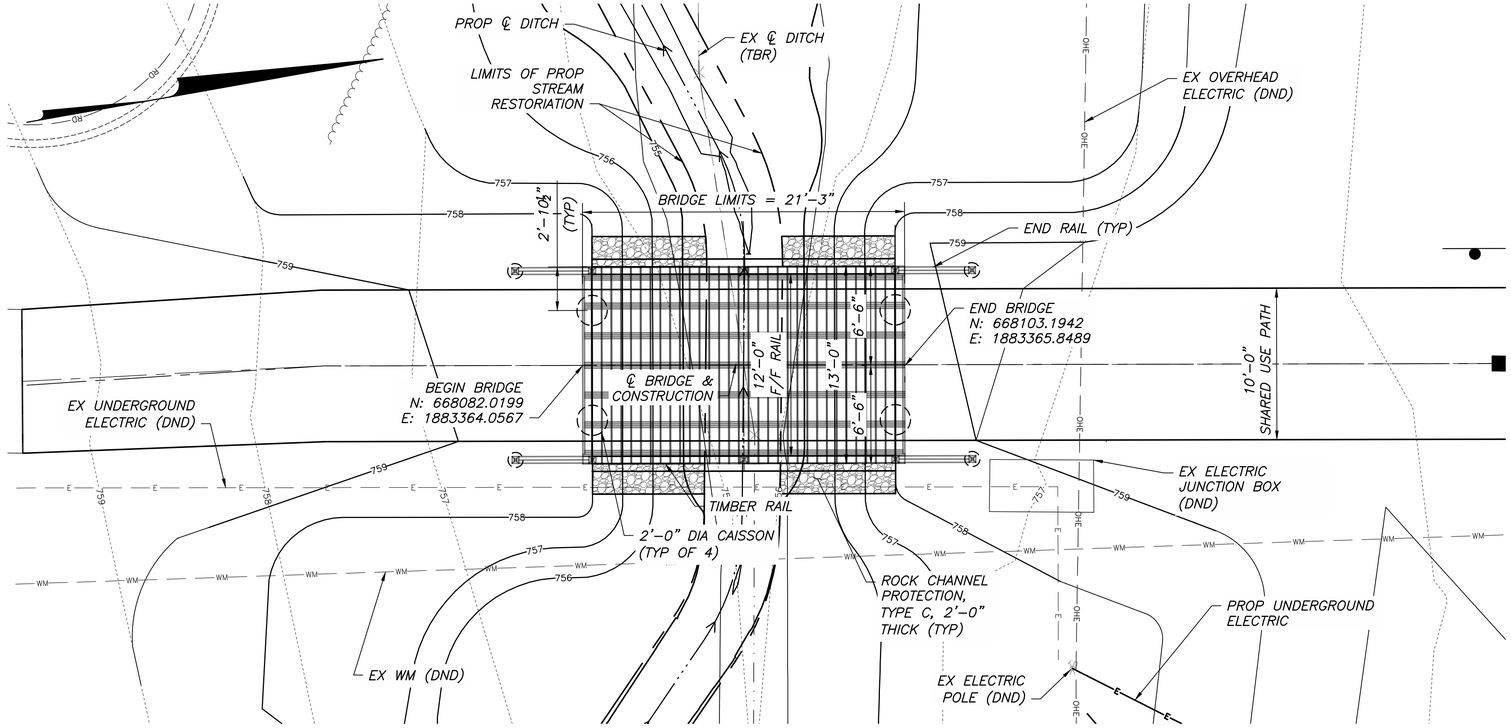
DATE: September 2025

SCALE: AS NOTED

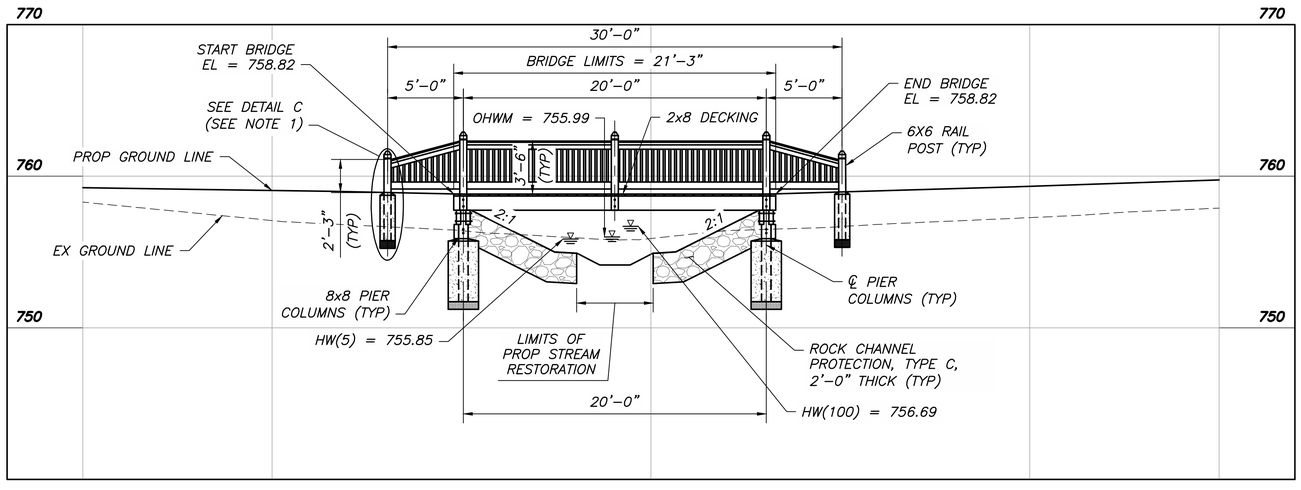
JOB NO.: 20241062

SHEET: 54/61

J:\20241062\Dwg\04Sheets\SITE\RECREATION AREA DETAIL.dwg, Last Saved By: jsampson, 9/15/2025 12:59 PM Last Printed By: Banks, Annaliese, 9/15/2025 1:22 PM



PLAN



PROFILE ALONG ℄ BRIDGE AND CONSTRUCTION

GENERAL NOTES – PEDESTRIAN BRIDGE

THE PROPOSED STRUCTURE SHALL BE A WOODEN BRIDGE, 12'–0" FACE TO FACE OF RAIL.

DESIGN LOADING
LIVE LOAD = 90 PSF MAX. (ENCOMPASSES PEDESTRIAN LOAD, GOLF CART/JOHN DEERE GATOR OR EQUIVALENT 2500 LBS VEHICLE LOAD, AND SNOW LOAD)
WIND LOAD = 25 PSF
SEISMIC ZONE 1

MATERIALS
ALL WOOD SHALL CONFORM TO ODOT SPECIFICATION 710.14 AND 712.06. WOOD COMPONENTS THAT HAVE BEEN RECLAIMED FROM USE IN ANOTHER APPLICATION WILL NOT BE PERMITTED. WOOD COMPONENTS THAT MEET MATERIAL SPECIFICATIONS LISTED BUT HAVE BEEN IN STORAGE FOR MORE THAN ONE YEAR WILL ALSO NOT BE ALLOWED. ANY WOOD COMPONENTS THAT MEET MATERIAL SPECIFICATIONS LISTED, BUT ARE SUBSEQUENTLY SAWN DOWN TO MEET PLAN COMPONENT CROSS SECTION DIMENSIONS, SHALL BE PRESSURE TREATED AGAIN, OR TREATED WITH A CLEAR WATER REPELLANT SEALER AFTER RESIZING PRIOR TO PLACEMENT AS SHOWN ON THE PLANS. UPON COMPLETION OF CONSTRUCTION AND WHEN DRY, WATER REPELLENT SEALER FOR WOOD SHALL BE APPLIED TO ALL EXPOSED WOOD SURFACES.

ALL WOOD SHALL BE PRESSURE TREATED SOUTHERN PINE. MEMBERS IN CONTACT WITH SOIL SHALL BE RATED FOR BELOW GRADE USE.

TIMBER SHALL MEET THE PROPERTIES LISTED BELOW:

DECK: 2 X 8, GRADE NO. 1, FB = 1250 PSI (MIN.)
JOISTS: 2 X 12, GRADE NO. 1, FB = 1000 PSI (MIN.)
PIER CAPS AND LAGGING: 4 X 12, GRADE NO. 2, FB = 700 PSI (MIN.)
COLUMNS: 8 X 8, GRADE NO. 2, FB = 850 PSI (MIN.)
RAIL POSTS: 6 X 6, GRADE NO. 2, FB = 850 PSI (MIN.)
ALL OTHER RAILING MEMBERS TO BE GRADE NO. 2, FB = 850 PSI (MIN.)

THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT THE WOODEN COMPONENTS SUPPLIED FOR THE PROJECT MEET OR EXCEED THE SPECIFICATIONS CONTAINED HEREIN.

ALL ANCHOR BOLTS, LAG SCREW, NUTS, AND STUDS SHALL CONFORM TO THE PHYSICAL PROPERTIES OF ASTM–A325, EXCEPT THAT THE ELONGATION SHALL BE 10%. THE CHEMICAL PROPERTIES ARE WAIVED.

AT THE CONTRACTORS OPTION, CARRIAGE BOLTS MAY BE SUBSTITUTED FOR THROUGH BOLTS CALLED FOR IN THE PLANS, PROVIDE THE SAME DIAMETER AND MATERIAL PROPERTIES ARE UTILIZED.

ALL HARDWARE AND ACCESSORIES SHALL BE RATED FOR CORROSION PROTECTION, FOR USE IN ACQ TREATED LUMBER.
GALVANIZED FASTENERS SHALL CONFORM TO ASTM SPECIFICATION A153.
COATED FASTENERS SHALL CONFORM TO ASTM B117.

CONCRETE SHALL CONFORM TO ODOT CMS ITEM 511, CLASS QC1, f'c = 4000 PSI MIN.

FOUNDATION BEARING PRESSURE
THE DESIGN FOUNDATION BEARING PRESSURE IS 2.0 KSF. IF UNSUITABLE BEARING MATERIAL OCCURS AT THE BOTTOM OF THE WALL, LOWER THE GIVEN ELEVATION BY OVER EXCAVATING, THEN REPLACING WITH SUITABLE COMPACTED GRANULAR MATERIAL. THE SUITABILITY OF THE BEARING MATERIAL SHALL BE VERIFIED BY THE TESTING AGENCY. ANY CHANGES IN THE FOOTING MUST BE APPROVED BY THE ENGINEER. THE TESTING AGENCY SHALL SUBMIT A WRITTEN REPORT TO THE ENGINEER, ATTESTING TO THE BEARING PRESSURE. THE REPORT SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF OHIO.

INSTALLATION
ALL EXISTING DRAINAGE COURSES SHALL BE MAINTAINED DURING CONSTRUCTION AND PLACEMENT OF THE PROPOSED STRUCTURE. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE OF SEQUENCE AND METHOD OF MAINTAINING THE WATERCOURSE. IMPACTS TO THE STREAM, INCLUDING TEMPORARY FILLS FOR ACCESS OR CONSTRUCTION ARE NOT PERMITTED

WOOD COMPONENT PREVENTATIVE MAINTENANCE
FOR LONG TERM DURABILITY, IT IS STRONGLY RECOMMENDED THAT A WATER REPELLENT SEALER BE APPLIED PERIODICALLY TO ALL EXPOSED WOOD SURFACES. THE FREQUENCY OF MAINTENANCE WILL BE DEPENDENT ON SOUND JUDGMENT IN CONJUNCTION WITH THE SELECTED SEALER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

ITEM SPECIAL – WOODEN PEDESTRIAN BRIDGE, AS PER PLAN
THIS ITEM WILL BE PAID FOR AT THE LUMP SUM CONTRACT BID PRICE, COMPLETE IN PLACE. THE BID SHALL INCLUDE ALL TOOLS, LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO INSTALL THE BRIDGE, INCLUDING BUT NOT LIMITED TO ALL WOOD COMPONENTS, STEEL CONNECTIONS, ROCK CHANNEL PROTECTION, AND CONCRETE CAISSON FOUNDATIONS.

HYDRAULIC DATA:

DRAINAGE AREA = 92 ACRES
Q(5) = 29.49 CFS V(5) = 4.10 FPS Q(100) = 76.34 CFS V(100) = 5.65 FPS
HW(5) = 755.85 HW(100) = 756.69

STRUCTURE CLEARS THE 5 YEAR DESIGN HW BY 1.91'.

NOTES

1. FOR DETAIL C, SEE SHEET 56.

PROPOSED STRUCTURE

TYPE: SINGLE SPAN TIMBER BRIDGE
SPAN: 20'–0" C/C BEARING
ROADWAY: 12'–0" FACE/FACE RAIL
LOADING: 0.090 KIPS/SQ FT LIVE LOAD AND 25 PSF WIND LOAD
SKEW: NONE
WEARING SURFACE: TIMBER DECK
APPROACH SLAB: NONE
TRANSVERSE SLOPE: 0%
COORDINATES: LATITUDE N 39°50'1.96"
LONGITUDE E 82°48'11.37"

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
PEDESTRIAN BRIDGE SITE PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

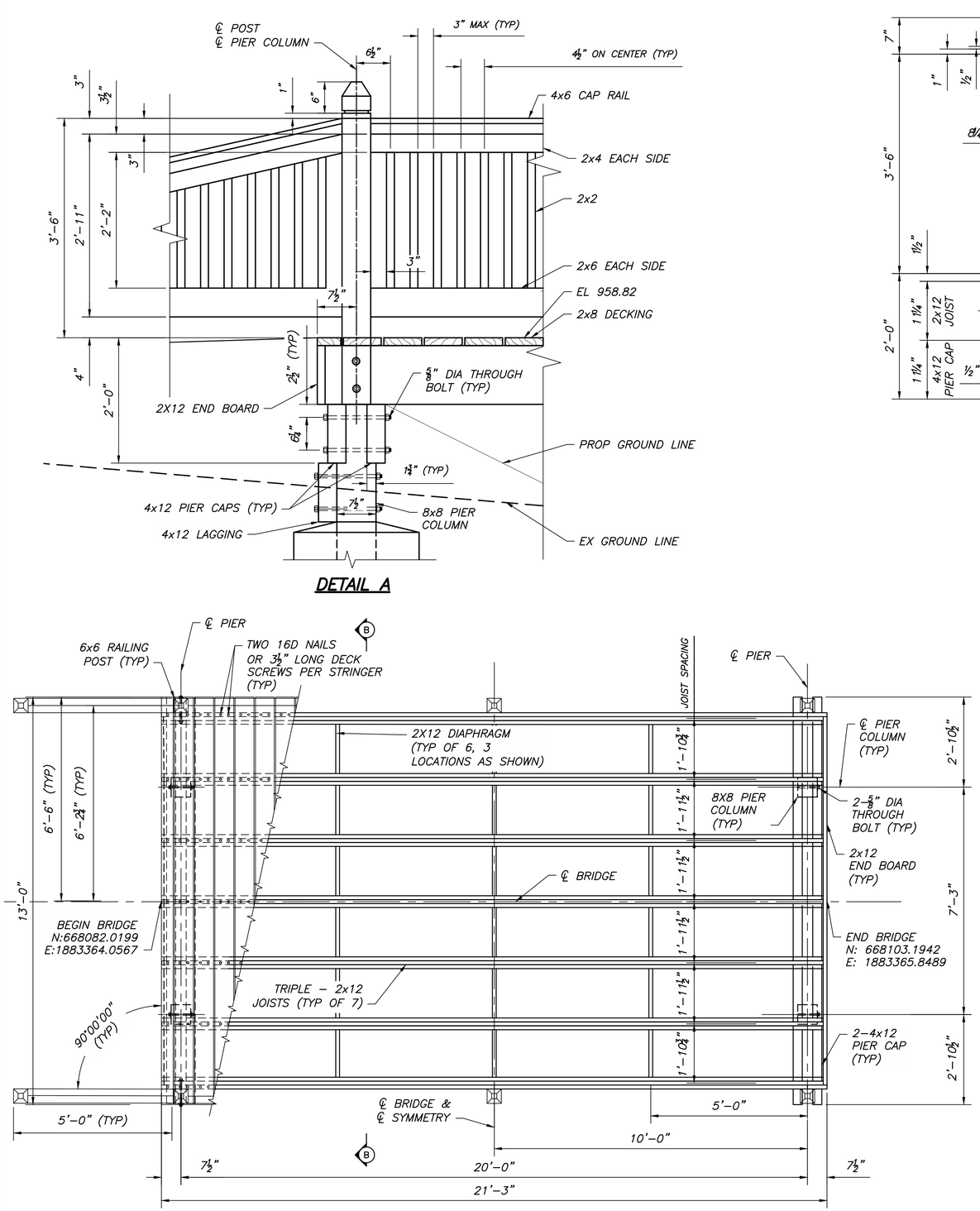
SCALE
Horiz: 1" = 5'
Vert: 1" = 5'

JOB NO.
20241062

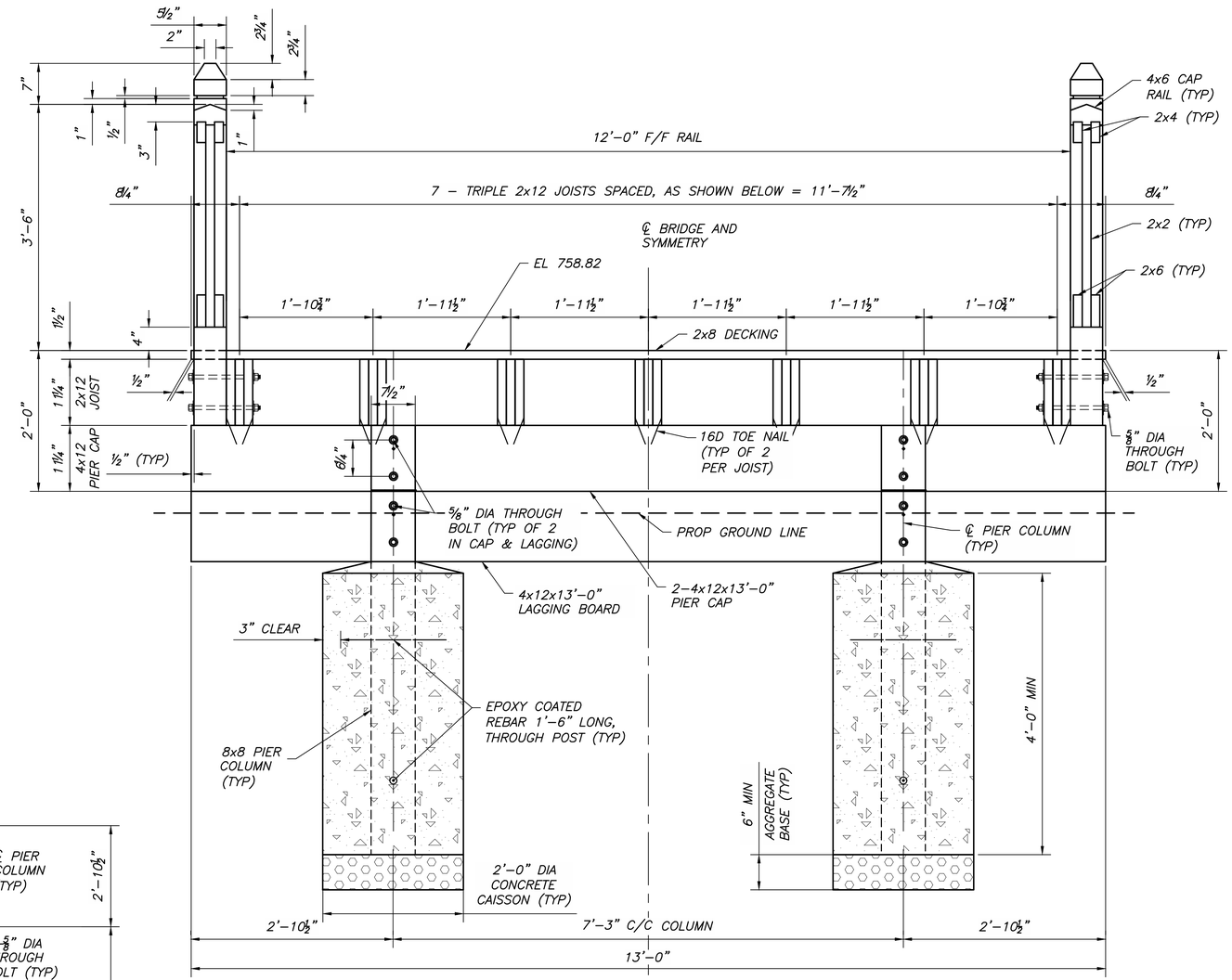
SHEET
55/61

J:\20241062\Dwg\04Sheets\Structures\Pedestrian Bridge Site Plan.dwg, Last Saved By: dbanks, 9/15/2025 2:04 PM Last Printed By: Banks, Annalise, 9/15/2025 2:06 PM

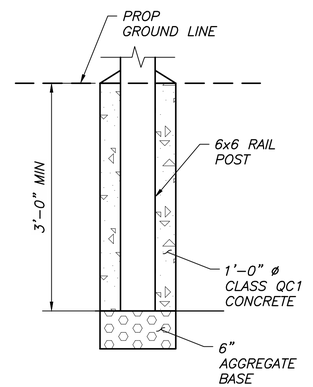
DETAIL A



FRAMING/DECK PLAN
(PARTIAL DECKING AND RAILING SHOWN)



SECTION B–B



DETAIL C

NOTES

1. FOR LOCATION OF DETAIL C SEE SHEET 55.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
PEDESTRIAN BRIDGE STRUCTURE DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

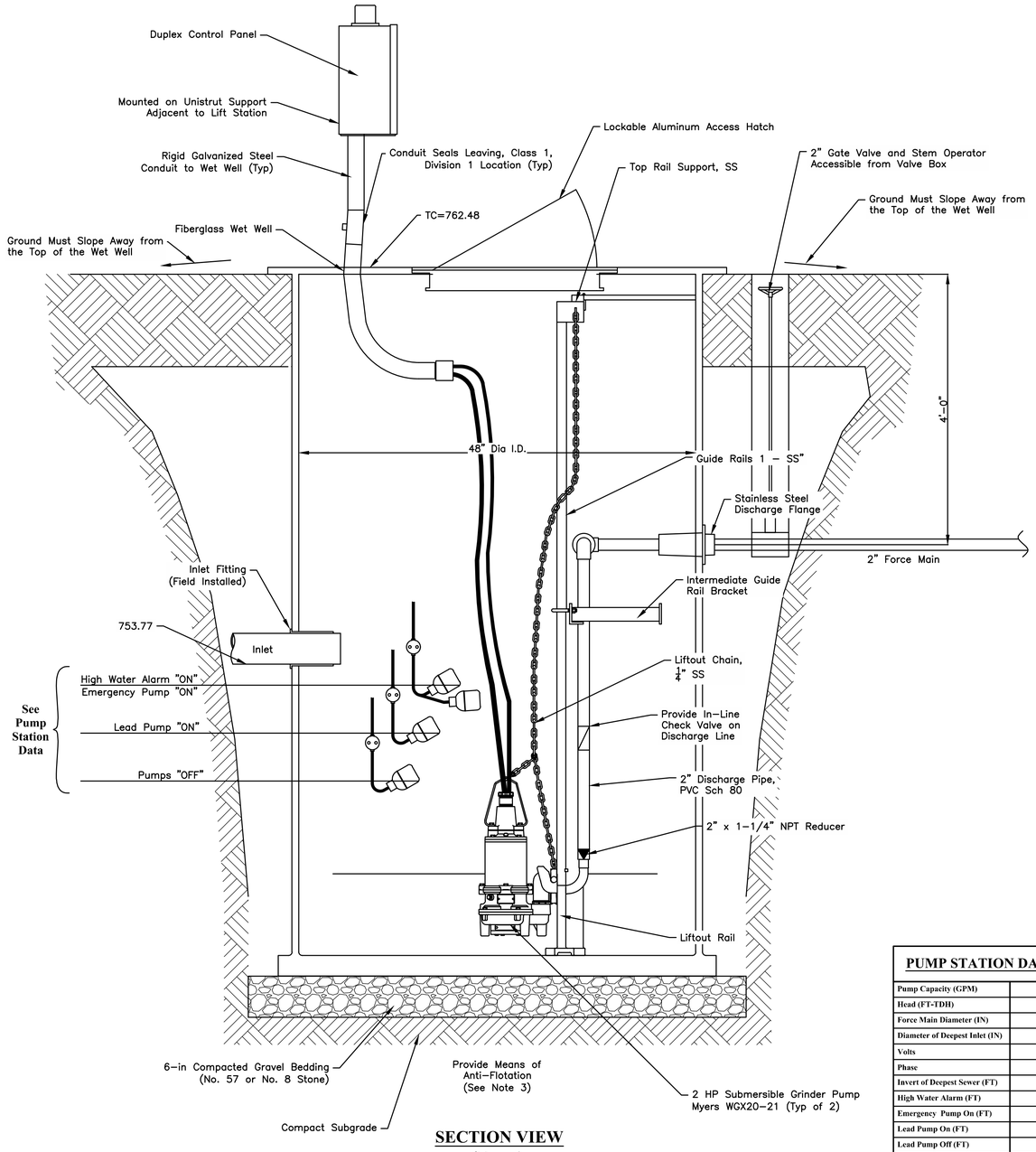
DATE
July 2025

SCALE
Varies

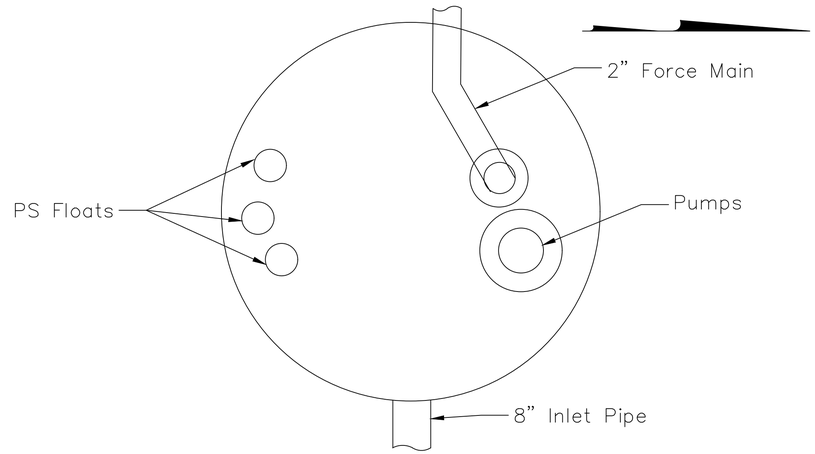
JOB NO.
20241062

SHEET
56/61

J:\20241062\Dwg\04Sheets\Structures\Pedestrian Bridge Timber Structure Details.dwg, Last Saved By: obanks, 9/15/2025 2:02 PM Last Printed By: Banks, Annaliisa, 9/15/2025 2:03 PM
Xref: 20241062-ES201



SECTION VIEW
Schematic
Not to Scale



EQUIPMENT ORIENTATION - TOP VIEW

PUMP STATION DATA TABLE	
Pump Capacity (GPM)	45
Head (FT-TDH)	45
Force Main Diameter (IN)	2
Diameter of Deepest Inlet (IN)	8
Volts	230
Phase	1
Invert of Deepest Sewer (FT)	753.77
High Water Alarm (FT)	753.77
Emergency Pump On (FT)	753.77
Lead Pump On (FT)	752.77
Lead Pump Off (FT)	751.77
Invert Pump Station (FT)	749.77

SHEET NOTES

1. The Contractor is required to visit the site to become familiar with all existing site conditions, which may affect the scope of work. Failure to visit the site shall not relieve the Contractor from any responsibility in the performance of this Contract.

2. The Contractor shall investigate and locate all existing utilities and notify all utility owners a minimum of 48 hours prior to the start of construction.

3. The Contractor shall submit buoyancy calculations and means to mitigate buoyancy force. Assume a fully submerged condition. Buoyancy shall be counteracted by an anti-floatation base and/or concrete fill.

PUMP STATION NOTES

SCOPE OF WORK
Work under this section includes furnishing and installing the pump station, complete as shown on the Drawings and as specified herein. Contractor shall grade area to drain surface water away from station.

PIPING
The Contractor shall supply and install all piping and valves required in the Wet Well.

PUMPS
Explosion proof motors & electrical items are required per Class 1, Div. 1, Group D Requirements.

PUMP MODEL
Pumps shall be of the centrifugal grinder type Myers WGX20-21. Discharge shall be 1-1/4" NPT. Pump should be 230V single phase. The pump station shall be configured to alternate pumps upon start up.

OPERATING CONDITIONS
Pump shall have a capacity of 45 GPM at a total head of 45 feet.

OPERATION AND MAINTENANCE MANUALS
Four (4) copies of the manufacturer's Operation and Maintenance manuals, for the specified pumps, shall be delivered to the Owner to familiarize themselves with the operation of these pumps.

RAIL ASSEMBLY
The lift-out rail system assembly shall permit easy removal and installation of the pump and lower check valve without the necessity of personnel entering the wet well. The lift-out rail systems shall be of non-sparking design and listed for hazardous location service.

LIFTING CHAIN
An adequate length of 1/4" diameter stainless steel lifting chain shall be supplied for removing each pump. The chain shall be of sufficient length and shall include an adequate number of lifting rings for easy removal. Provide and install chain for pump unit.

FLOATS
Four (4), intrinsically safe, non-mercury liquid level float switches shall be mounted inside the wet well in a triangular formation and supported for adjustment without entering the wet well.

SCHEDULE
The floats shall be suspended at the proper elevations to control the Pumps OFF Level, Lead Pump ON Level, Emergency Pump ON, and High Water Alarm Level.

ELECTRIC SERVICE
230V, single phase electric service to the pump station shall be provided through the electrical panel to be provided within the picnic shelter utility room. Contractor is responsible to confirm wire size, conduit size, and routing to deliver power to the pump station site. Cost of routing power from the picnic shelter to the pump station shall be as shown on the lighting and electrical drawings and included in the cost for the pump station complete.

CONTROL PANEL
A NEMA 3R steel control panel shall be furnished with each pumping unit to be installed, unistrut supports adjacent to the pump station. Control Panel shall be mounted on the unistrut support adjacent to the Pump Station.

The panel shall include a main disconnect with exterior handle, pump circuit breaker, control circuit breaker, alarm circuit fuse, control circuit fuse, I.E.C. rated motor starter with 2-pole ambient compensated bimetal overload relay, pump hand-off-auto switch (momentarily in the hand position), alarm test switch, pump run light, seal leak light, control transformer with primary fusing, terminal blocks, ground lug and all necessary wiring and brackets.

The control panel shall be fitted with Audio Visual Alarm.

The alarm shall have a bright glow and flash during high water conditions. The alarm light will go out when the water level drops.

A schematic diagram (showing wire color) shall be permanently fastened to the inside of the enclosure. An Installation and Service Manual shall also be included with each control panel.

The control panel shall be UL listed as an assembly.

Contractor shall provide plug and transfer switch for portable generator hook up. Contractor shall coordinate plug requirements with the City of Canal Winchester.

The alarm system shall be equipped with a Henry P Thompson alarm compatible with RemotelQ messenger software. The alarm system and software package shall be the responsibility of the Contractor to install and confirm compatibility.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
PUMP STATION DETAILS

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
57/61

J:\20241062\Dwg\04Sheets\SITE\Lift Station Notes and Details.dwg, Last Saved By: abanks, 9/15/2025 1:59 PM Last Printed By: Banks, Annalise, 9/15/2025 2:00 PM (No Xrefs)

Prop Ground Mounted Sign Support w/ Bike Parking Sign D4-3-12
Prop Bike Rack
Prop Trash Receptacle
Prop Ground Mounted Sign Support w/ Handicap Parking Sign R7-8-12 & Van-Accessible Plaque R7-8A-12
Prop Ground Mounted Sign Support w/ Handicap Parking Sign R7-8-12
Prop Ground Mounted Sign Support w/ Handicap Parking Sign R7-8-12
Prop 10' Asphalt Path
Prop Ground Mounted Sign Support w/ Bike Parking Sign D4-3-12
Prop Bike Rack
Prop EOP
9.66' (Typ)
18' (Typ)
5' (Typ)
11'
8' (Typ)
24' (Typ)
Item 642 – Parking Lot Stall Marking, White, 4-Inch (Typ)
Item 642 – Handicap Symbol Marking (Typ)
Prop 4" Parking Lot Striping Item 642
Prop Ground Mounted Sign Support w/ Pedestrian Crossing Sign W11-2-30
Prop Ground Mounted Sign Support w/ "No Parking Anytime" Sign R7-1-12
Prop Light Pole (Typ)
Prop Ground Mounted Sign Support w/ "No Parking Anytime" Sign R7-1-12
Prop EOP
Prop EOP
Prop EOP
Prop EOP
Prop EOP
Item 644 – Thermoplastic Crosswalk Line, 24-Inch (Typ)
22'
Prop Ground Mounted Sign Support w/ Pedestrian Crossing Sign W11-2-30
Prop Bollard per CW SCD RD-10B-01(Typ)
Prop Ground Mounted Sign Support w/ "No Parking Anytime" Sign R7-1-12
Prop Ground Mounted Sign Support w/ "No Parking Anytime" Sign R7-1-12
Prop 10' Asphalt Path
Prop Pole Mounted Pedestrian Crossing Sign W11-2-30
Prop Stream
Prop Ground Mounted Sign Support w/ Pedestrian Crossing Sign W11-2-30
Prop 10' Asphalt Path
Prop Ground Mounted Sign Support w/ "No Parking Anytime" Sign R7-1-12
Prop EOP
Ex Asphalt Path (DND)
Ex EOP
Ex Conc Sidewalk (DND)
Ex Asphalt Path (DND)
Ex Playground (DND)
Ex Pickleball Courts (DND)
Ex Crosswalk (DND)
Ex Asphalt Path (DND)
Ex Parking Lot (DND)

W11-2-30

R7-8-12 RESERVED PARKING

R7-8-12 RESERVED PARKING VAN ACCESSIBLE
R7-8A-12

NO PARKING ANY TIME
R7-1-12

PARKING
D4-3-12

GRAPHIC SCALE
0 10 20 40
1 inch = 20 feet

LEGEND - PROPOSED	
	Proposed Asphalt Shared Used Path
	Proposed Concrete Sidewalk
	Proposed Full-Depth Asphalt Pavement
	Proposed Stone Mulch

REVISIONS			
MARK	DATE	DESCRIPTION	

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
PAVEMENT MARKING & SIGNAGE PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
1" = 20'

JOB NO.
20241062

SHEET
58/61

J:\20241062\Dwg\04Sheets\SITE Pavement Marking Plan.dwg, Last Saved By: dbanks, 9/9/2025 2:51 PM Last Printed By: Banks, Annalise, 9/15/2025 1:24 PM

GENERAL NOTES

CONTRACTOR RESPONSIBILITY: Details have been provided on the plans in an effort to help the Contractor provide erosion and sedimentation control. The details shown on the plan shall be considered a minimum. Additional or alternate details may be found in the O.D.N.R. Manual "Rainwater and Land Development." The Contractor shall be solely responsible for providing necessary and adequate measures for proper control of erosion and sediment runoff from the site along with proper maintenance and inspection in compliance with the NPDES General Permit for Stormwater Discharges Associated with Construction Activity and the Canal Winchester Requirements.

Contractor's Responsibilities:

Prior to Construction Operations in a particular area, all sedimentation and erosion control features shall be in place. Field adjustments with respect to locations and dimensions may be made by the Engineer and the City of Canal Winchester.

The Contractor shall replace inlet protection for erosion control immediately after construction in the immediate area of the catch basins or inlets has occurred.

The Contractor shall be responsible to ensure that off–site tracking of sediments by vehicles and equipment is minimized. All such off–site sediment shall be cleaned up daily.

The Contractor shall be responsible to ensure that no solid or liquid waste is discharged into storm water runoff. Untreated sediment–laden runoff shall not flow off of site without being directed through a control practice. Concrete trucks will not be allowed to wash out or discharge surplus concrete into or alongside rivers, streams, or creeks or into natural or man–made channels or swales leading thereto. Concrete wash water and surplus concrete shall be confined to approved areas; after solidifying, these waste materials shall be removed from the site.

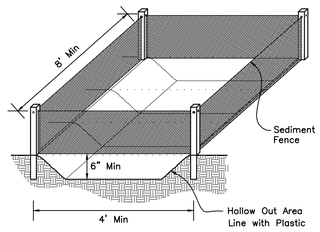
The Contractor shall remove all temporary erosion and sedimentation controls upon permanent stabilization of the site.

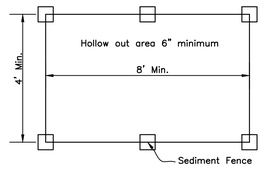
It may become necessary to remove portions of the sedimentation and erosion control features during construction to facilitate the grading operations in certain areas. However, the sedimentation and erosion control features shall be in place in the evening or during any inclement weather.

All Temporary and Permanent seeding shall be completed using the requirements indicated under Item 659. The cost for temporary channels, sediment dams, sediment basins, and other appurtenant earthmoving operations shall be included in the price bid for erosion and sedimentation control quantities.

MAINTENANCE: It is the Contractor's responsibility to maintain the sediment control features used on this project. The site shall be inspected periodically and within 24 hours of a significant rainfall. Records of these inspections shall be kept and made available to jurisdictional agencies if requested. Any sediment or debris which has reduced the efficiency of a structure shall be removed immediately. Should a structure or feature become damaged, the Contractor shall repair or replace at no additional cost to the City.

CONCRETE WASHOUT AREA



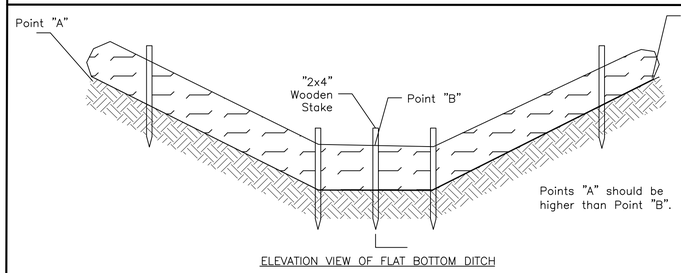


PLAN VIEW

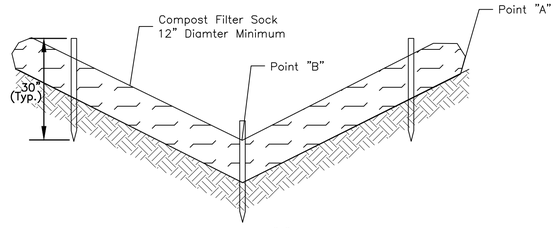
NOTES

Concrete trucks shall utilize areas to washout trucks. Accumulated concrete shall be removed from the site and disposed of properly.

COMPOST FILTER SOCK DITCH CHECK



ELEVATION VIEW OF FLAT BOTTOM DITCH



ELEVATION VIEW OF "V" DITCH

NOTES:

Materials:

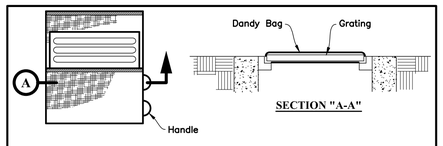
1. Materials – compost used for filter socks shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. they shall be derived from a well–decomposed source of organic matter and consist of a particles ranging from 3/8" to 2".
2. Filter socks shall be 3 or 5 mil continuous, tubular, hdpe 3/8" knitted mesh netting material, filled with compost passing the above specifications for compost products.

Installation:

3. Place a vertical "2x4" stake in the center of the ditch with the top level to the top of the fence and at least 6" below the bottom of the ditch
4. Upon installation of the filter sock, additional filter media (matching the media inside of the sock) shall be placed on the upland side of the filter sock. filter media shall extend halfway up the sock and slope at a maximum of 45 degrees to existing ground elevation.

Maintenance:

5. Routinely inspect filter socks after each significant rain, maintaining filter socks in a functional condition at all times.
6. Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
7. Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.
8. Removal – filter socks will be dispersed on site when no longer required in such as way as to facilitate and not obstruct seedings.



SECTION "A-A"

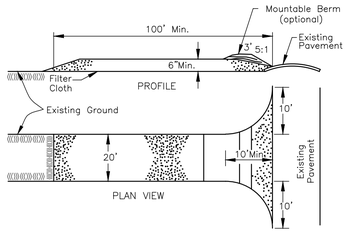
INSTALLATION:
Stand grate on end. Place Dandy Bag over grate. Roll grate over so that open end is up. Pull up slack. Tuck flap in. Be sure end of grate is completely covered by flap or Dandy Bag will not fit properly. Holding handles, carefully place Dandy Bag with grate inserted into catch basin frame so that red dot on the top of the Dandy Bag is visible.

MAINTENANCE:
With a stiff bristle broom or square point shovel remove silt & other debris off surface after each event.

DANDY BAG INLET PROTECTION

Not to Scale

TEMPORARY CONSTRUCTION ENTRANCE DETAIL

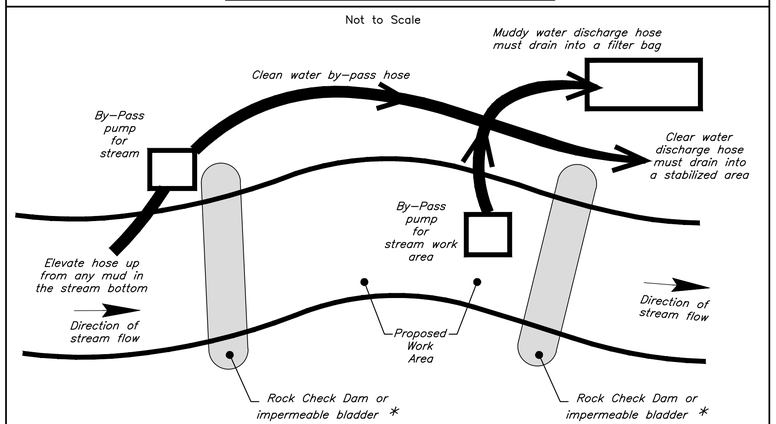


NOTES:

1. Stone Size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. 2. Length – 100' Minimum
3. Thickness – CMS 703 – 12" No. 2 Limestone.
4. Width – Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – will be placed over the entire area prior to placing of stone.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right–of–way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights–of–way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public right–of–ways. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.
10. Vacuum street sweeping of public roads to be performed routinely and as required by City's Representative.

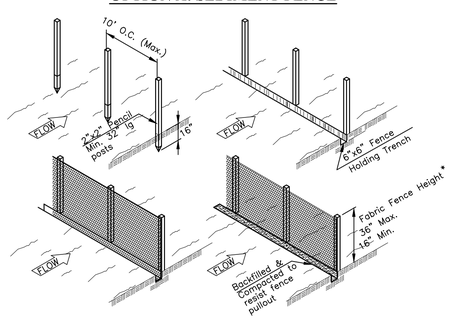
STREAM DAM AND BY-PASS PUMP DETAIL

Not to Scale



* Non–erodable material only

OPTION A: SEDIMENT FENCE

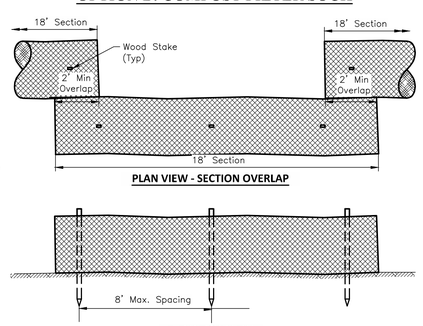


* Post height to match Fabric Fence

Sediment fence fabric shall be ODOT, Type C Geotextile fabric or the equivalent to the following properties:

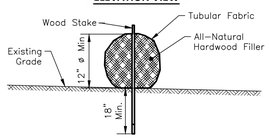
MINIMUM CRITERIA FOR SILT FENCE FABRIC (ODOT, 2002)		
Maximum Tensile Strength	120 lbs. (535N)	ASTM D 4632
Maximum Elongation at 60 lbs.	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180N)	ASTM D 4533
Apparent Opening Size	≤0.84 mm	ASTM D 4751
Minimum Permeability	$1X10^{-2}$ sec.$^{-1}$	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355

OPTION B: COMPOST FILTER SOCK



PLAN VIEW - SECTION OVERLAP

ELEVATION VIEW



SECTION VIEW

NOTES

Compost filter sock shall be comprised of a tubular fabric filled with aged all–natural hardwoods.

NOTES

SEDIMENT FENCE:
This sediment barrier is designed for situations in which only sheet or overland flows are expected. Material Properties are listed in the provided table.

1. The height of a sediment fence fabric shall not exceed 36–inches (higher fences may impound volumes of water sufficient to cause failure of the structure) minimum length shall be 16 inches.
2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum of a 6 inch overlap, and securely sealed.
3. Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 16–inches). Wood posts will be a minimum of 32" long.
4. A trench shall be excavated approximately 6–inches wide and 6–inches deep along the line of posts and upslope from the barrier.
5. The filter fabric shall be stapled or wired to the fence, and 8–inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36–inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
6. The trench shall be backfilled and soil compacted over the filter fabric.
7. Sediment fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
8. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.

MAINTENANCE OF LINEAR SEDIMENT BARRIERS:
Sediment Fence and/or Compost Filter Sock shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one–half the height of the barrier. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

Sediment fence shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

LINEAR SEDIMENT BARRIERS DETAIL

Not to Scale

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
SEDIMENT & EROSION CONTROL NOTES AND DETAILS

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
NONE

JOB NO.
20241062

SHEET
59/61

J:\20241062\Dwg\04Sheets\SITE\Sediment & Erosion Control Notes and Details.dwg, Last Saved By: dbanks, 9/15/2025 12:19 PM Last Printed By: Banks, Annalise, 9/15/2025 1:24 PM

EROSION AND SEDIMENT CONTROL NARRATIVE

ALL EROSION & SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATION AT THE DIRECTION OF CITY OF CANAL WINCHESTER AND/OR OHIO EPA.

PLAN DESIGNER: EMH&T
5500 New Albany Road Columbus, Ohio 43054
Tel: 614–775–4500

OWNER: City of Canal Winchester
45 E. Waterloo St., Canal Winchester, OH 43110
Tel: (614) 834–5109

PROJECT DESCRIPTION: Site grading, utilities, and paving for new athletic fields, play areas, parking lot, and associated pedestrian facilities.

EXISTING SITE CONDITIONS: Open Space

RECEIVING STREAM: Walnut Creek

ADJACENT AREAS: Stream/open field to the west;
Stream/residential to the north;
Lithopolis–Winchester Road to the east;
McGill Park to the south

CRITICAL AREAS: None

EROSION AND SEDIMENT CONTROL MEASURES: Erosion and sediment will be controlled by the use of linear sediment barriers, temporary swale, temporary sediment basin and inlet protection at storm sewer inlets.

PERMANENT STABILIZATION: All disturbed areas shall be seeded and mulched or paved.

MAINTENANCE: All erosion control devices are to be inspected by the construction superintendent daily and after rainfalls. Any damaged facilities are to be replaced/repaired immediately as may be necessary.

CONSTRUCTION SEQUENCE:

1. Establish a construction entrance/exit, contractor laydown area and a concrete washout area.
2. Install perimeter sediment controls as shown on the plan.
3. Construct the temporary sediment basin, including the temporary skimmer and outlet structure. Ensure the post–construction orifice(s) are not installed during the sediment basin phase.
4. Install the temporary diversion channel to route runoff to the sediment basin.
5. Begin clearing and initial grading activities.
6. Install the proposed utilities. Utilize a dewatering filter bag for any muddy water encountered during utility work.
7. Install storm sewer inlet protection for newly constructed inlets.
8. Stabilize the disturbed areas according to the temporary and permanent seeding requirements.
9. Construct the proposed parking areas and ball field/park improvements
10. Remove the temporary diversion channel and fine grade the remaining disturbed park land areas.
11. Permanently stabilize the remaining disturbed areas.
12. Once permanent vegetation is established, remove the temporary sediment controls include the temporary skimmer and riser.
13. Construct the permanent outlet structure and post construction water quality orifices.
14. Perform stream restoration activities at a time when the environmental permits allow. Ensure the stream bypass pumping is utilized for any necessary pumping and ensure all disturbed areas are permanently stabilized as construction allows.

SCHEDULE: The Contractor shall provide a schedule of operations to the City. Sedimentation and erosion control features shall be placed and maintained in accordance with this schedule.

SITE CONTACT: City of Canal Winchester
45 E. Waterloo St., Canal Winchester, OH 43110
Bill Sims
Tel: (614) 834–5109

GRAPHIC SCALE
0 25 50 100
1 inch = 50 feet

LEGEND
- Existing Storm Sewer (CB)
- Inlet Protection
- Flow Direction
- Proposed Linear Sediment Barrier (CS)
- Proposed Compost Filter Stock
- Proposed Storm Sewer (MH, CB, YD)
- Work/ Grading Limits

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK PHASE 2B
SEDIMENT & EROSION CONTROL PLAN

EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

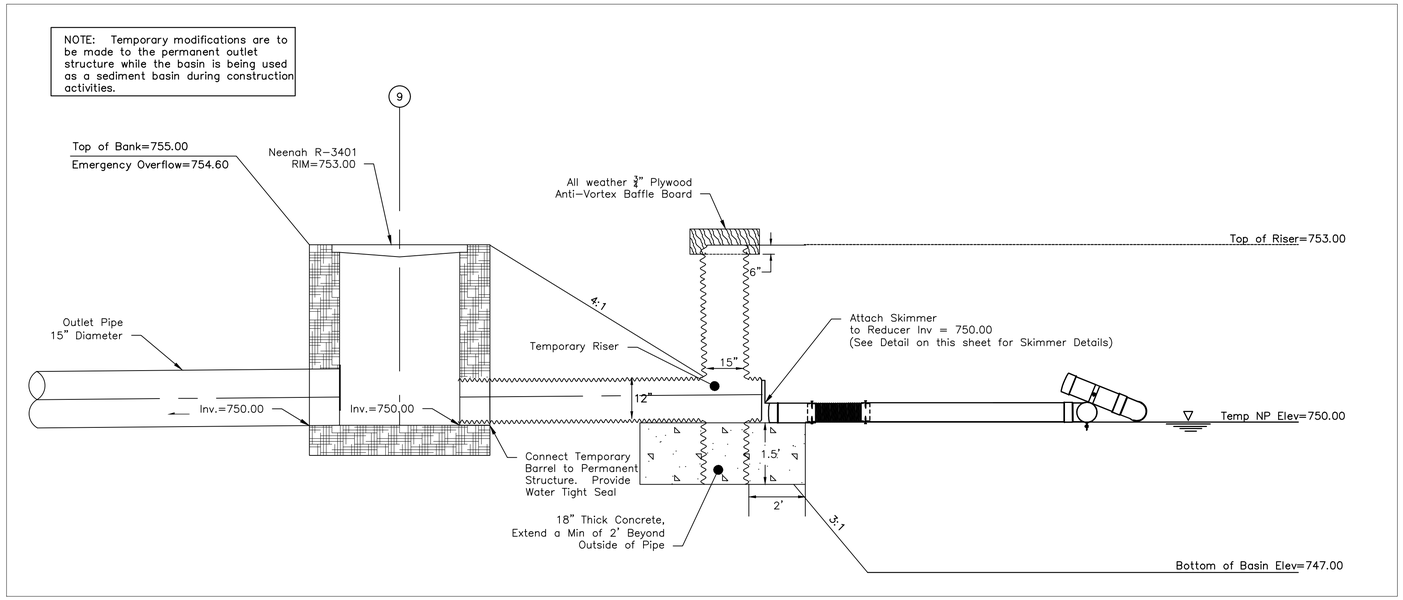
DATE: September 2025

SCALE: 1" = 50'

JOB NO.: 20241062

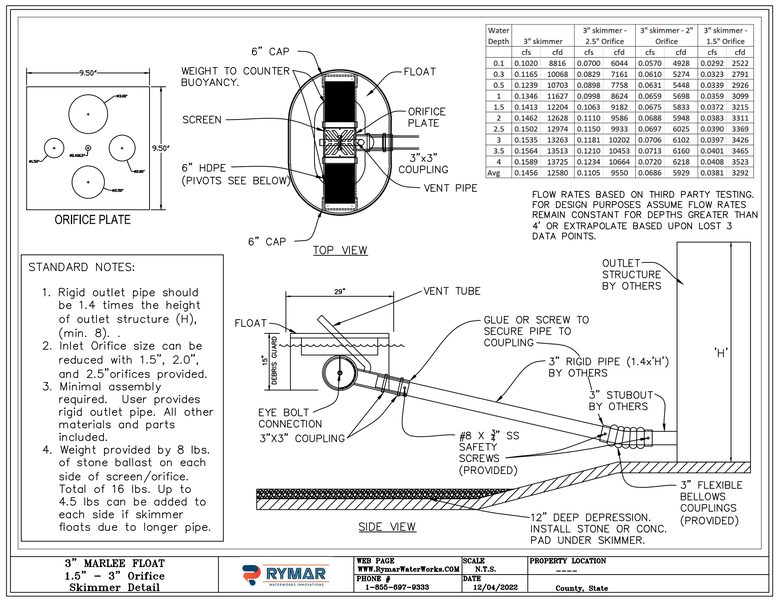
SHEET: 60/61

J:\20241062\Dwg\04Sheets\SITE\Sediment & Erosion Control Plan.dwg, Last Saved By: abanks, 9/15/2025 12:19 PM Last Printed By: Banks, Annalise, 9/15/2025 1:25 PM
Xrefs: 20241062-HS_REFR_N, 20241062-HS_REFR_E



TEMPORARY SEDIMENT BASIN OUTLET STRUCTURE DETAIL

Not to Scale



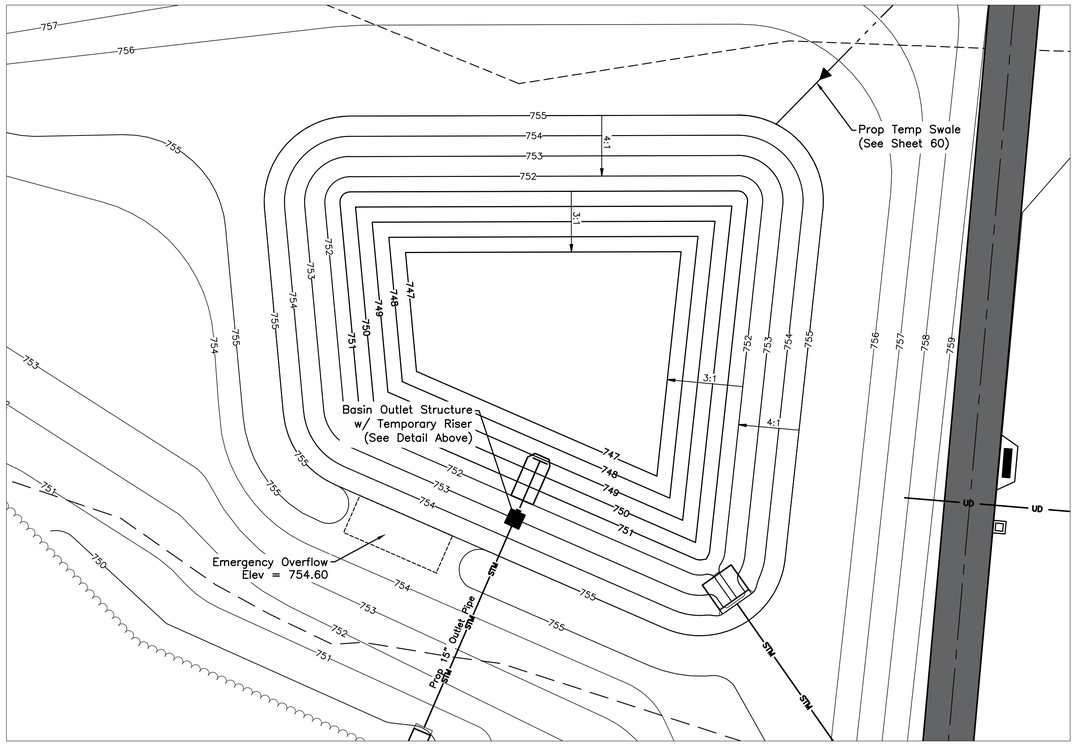
Water Depth	3" skimmer		3" skimmer - 2.5" Orifice		3" skimmer - 2" Orifice		3" skimmer - 1.5" Orifice	
	cfs	cfd	cfs	cfd	cfs	cfd	cfs	cfd
0.1	0.1020	8816	0.0700	6044	0.0570	4928	0.0292	2522
0.3	0.1165	10068	0.0829	7161	0.0610	5274	0.0323	2791
0.5	0.1239	10703	0.0898	7758	0.0631	5448	0.0339	2926
1	0.1346	11627	0.0998	8624	0.0659	5698	0.0359	3099
1.5	0.1413	12204	0.1063	9182	0.0675	5833	0.0372	3215
2	0.1462	12628	0.1110	9586	0.0688	5948	0.0383	3311
2.5	0.1502	12974	0.1150	9933	0.0697	6025	0.0390	3369
3	0.1535	13263	0.1181	10202	0.0706	6102	0.0397	3426
3.5	0.1564	13513	0.1210	10453	0.0713	6160	0.0401	3465
4	0.1589	13725	0.1234	10664	0.0720	6218	0.0408	3523
Avg	0.1456	12580	0.1105	9550	0.0686	5929	0.0381	3292

FLOW RATES BASED ON THIRD PARTY TESTING. FOR DESIGN PURPOSES ASSUME FLOW RATES REMAIN CONSTANT FOR DEPTHS GREATER THAN 4' OR EXTRAPOLATE BASED UPON LOST 3 DATA POINTS.

STANDARD NOTES:

1. Rigid outlet pipe should be 1.4 times the height of outlet structure (H), (min. 8). .
2. Inlet Orifice size can be reduced with 1.5", 2.0", and 2.5"orifices provided.
3. Minimal assembly required. User provides rigid outlet pipe. All other materials and parts included.
4. Weight provided by 8 lbs. of stone ballast on each side of screen/orifice. Total of 16 lbs. Up to 4.5 lbs can be added to each side if skimmer floats due to longer pipe.

3" MARLEE FLOAT 1.5" – 3" Orifice Skimmer Detail	RYMAR WATERWORKS INNOVATIONS	WEB PAGE WWW.RymarWaterWorks.COM	SCALE N.T.S.	PROPERTY LOCATION -----
		PHONE # 1-855-897-9333	DATE 12/04/2022	County, State



TEMPORARY SEDIMENT BASIN GRADING DETAIL

Scale: 1" = 15'

ITEM 207 - TEMPORARY SEDIMENT BASIN, AS PER PLAN

The work for the temporary sediment basin as shown on this sheet shall include all necessary grading to establish the temporary sediment basin condition during construction and complete the final condition of the dry basin and permanent outlet structure. The pay item shall also include maintaining the temporary sediment basin as well as installing, maintaining and removing the temporary skimmer and all components of the temporary outlet structure for the basin as defined in the detail on this sheet.

REVISIONS

MARK	DATE	DESCRIPTION

CITY OF CANAL WINCHESTER

CANAL WINCHESTER, FRANKLIN COUNTY, OHIO
SITE IMPROVEMENT PLAN
FOR
MCGILL PARK
PHASE 2B
TEMPORARY SEDIMENT BASIN PLAN

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
September 2025

SCALE
AS NOTED

JOB NO.
20241062

SHEET
61/61

J:\20241062\Dwg\04Sheets\SITE\60 Temporary Sediment Basin Plan.dwg, Last Saved By: dbanks, 9/10/2025 8:19 AM Last Printed By: Banks, Annaliese, 9/15/2025 1:25 PM