

GENERAL NOTES:

1. THE TOPOGRAPHIC DATA AS SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY CV IN MAY 2021.
2. THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM DATUMS: HORIZONTAL = NAD83/91 (2011) AND VERTICAL = NAVD 88.
3. LOCATION AND ELEVATIONS OF EXISTING SITE FEATURES, UTILITIES AND WORK ARE BASED ON THE BEST AVAILABLE INFORMATION. EXACT LOCATIONS AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL MAKE ALL REQUIRED FIELD MEASUREMENTS TO VERIFY EXISTING AND CONTRACT INTERFACE DIMENSIONS, LOCATIONS, AND OTHER CONDITIONS. FINAL LOCATIONS OF PIPES WILL BE DETERMINED IN THE FIELD.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF EXISTING CONDITION INFORMATION. ANY DISCREPANCIES FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER AND FACILITY OPERATIONS PRIOR TO THE START OF ANY CONSTRUCTION WORK.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR BY HIS/HER FAILURE TO NOT LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS/HER WORK. ITEMS SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
6. EXISTING TREES, BUSHES, AND SHRUBS SHALL BE PROTECTED BY CONTRACTOR FROM ALL DAMAGE UNLESS IN DIRECT CONFLICT WITH NEW UTILITIES, STRUCTURES, OR EQUIPMENT.
7. ALL EXISTING UTILITIES AND FEATURES ON THE SITE WHICH SHALL INCLUDE BUT NOT BE LIMITED TO, FENCES, TREES, SHRUBS, ETC. SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR. SHOULD ANY DAMAGE OCCUR BY THE CONTRACTOR, THEY SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL OBSERVE EXTREME CAUTION WHEN WORKING NEAR OR OVER EXISTING UTILITIES AND/OR APPURTENANCES. ANY DAMAGE TO EXISTING UTILITIES INCURRED SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR SHALL OBSERVE EXTREME CAUTION WORKING NEAR THE EXISTING RESIDENTIAL DWELLING.
10. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS AND PROGRAMS.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE DEPARTMENT OF NATURAL RESOURCES (DNREC) SEDIMENT AND STORMWATER MANAGEMENT CONTROLS, LATEST EDITION, SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH DELAWARE EROSION AND SEDIMENT CONTROL STANDARD DETAILS AND SPECIFICATIONS FOR ALL DISTURBED AREAS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PERSONNEL SAFETY ON THE JOBSITE. GUIDELINES FOR CONSTRUCTION SAFETY SHALL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE CONSTRUCTION INDUSTRY OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION (PART 1926 STANDARDS), AND ANY LOCAL ORDINANCES OR CODES THAT MAY BE APPLICABLE.

# 3703 OAKRIDGE ROAD CULVERT REPLACEMENT CONSTRUCTION PLAN

NEW CASTLE COUNTY, DELAWARE  
JUNE 2024

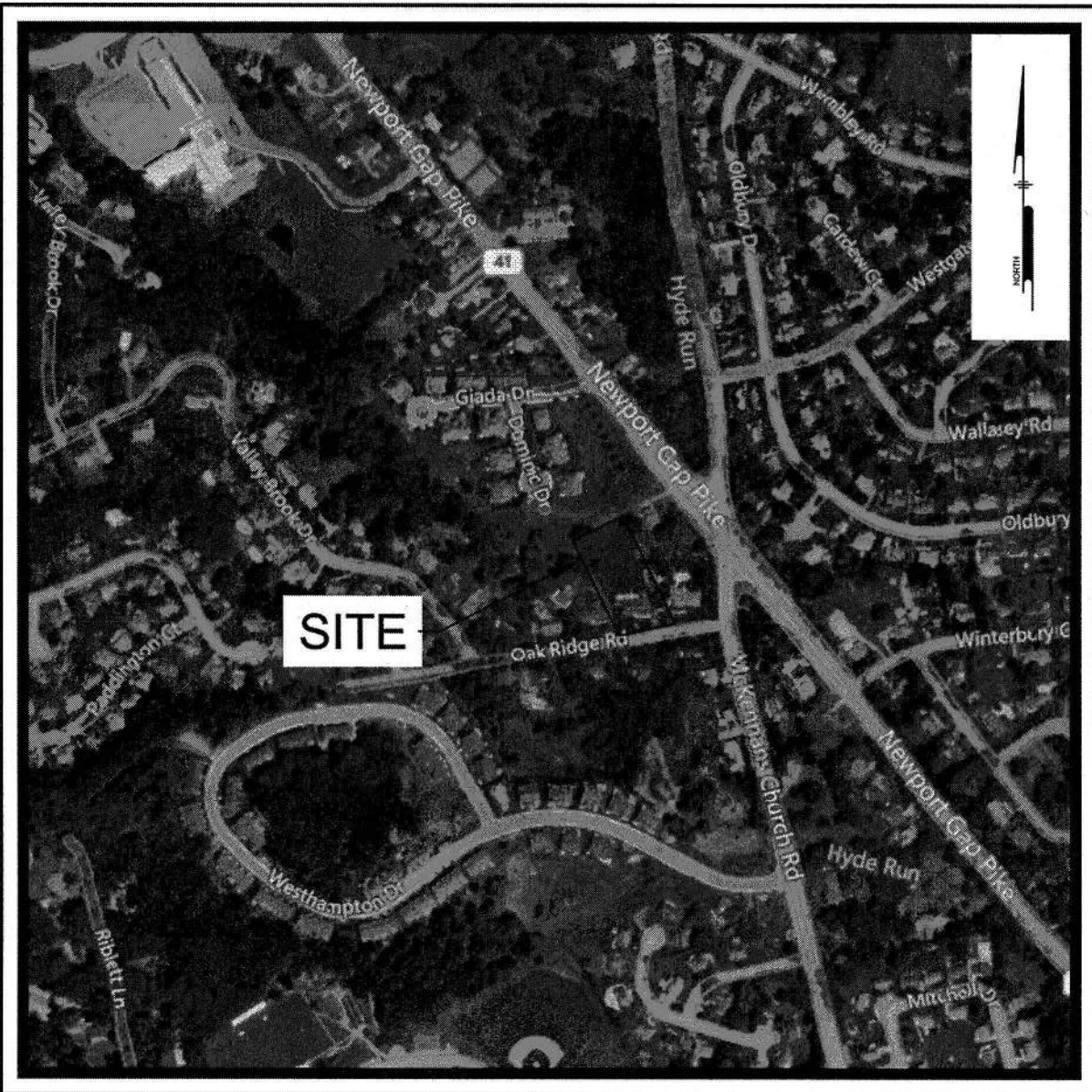
PREPARED FOR:

## NEW CASTLE COUNTY CONSERVATION DISTRICT

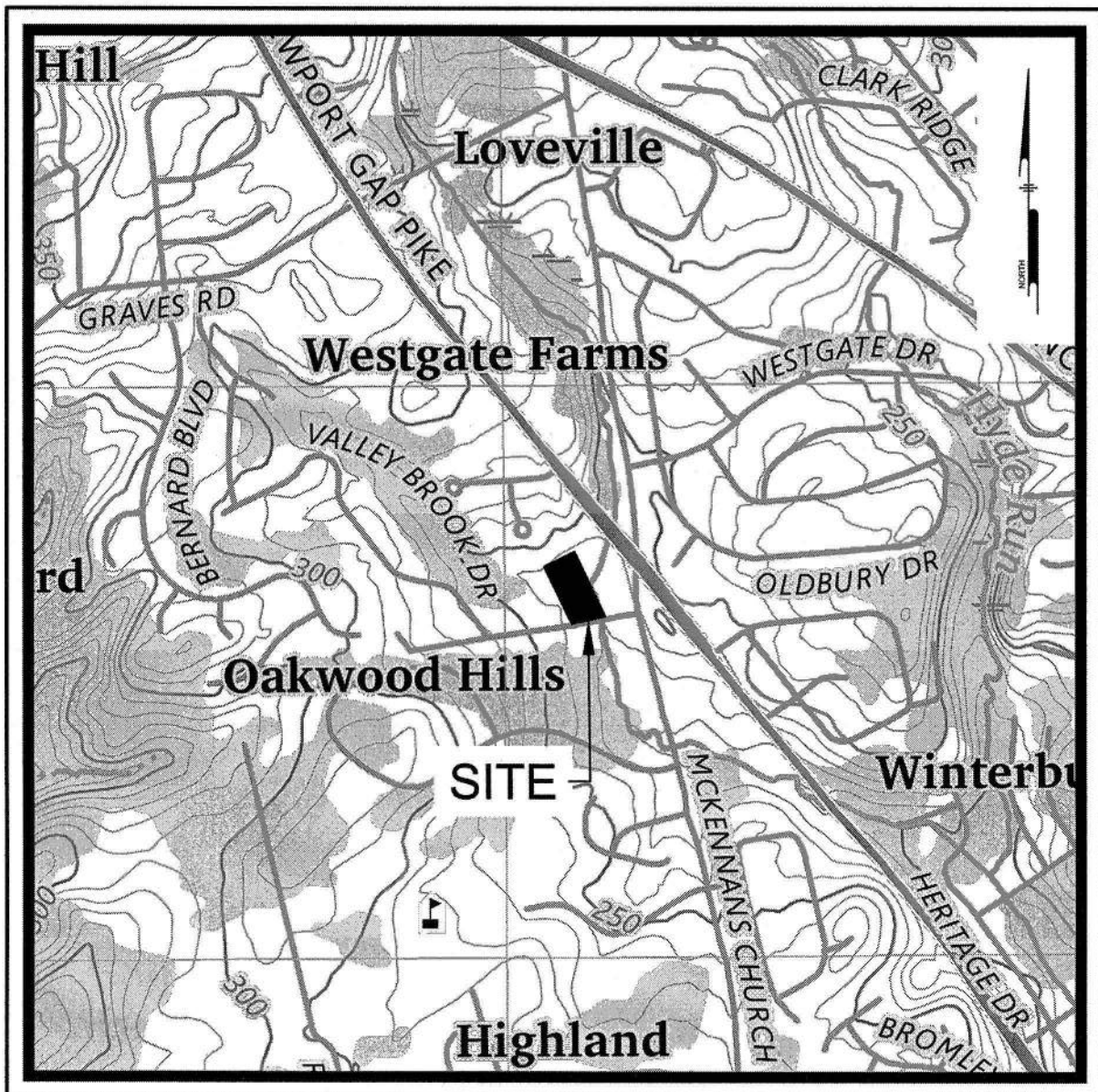
2430 OLD COUNTY ROAD  
NEWARK, DE 19702  
(302) 365-8970

| SHEET INDEX |        |                                    |
|-------------|--------|------------------------------------|
| SHT.        | DWG.   | TITLE                              |
| 1           | CS0001 | COVER SHEET                        |
| 2           | CS0201 | EXISTING CONDITIONS AND DEMO PLAN  |
| 3           | CS1001 | SITE PLAN                          |
| 4           | CS6001 | CONSTRUCTION DETAILS               |
| 5           | CS8001 | EROSION & SEDIMENT CONTROL PLAN    |
| 6           | CS8501 | EROSION & SEDIMENT CONTROL DETAILS |
| 7           | CS8502 | EROSION & SEDIMENT CONTROL DETAILS |

| LEGEND   |          | DESCRIPTION                     |
|----------|----------|---------------------------------|
| EXISTING | PROPOSED |                                 |
|          |          | COMMUNICATIONS MANHOLE          |
|          |          | COMMUNICATION LINE              |
|          |          | CURB                            |
|          |          | EDGE OF PAVEMENT                |
|          |          | FENCE                           |
|          |          | GAS LINE                        |
|          |          | GUY WIRE                        |
|          |          | UTILITY POLE                    |
|          |          | PROPERTY LINE                   |
|          |          | BUILDING                        |
|          |          | MAIL BOX                        |
|          |          | SIGN                            |
|          |          | SANITARY SEWER MANHOLE          |
|          |          | SANITARY SEWER LINE             |
|          |          | STREAM                          |
|          |          | STORM SEWER INLET               |
|          |          | STORM SEWER HEADWALL            |
|          |          | STORM SEWER MANHOLE             |
|          |          | STORM SEWER LINE                |
|          |          | DITCH/SWALE                     |
|          |          | MINOR CONTOUR                   |
|          |          | MAJOR CONTOUR                   |
|          |          | TREE                            |
|          |          | TREE                            |
|          |          | WATER LINE                      |
|          |          | WATER VALVE                     |
|          |          | LIMIT OF DISTURBANCE            |
|          |          | STABILIZED CONSTRUCTION MATTING |



LOCATION MAP  
Scale: 1" = 600'



USGS MAP  
Scale: 1" = 2000'

PREPARED BY:

PENNONI ASSOCIATES INC.



Christiana Executive Campus  
121 Continental Drive, Suite 207  
Newark, DE 19713-4310  
T 302.655.4451  
F 302.654.2895

CALL BEFORE YOU DIG  
Call Miss Utility of Delmarva  
800-282-8555  
Ticket Number(s): 232481025



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

3703 OAKRIDGE ROAD CULVERT REPLACEMENT

COVER SHEET

NEW CASTLE COUNTY CONSERVATION DISTRICT  
2430 OLD COUNTY ROAD  
NEWARK, DE 19702

| NO. | DATE | REVISIONS | BY |
|-----|------|-----------|----|
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |

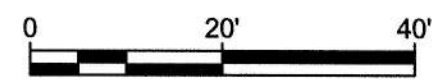
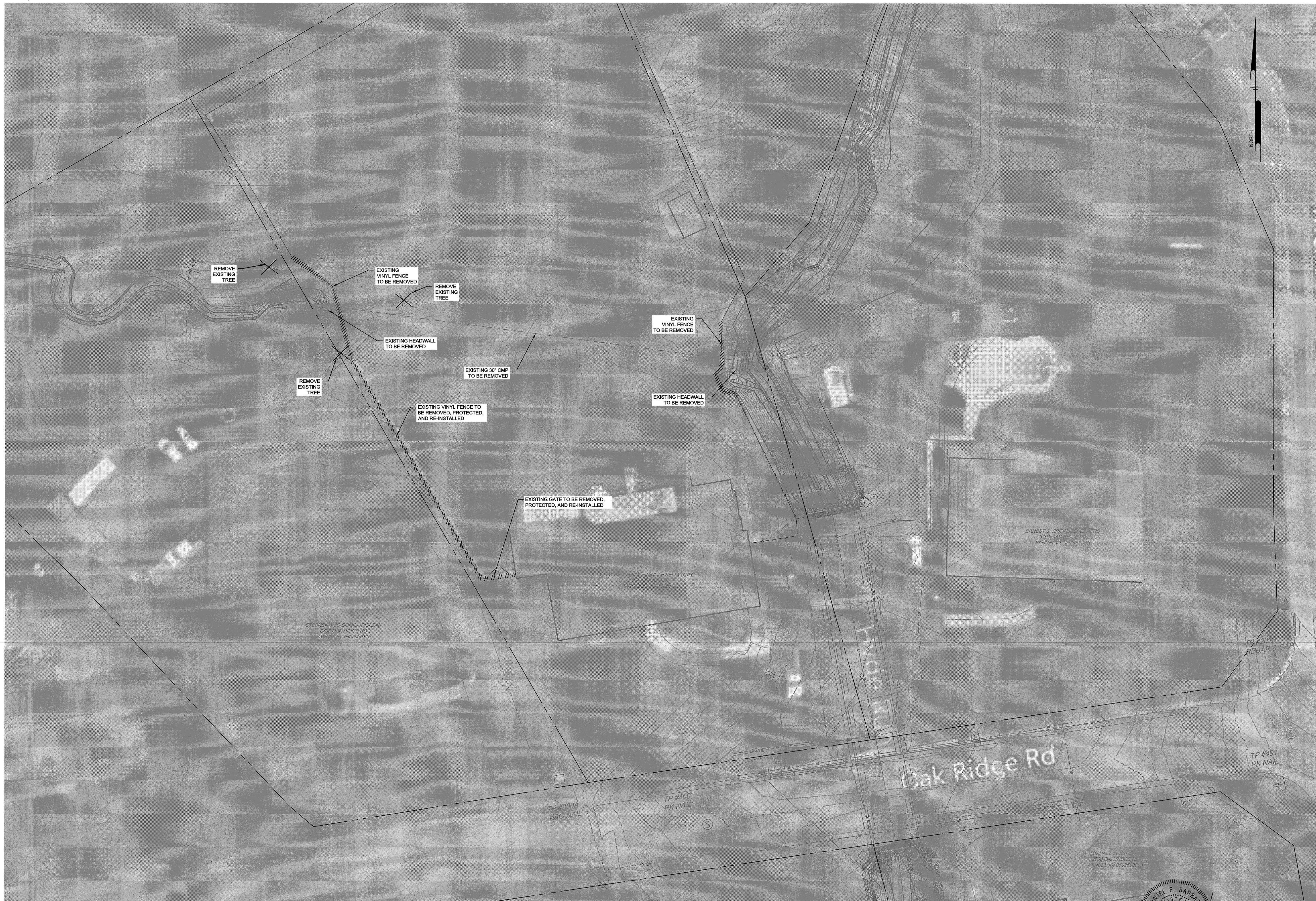
ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNERS OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

|               |            |
|---------------|------------|
| PROJECT       | NCCDS23001 |
| DATE          | 2023-09-05 |
| DRAWING SCALE | AS NOTED   |
| DRAWN BY      | ELA        |
| APPROVED BY   | MJE        |

CS0001  
SHEET 1 OF 7



U:\Account\NCCDS\NCCDS23001 - 3703 Oakridge Road Culvert Replacement\DESIGN\_SHEET\CS0201.dwg  
PLOTTED: 8/20/24 1:56 PM BY: Lindsay Uselbio  
PROJECT STATUS: —  
PLOT STYLE: Pennoni NCS.dwt



3703 OAKRIDGE ROAD CULVERT REPLACEMENT

3703 OAKRIDGE ROAD  
WILMINGTON, DE

EXISTING CONDITIONS AND DEMO PLAN

NEW CASTLE COUNTY CONSERVATION DISTRICT  
2430 OLD COUNTY ROAD  
NEWARK, DE 19702

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR  
AND OWNER MUST BE NOTIFIED OF ANY  
DISCREPANCIES BEFORE PROCEEDING WITH WORK

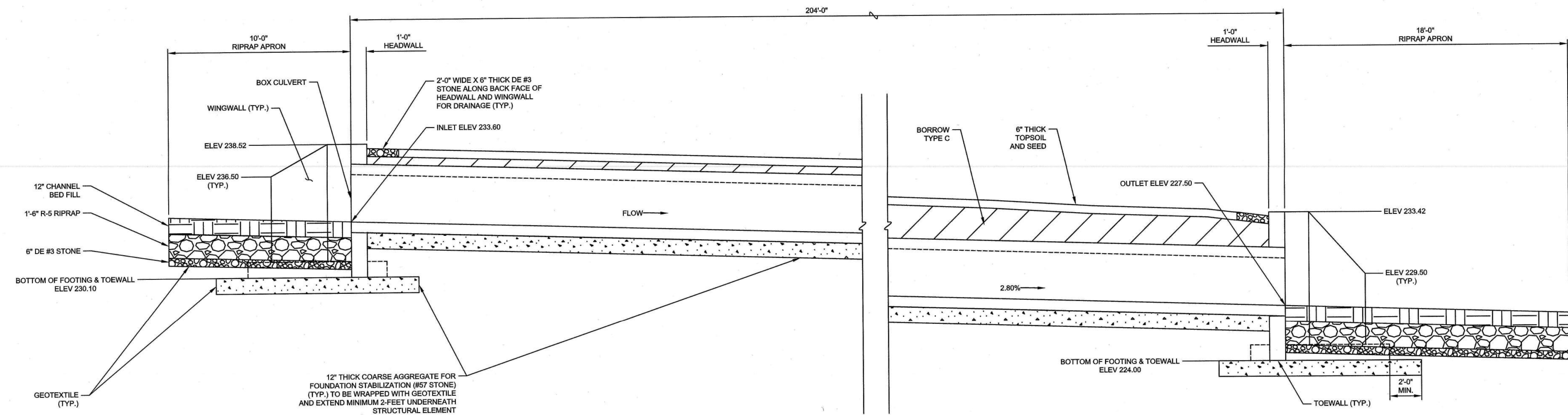
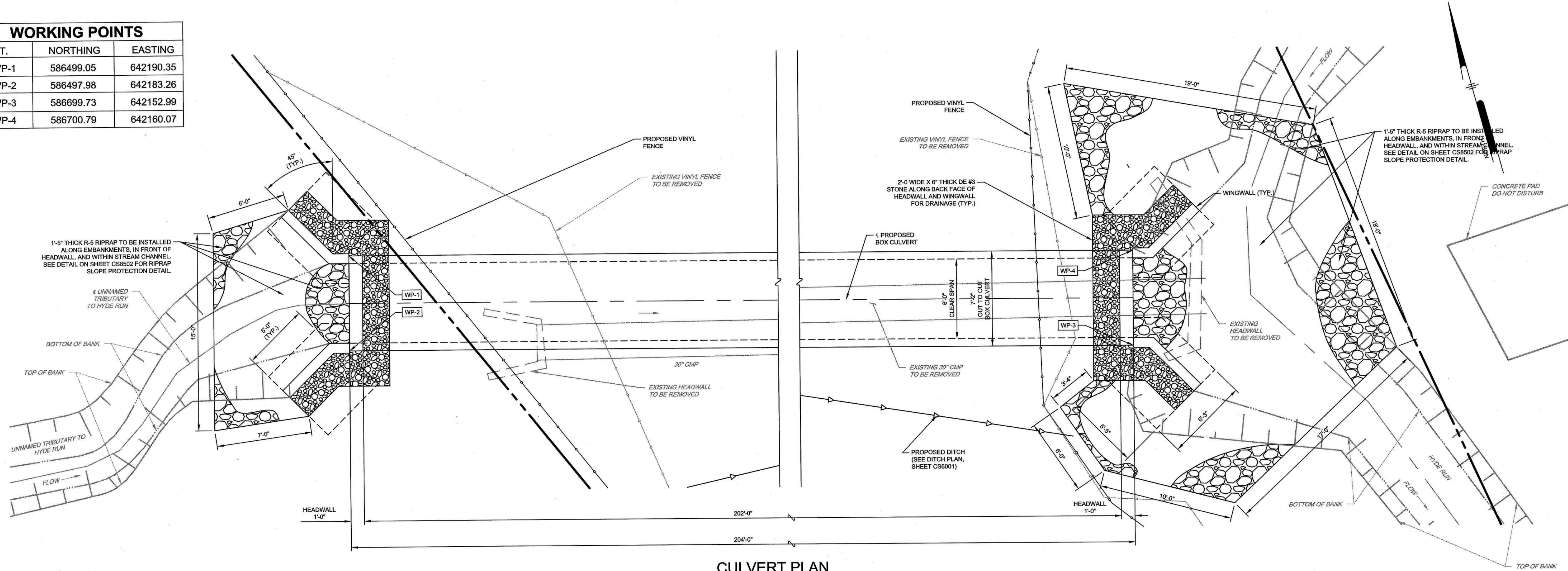
| NO. | DATE | REVISIONS | BY |
|-----|------|-----------|----|
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES  
ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE  
PROJECT. THEY ARE NOT INTENDED OR REPRESENTED  
TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON  
THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER  
PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION  
OR ADAPTATION BY PENNONI ASSOCIATES FOR THE  
SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS  
SOLE RISK AND WITHOUT LIABILITY OR LEGAL  
EXPOSURE TO PENNONI ASSOCIATES; AND OWNER  
SHALL INDEMNIFY AND HOLD HARMLESS PENNONI  
ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND  
EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

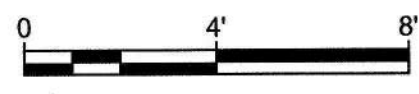
|               |            |
|---------------|------------|
| PROJECT       | NCCDS23001 |
| DATE          | 2023-09-08 |
| DRAWING SCALE | 1"=20'     |
| DRAWN BY      | ELA        |
| APPROVED BY   | MJE        |



| WORKING POINTS |           |           |
|----------------|-----------|-----------|
| PT.            | NORTHING  | EASTING   |
| WP-1           | 586499.05 | 642190.35 |
| WP-2           | 586497.98 | 642183.26 |
| WP-3           | 586699.73 | 642152.99 |
| WP-4           | 586700.79 | 642160.07 |



CULVERT SECTION ALONG STRUCTURE FLOW CENTERLINE  
1/4" = 1'-0"



**Pennoni**

PENNONI ASSOCIATES INC.  
Christiana Executive Campus  
121 Continental Drive, Suite 207  
Newark, DE 19713-4310  
T 302.655.4451 F 302.654.2895

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

3703 OAKRIDGE ROAD CULVERT REPLACEMENT

3703 OAKRIDGE ROAD  
WILMINGTON, DE

SITE PLAN

NEW CASTLE COUNTY CONSERVATION DISTRICT

2430 OLD COUNTY ROAD  
NEWARK, DE 19702

| NO. | DATE | REVISIONS | BY |
|-----|------|-----------|----|
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |

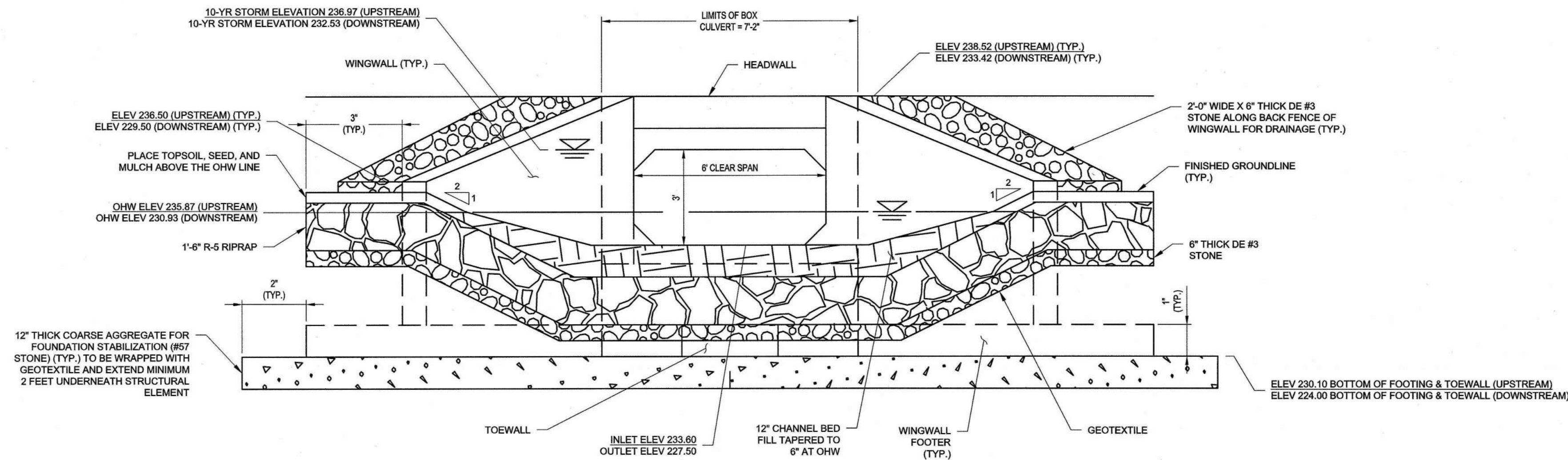
ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT: NCCDS23001  
DATE: 2023-09-08  
DRAWING SCALE: 1/4"=1'  
DRAWN BY: ELA  
APPROVED BY: MJE

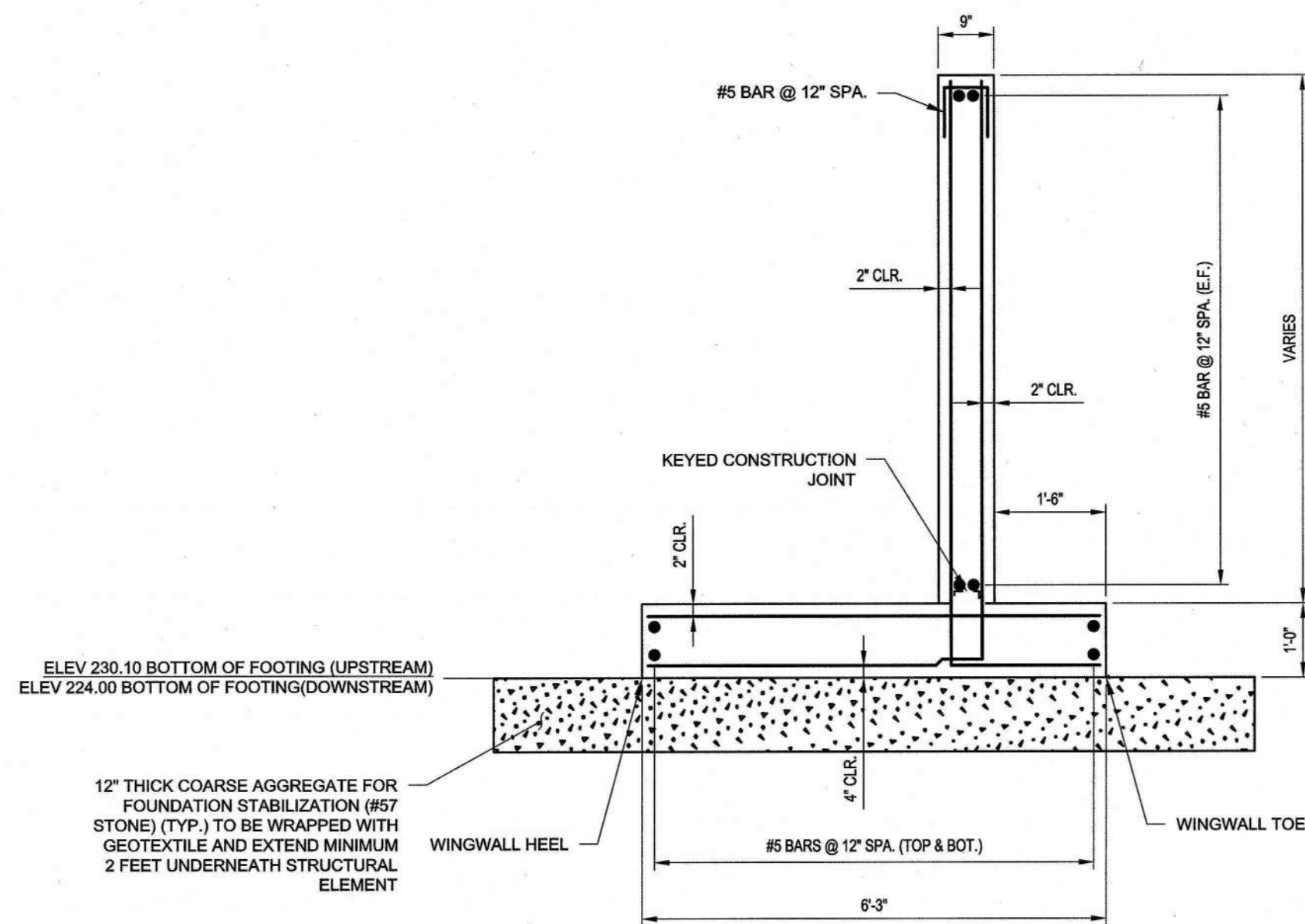
**CS1001**  
SHEET 3 OF 7



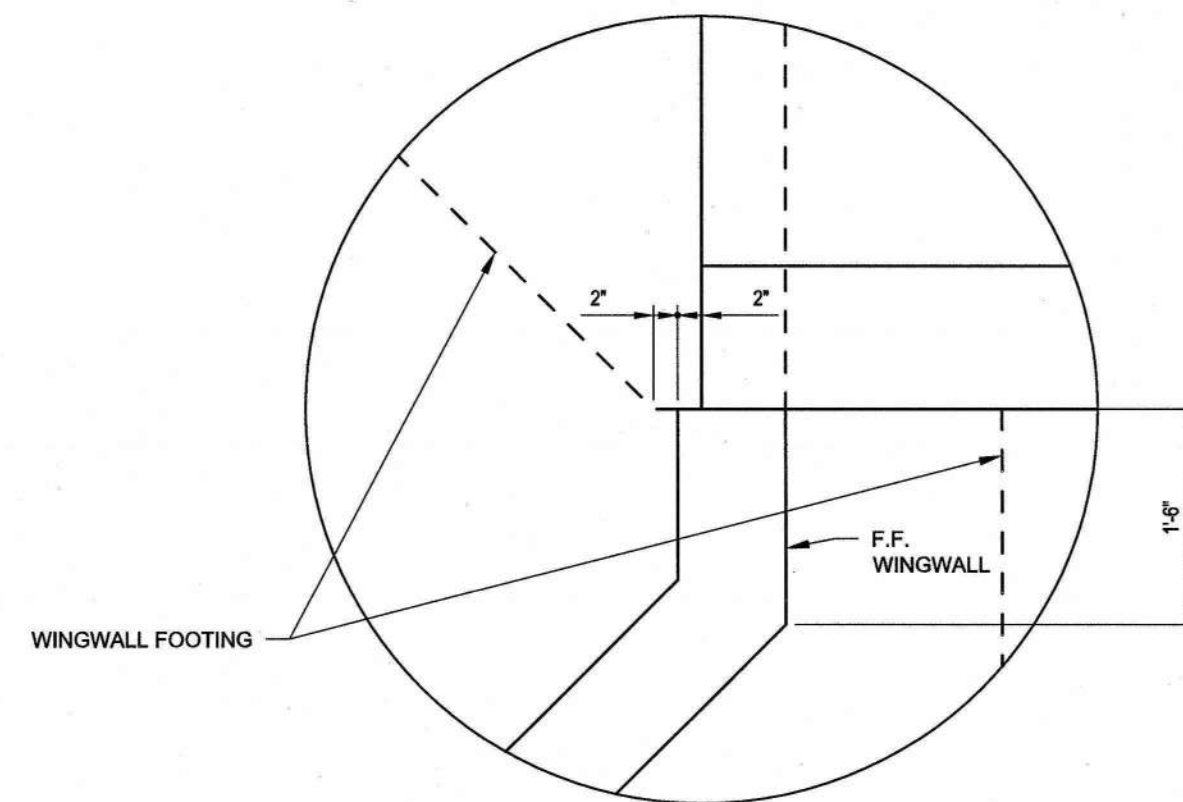
U:\Accounts\NCCDS\NCCDS23001 - 3703 Oakridge Road Culvert Replacement\DESIGN SHEET\CS6001.dwg  
PLOTED: 8/3/2024 1:50 PM BY: Lindsey Lucabell  
PLOT STYLE: Pennoni NC3.ctb  
PROJECT STATUS: —



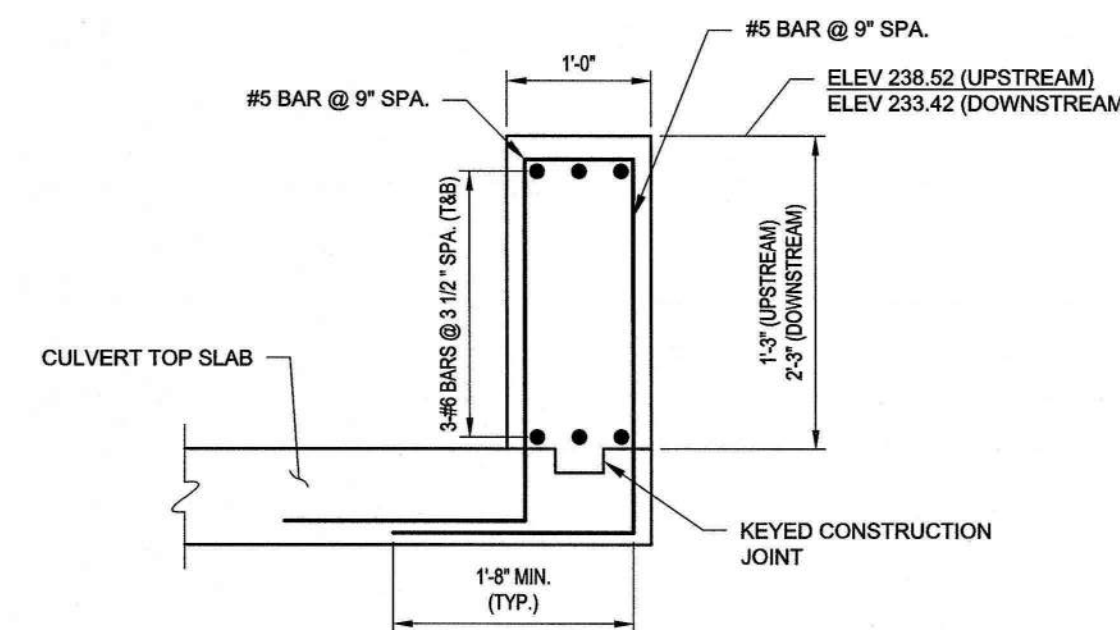
**DOWNSTREAM END ELEVATION**  
(UPSTREAM ELEVATION SIMILAR)  
3/8" = 1'-0"



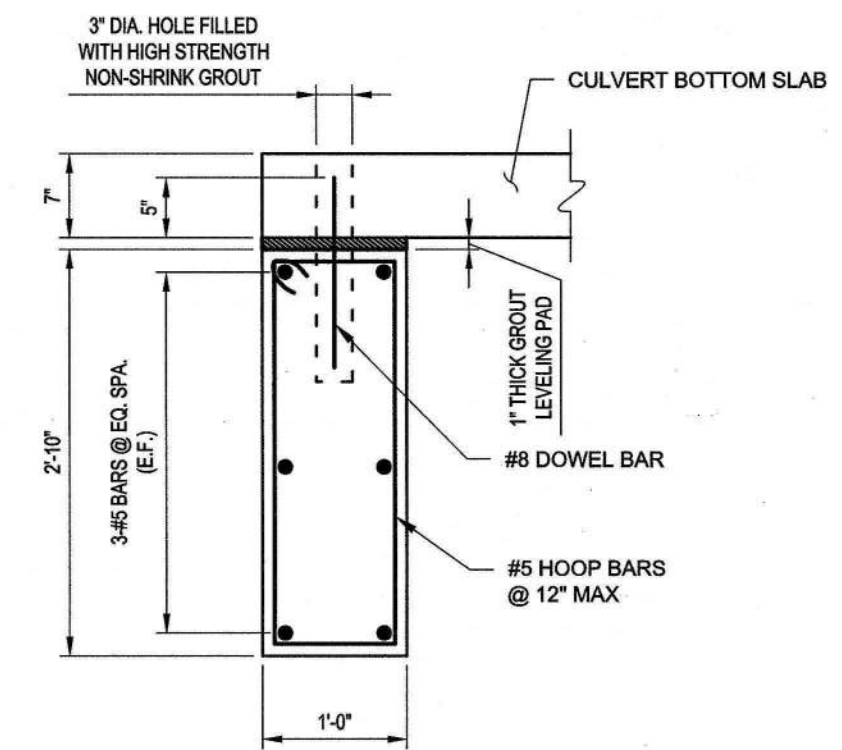
**TYPICAL WINGWALL SECTION**  
1/2" = 1'-0"



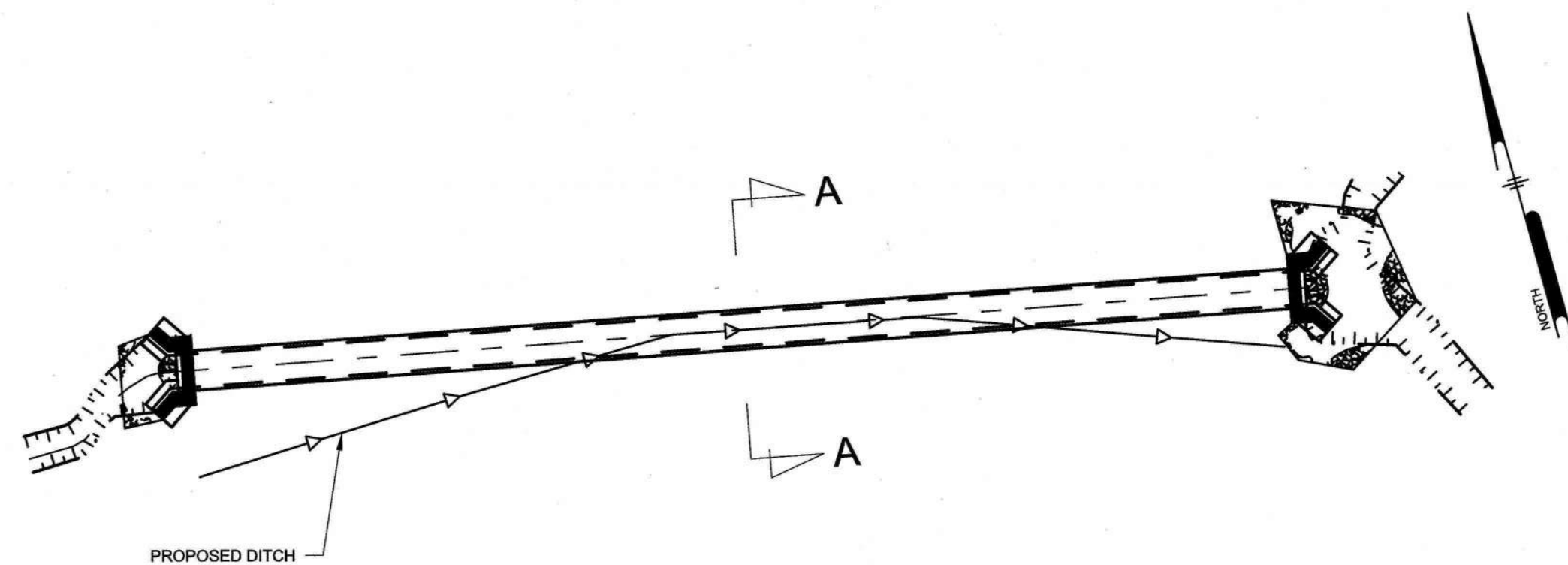
**WINGWALL CORNER DETAIL**  
3/4" = 1'-0"



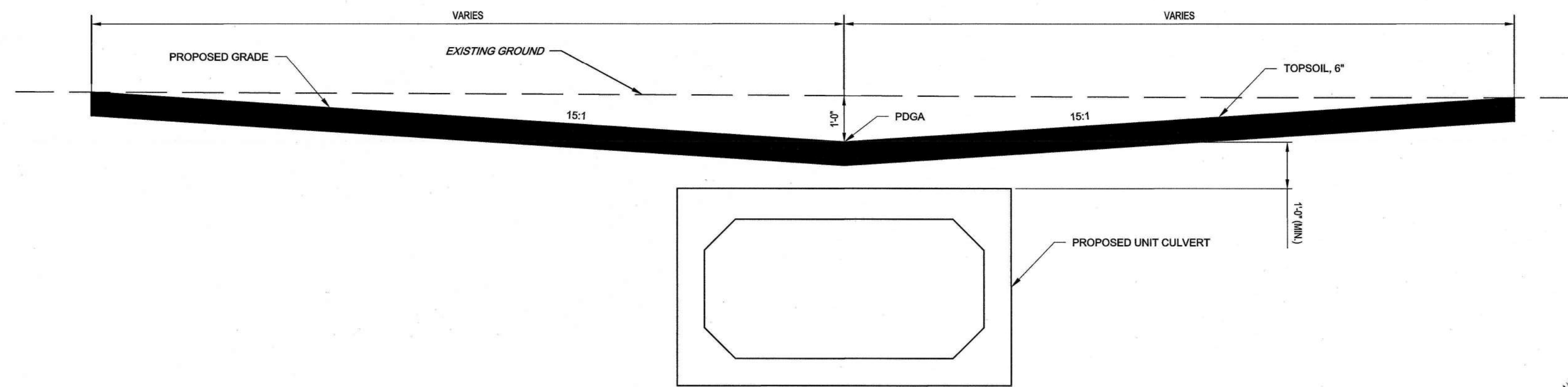
**HEADWALL DETAIL**  
3/4" = 1'-0"



**TOEWALL DETAIL**  
3/4" = 1'-0"

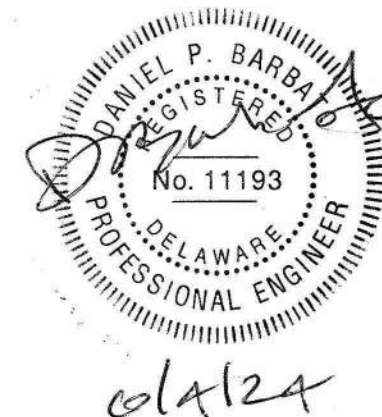


**DITCH PLAN**  
NOT TO SCALE  
FENCE NOT SHOWN FOR CLARITY



**SECTION A-A**  
NOT TO SCALE

**TYPICAL PRECAST CULVERT SECTION**  
(SHOWING HEADWALL & TOEWALL)  
1/2" = 1'-0"



3703 OAKRIDGE ROAD  
3703 OAKRIDGE ROAD  
WILMINGTON, DE

CONSTRUCTION DETAILS

NEW CASTLE COUNTY CONSERVATION DISTRICT

2430 OLD COUNTY ROAD  
NEWARK, DE 19702

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK



**PENNONI ASSOCIATES INC.**  
Christiana Executive Campus  
121 Continental Drive, Suite 207  
Newark, DE 19713-4310  
T 302.655.4451 F 302.654.2895

| NO. | DATE | REVISIONS | BY |
|-----|------|-----------|----|
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |
|     |      |           |    |

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSION OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT: NCCDS23001  
DATE: 2023-09-08  
DRAWING SCALE: AS NOTED  
DRAWN BY: ELA  
APPROVED BY: MJU

**CS6001**

SHEET 4 OF 7











