

MULTIMODAL ACCESS CLOSURE EXCEPTION APPLICATION FORM AND CHECKLIST

Submittal Date: 03/23/2025 ☒ New Submittal ☐ Re-Submittal No: _____

Related Building Permit No: _____

Project Name: Aaron Drive (Blue Hole Rd) - Stormwater System Improvements

Street Name Location: Blue Hole Rd

Between: 5450 Blue Hole Rd And: 5423 Blue Hole Rd

Applicant Name: Walker Building Group

Address: 2617 Locust Street

Phone: 615-829-1276 Fax: _____ Contact: Eric Ricker

Email: Ericker@walkerbuildinggroup.com

Project Description: Removal of existing 68"x43" HERCP, 36" CMP, and 60" CMP pipes
crossing Blue Hole Road and replacing with 68"x43" HERCP and 12' x 5' Box Bridge.

Start Date: 5/25/2026 End Date: 7/10/2026 Project Length: 46 Days

Describe Type of Closure: 24 Hour Full Road Closure during Removal of 68"x43" & 36" CMP
and replacing it with a new Box Culvert span across Blue Hole Rd.

Provide Reasons why Project cannot be completed without closures and what other
options were considered (attach documents as needed): Excavation to demo the existing
CMP and install the new Box will be 24ft wide. We would not be able to span that width
with steel street plates. Project has to be started and completed during summer break because of
its proximity to Henry Maxwell Elementary School.

PROJECT INFORMATION CHECKLIST:

Included Not Applicable

- | | | |
|-------------------------------------|--------------------------|--|
| ☒ | ☐ | Project Vicinity Map with Project Area shown, street names, property information, existing pavement and striping, gutter and building locations, north arrow, and scale. |
| ☒ | ☐ | Planned work hours included. |
| ☒ | ☐ | Exact location and dimensions of the construction work zone shown. |
| ☒ | ☐ | If multiple phases are necessary, include perimeter impact of each phase, phase number, anticipated work hours and phase duration. |
| ☒ | ☐ | Details on construction activity and equipment being used as part of construction included for each phase. |
| ☒ | ☐ | Specify if any on-street parking, and/or metered parking, is to be restricted and if bus zone will need to be relocated. |
| ☒ | ☐ | Specify if trash pickup will be impacted. |
| ☒ | ☐ | Provide information on all utility work and utility connections. |
| ☒ | ☐ | List all affected residents, businesses, agencies, and schools and any conversations/agreements taken place. |
| ☒ | ☐ | Show ongoing construction projects within vicinity of proposed project impact. |
| ☒ | ☐ | Provide plan to address conflicts with other nearby projects. |
| ☒ | ☐ | Provide traffic control plan for each phase of construction (see traffic control checklist for more information). |
| ☒ | ☐ | Provide information on work vehicle parking locations. |
| ☒ | ☐ | Show construction trucks ingress/egress to project location. |
| ☒ | ☐ | Provide information on any traffic signals, traffic signal loops, and traffic signal cabinets in close proximity to project. |

TRAFFIC CONTROL PLAN CHECKLIST:

Included Not Applicable

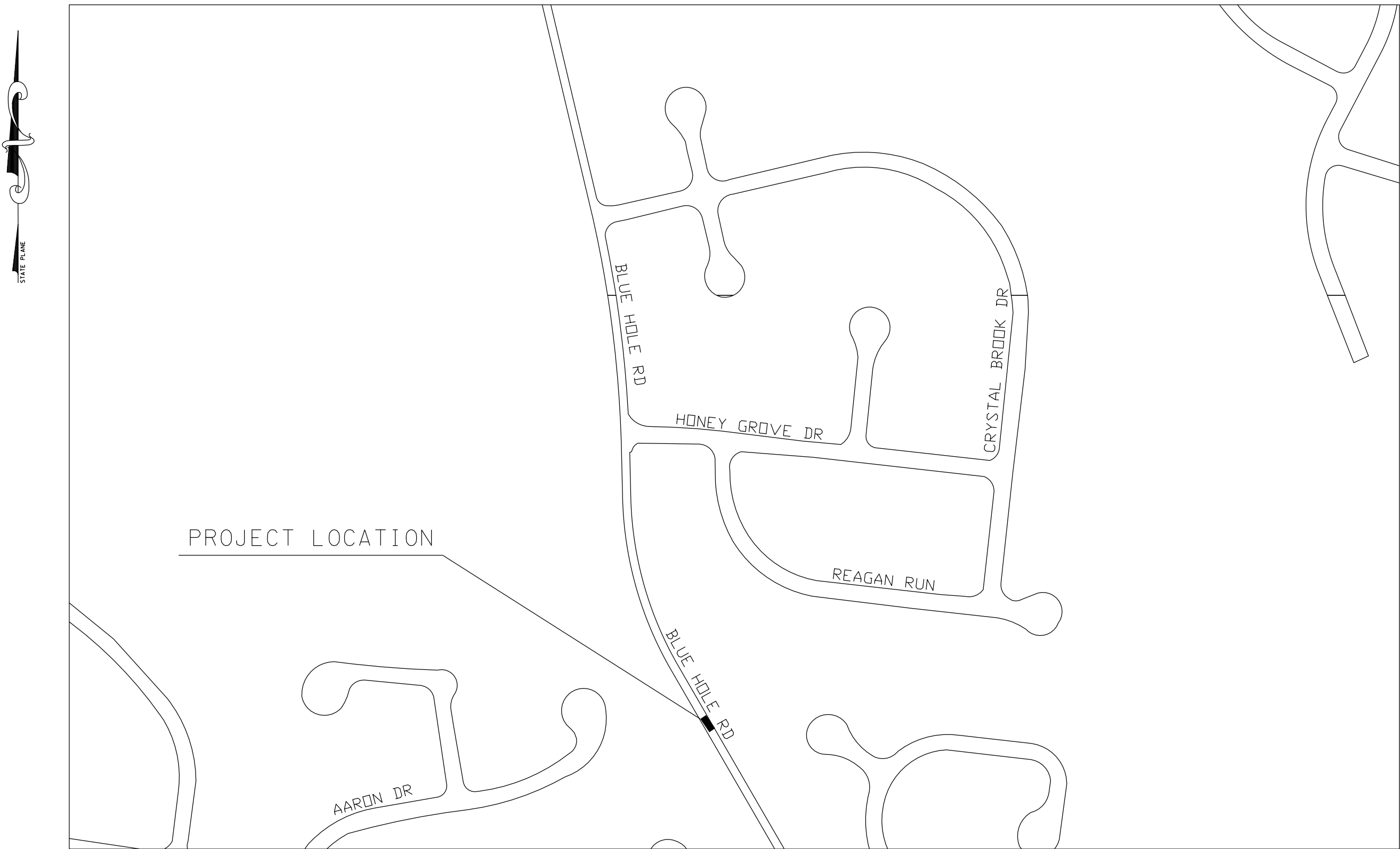
- | | | |
|-------------------------------------|--------------------------|---|
| ☒ | ☐ | All temporary traffic control plans shall be designed in accordance with the most recent ADA regulations and requirements of the Manual of Uniform Traffic Control Devices. |
| ☒ | ☐ | Clearly show the locations of all existing signs (including speed limit) as well as the proposed signs for each construction phase. |
| ☒ | ☐ | Show the location of all existing pedestrian paths and pedestrian detour route of each stage of construction. |
| ☒ | ☐ | Show dimensions of travel lane width, shoulder width, sidewalk of each phase, and overall roadway width along the length of affected area. |
| ☒ | ☐ | Show all existing striping and markings to remain, to be removed, and all proposed striping and markings for each construction stage. |
| ☒ | ☐ | Provide detour plan clearly showing detour route for any roadway or pedestrian/bike path closures. |
| ☒ | ☐ | Specify placement of all temporary traffic control devices. |
| ☒ | ☐ | Specify spacing of all temporary traffic control devices. |
| ☒ | ☐ | Show all existing traffic signals and streetlights in the work zone location. |
| ☒ | ☐ | Lighting provided for all pedestrian detour routes. |
| ☒ | ☐ | Provide minimum eleven (11) foot travel lanes at all times. |
| ☒ | ☐ | Show size, height, and location of all channelizing devices, warning lights, flag trees, barriers, etc. |
| ☒ | ☐ | Label all taper lengths and widths. |
| ☒ | ☐ | Provide locations of police officers for each phase as needed. |
| ☒ | ☐ | Temporary Traffic Control Plan has been stamped and signed by a TN licensed Civil Engineer. |

METROPOLITAN GOVERNMENT OF NASHVILLE
AND DAVIDSON COUNTY, TENNESSEE
DEPARTMENT OF WATER AND SEWERAGE SERVICES

INDEX

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DAVIDSON COUNTY
DISTRICTS 31&33
AARON DRIVE
STORMWATER SYSTEM IMPROVEMENTS



SCALE: 1"=200'

FREDDIE O'CONNELL
METROPOLITAN MAYOR



SCOTT A. POTTER
DIRECTOR OF WATER & SEWERAGE SERVICES

ENGINEERING BY - METROPOLITAN DEPARTMENT OF
WATER AND SEWERAGE SERVICES

STORMWATER DIVISION
1600 SECOND AVENUE NORTH
NASHVILLE, TN 37208

PREPARED BY:
CONSOR ENGINEERS, LLC
101 WEST PARK DRIVE, SUITE 300, BRENTWOOD, TN 37027
(615) 425-2000

SHEET NO. 01 OF 12

FILE NO.	AARON DRIVE
DATE:	05/14/2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
DATE:	
DATE:	

Metro Water ServicesNashville, TN

* Approved for Construction *

Under authority delegated by the Tennessee Department of Environment and Conservation Division of Water Resources, this document has been reviewed by the Department of Water and Sewerage Services or contracted professional and is hereby approved for construction.

This approval shall not be construed as an assurance that the improvements depicted in the document bearing this stamp will function as intended.

Public Sewer

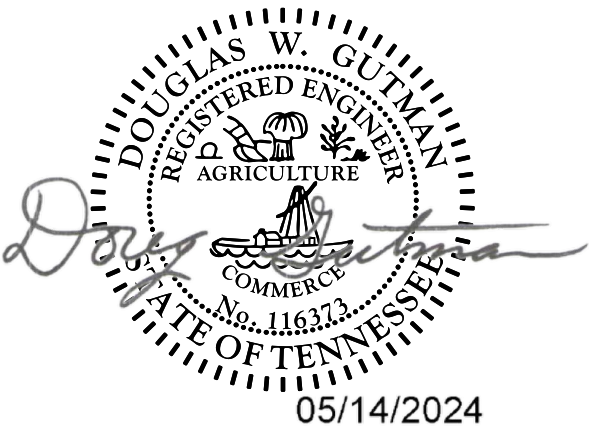
Public Water

Date

MWS Engineer

This approval expires one year from date shown below

MWS PROJECT NUMBERS:
24-SWC-110
24WC0039



UNLESS OTHERWISE NOTED, ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, TDOT DESIGN STANDARDS AND STANDARD DRAWINGS, METROPOLITAN DEPARTMENT OF PUBLIC WORKS DETAILS AND SPECIFICATIONS, AND METROPOLITAN DEPARTMENT OF WATER SERVICES DETAILS AND SPECIFICATIONS

GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT REQUIREMENTS OF TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, METROPOLITAN DEPARTMENT OF WATER AND SEWERAGE SERVICES STORMWATER MANAGEMENT MANUAL, AND NASHVILLE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND DETAILS, AND METRO WATER SERVICES SPECIFICATIONS AND DETAILS FOR WATER AND SEWER CONSTRUCTION.
2. WATER LINE LOCATIONS WERE ESTIMATED FROM VALVE BOXES AND WATER METERS LOCATED BY SURVEYORS AND FROM BASE MAPPING PROVIDED BY METRO WATER SERVICES. WATER LINES MAY BE LOCATED BY TENNESSEE ONE CALL PRIOR TO THE SURVEY IN SOME CASES. WATER LINES THAT WERE LOCATED BY TENNESSEE ONE CALL WILL BE NOTED ON THE EXISTING SITE PLAN(S). POTENTIAL CONFLICTS WITH MAIN SEWER LINES WERE ESTIMATED BY ASSUMING A CONSTANT SLOPE FROM THE UPSTREAM MANHOLE TO THE DOWNSTREAM MANHOLE. THE LOCATION OF SANITARY SERVICE LINES WERE ESTIMATED FROM AS-BUILT DRAWINGS PROVIDED BY MWS, AND CLEAN-OUTS LOCATED BY THE SURVEYORS, IF PRESENT. USE APPROXIMATE LOCATION OF SEWER SERVICE LINES AS GUIDANCE ONLY. LOCATION MAY OR MAY NOT BE ACCURATE. ADDITIONAL SERVICE LINES MAY BE PRESENT. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES AND PROTECTING UTILITIES PROPOSED TO REMAIN. CONSOR ENGINEERS, LLC ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THIS INFORMATION. REPAIRS AND/OR REPLACEMENTS TO ANY UTILITIES DAMAGED BY CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL PAYMENT WILL BE MADE.
3. THE CONTRACTOR SHALL USE TRAFFIC CONTROL METHODS AS APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, THE NASHVILLE DEPARTMENT OF TRANSPORTATION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
4. THE CONTRACTOR SHALL COORDINATE, KNOW, AND HAVE WORK SCHEDULED FOR ALL APPLICABLE UTILITY RELOCATIONS PRIOR TO PROJECT WORK BEGINNING. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF SCHEDULE.
5. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY OWNER'S REPRESENTATIVE OF DIFFERING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
6. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO STREETS, YARDS, MAILBOXES, FENCES, SIGNS, DRIVEWAYS, TREES, LANDSCAPING, IRRIGATION SYSTEMS, ETC. AT NO ADDITIONAL COST TO OWNER.
7. ALL DRIVEWAY REPAIRS SHALL MATCH EXISTING DRIVEWAYS IN WIDTH, DEPTH, AND MATERIAL UNLESS OTHERWISE SPECIFIED.
8. ALL PROPOSED ASPHALT TO GRADE TO NEW INLET(S).
9. EROSION AND SEDIMENT (E&S) CONTROL MEASURES TO BE INSTALLED PER METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY BEST MANAGEMENT PRACTICES (BMP), LATEST EDITION.
10. ONCE WORK HAS STARTED, THE CONTRACTOR SHALL PURSUE WORK DILIGENTLY UNTIL COMPLETE.
11. AREAS DESIGNATED FOR MILLING (COLD PLANING) SHALL BE SAW CUT TO A DEPTH OF TWO INCHES (2"). ALL OTHER JOINTS SHALL BE SAW CUT TO FULL DEPTH (ASPHALT AND CONCRETE) UNLESS OTHERWISE SHOWN ON THE PLANS OR CONTRACT DOCUMENTS.
12. THE UNIT PRICE BID FOR EACH ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND ALL APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION OF THE ITEMS SHOWN ON THE PLANS, IN THE DETAILS AND TYPICAL SECTIONS, AND AS CALLED OUT IN THE STANDARDS AND SPECIFICATIONS.
13. ALL PIPE SHALL BE BACKFILLED WITH #57 OR #67 CRUSHED STONE WHEN UNDER ANY PAVED OR RIGID SURFACE, PER METRO STANDARD DETAIL DR-180, DR-270a/b, DR-271a/b, AND/OR ST-272 AS APPLICABLE. WHEN NOT UNDER PAVEMENT, ALL PIPE SHALL BE BACKFILLED WITH #57 OR #67 CRUSHED STONE TO AT LEAST SIX INCHES (6") ABOVE THE PIPE, PER METRO STANDARD DETAIL DR-180.
14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ARRANGEMENTS MADE WITH PROPERTY OWNERS THAT ARE ADJACENT TO ANY PROPOSED WORK. THIS INCLUDES ARRANGEMENTS FOR UTILIZING PRIVATE PROPERTY FOR STORAGE (EQUIPMENT OR EXCAVATED MATERIALS), PARKING AREA, OR ACCESS. ALL COSTS ASSOCIATED WITH THIS WORK WILL NOT BE PAID FOR.
15. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES, AND SHALL BE REQUIRED TO KEEP ONE (1) LANE OF TRAFFIC OPEN AT ALL TIMES FOR THRU TRAFFIC AND EMERGENCY VEHICLES/EQUIPMENT.
16. THE CONTRACTOR SHALL ASSURE THAT ALL SERVICES THROUGH THIS CONTRACT SHALL BE COMPLETED IN FULL COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION, AS HAS BEEN ADOPTED BY METRO.
17. METRO WATER SERVICES WILL RETAIN OWNERSHIP OF ALL EXISTING DRAINAGE STRUCTURE GRATES THAT ARE NOT BEING UTILIZED FOR THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL DELIVER THE GRATES TO MWS STORMWATER MAINTENANCE YARD, 1607 COUNTY HOSPITAL ROAD. CONTACT JOE FEDUN AT 615-862-4164 FOR ACCESS AND SCHEDULING DELIVERY.

18. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS NEEDED FOR WORK, EXCAVATION, ROAD CLOSURE, ETC. FROM THE NASHVILLE DEPARTMENT OF TRANSPORTATION. THE CONTRACTOR WILL BE REIMBURSED FOR NDOT PERMIT FEES. ALL WORK SHALL CONFORM TO THE MOST CURRENT NDOT REQUIREMENTS AND SPECIFICATIONS FOR PAVEMENT REPLACEMENT/ PATCHING. REFER TO METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY STANDARD DETAILS ST-270a/b AND/OR ST-271a/b. ALL DRIVEWAY RAMPS, SIDEWALKS, SIDEWALK RAMPS, AND ROADWAY PAVEMENT REPLACEMENT WILL BE INSPECTED BY NDOT DURING AND AFTER CONSTRUCTION. IF THE NDOT INSPECTOR DETERMINES THAT CONSTRUCTION DOES NOT MEET CURRENT NDOT SPECIFICATIONS, THE CONTRACTOR SHALL DEMOLISH AND REPLACE ALL NON-COMPLIANT CONSTRUCTION AT NO ADDITIONAL COST TO METRO WATER SERVICES.
19. WHERE APPLICABLE, CONSTRUCTION SHALL CONFORM TO TDEC AQUATIC RESOURCE ALTERATION PERMIT PROGRAM REQUIREMENTS.
20. THE CONTRACTOR SHALL NOTIFY METRO WATER SERVICES CONSTRUCTION MANAGER OF ALL WATER LINE AND SANITARY SEWER RELOCATIONS. THE CONSTRUCTION MANAGER WILL COORDINATE PRE-CONSTRUCTION MEETINGS, ETC. AS NEEDED.
21. PLACEMENT OF SEED, MULCH, SOD, MATTING, AND TOPSOIL OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY AND EASEMENTS, ON PRIVATE PROPERTY, WILL NOT BE PAID FOR SEPARATELY. ALL COSTS ASSOCIATED WITH PLACEMENT OF THESE ITEMS ON PRIVATE PROPERTY, FOR ACCESS OF WORK AREA, OR MATERIAL STORAGE SHALL BE BORNE BY THE CONTRACTOR.
22. FOR BIDDING PURPOSES, THE CULVERT LENGTHS SHOWN ON THE PLANS ARE FROM CENTER TO CENTER OF STORM STRUCTURES, AND TO THE INLET OR OUTLET END OF PIPES WITH HEADWALLS. ACTUAL LENGTHS MAY BE SHORTER THAN DEPICTED ON THE PLANS. THE CONTRACTOR SHALL VERIFY REQUIRED LENGTHS WITH CONSTRUCTION MANAGER PRIOR TO PIPE INSTALLATION. PAYMENT WILL BE MADE FOR THE LINEAR FOOT OF CULVERT INSTALLED AND ACCEPTED. THE GROUTING OF THE ANNULUS AROUND ALL PIPE PENETRATIONS SHALL BE AN INCIDENTAL COST.
23. THE CONTRACTOR SHALL HAVE PROPERTY LINES AND EASEMENTS (EXISTING AND PROPOSED) LOCATED AND STAKED BY A LICENSED SURVEYOR PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR HAVING A LICENSED SURVEYOR LAY OUT PROPOSED STRUCTURES, RETAINING WALLS, AND DITCH LINES; LAY OUT GRADE OR ALIGNMENT SENSITIVE CONSTRUCTION ITEMS; RELOCATE ANY PROPERTY BOUNDARY IRON PINS OR MONUMENTS THAT ARE DISTURBED DURING CONSTRUCTION; GENERATE STAMPED AS-BUILT DRAWING(S); REPLACEMENT OF DISTURBED IRON PINS AND/OR MONUMENTS; AND SUBMISSION OF STAMPED AS-BUILT DRAWING(S) BEFORE FINAL PAYMENT TO THE CONTRACTOR IS ISSUED. THE CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS, SEALED BY A LICENSED SURVEYOR IN ADOBE (PDF) FORMAT AND A DRAWING FILE IN AUTOCAD (DWG), VERSION 2016 (OR EARLIER) FORMAT. ALL WORK PERFORMED BY THE LICENSED SURVEYOR SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR CONSTRUCTION STAKE, LINE, AND GRADE.
24. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH 29 CFR PART 1926, SUBPART P- EXCAVATIONS (LATEST EDITION).
25. ALL DRAINAGE STRUCTURES, BOX BRIDGES, BOX CULVERTS, RETAINING WALLS, AND OTHER MAJOR STRUCTURES SHALL BE DONE BY THE CAST-IN-PLACE METHOD. SHOULD THE CONTRACTOR ELECT TO USE PRE-CAST METHOD, THE CONTRACTOR SHALL BEAR ALL MODIFICATION/ADJUSTMENT/RELOCATION COSTS INCURRED FOR A COMPLETE INSTALLATION. THE GROUTING OF THE ANNULUS AROUND ALL PIPE PENETRATIONS SHALL BE AN INCIDENTAL COST.
26. ALL COSTS (INCLUDING LABOR, MATERIAL, EXCAVATION, INCIDENTALS, AND EQUIPMENT) NECESSARY TO PERFORM THE WORK AS SHOWN AND DESCRIBED IN THE DRAWINGS, STANDARD DETAILS, AND SPECIFICATIONS FOR WHICH A SEPARATE PAY ITEM IS NOT INCLUDED SHALL BE MERGED INTO PAY ITEMS SHOWN.
27. ALL MAJOR DRAINAGE STRUCTURES WILL REQUIRE QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) IN ACCORDANCE WITH TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION), PART 6, SECTION 604. A MAJOR DRAINAGE STRUCTURE, FOR THIS PURPOSE, WILL BE DEFINED AS ANY STRUCTURE REQUIRING REINFORCING STEEL. THIS WILL INCLUDE ALL BOX CULVERTS, SLAB BRIDGES, RETAINING WALLS, VERTICAL WALLED CHANNELS, INLETS, JUNCTION BOXES, AND HEADWALLS/ENDWALLS FOR PIPE DIAMETERS ≥ FORTY-EIGHT INCHES (48"). CONSTRUCTION ITEMS REQUIRING WELDED WIRE FABRIC, SUCH AS SIDEWALKS AND SWALES, WILL NOT REQUIRE QUALITY CONTROL FIELD TESTING. THE CONTRACTOR WILL BE FULLY RESPONSIBLE FOR RETAINING AN APPROVED INDEPENDENT TESTING LABORATORY TO PERFORM ALL REQUIRED CONCRETE STRENGTH AND FIELD TESTING AND FOR SUBMITTING THE RESULTS OF SUCH TESTING TO THE CONSTRUCTION MANAGER.
28. ALL PRECAST DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH THE CURRENT TDOT SOP 5-3, MANUFACTURE AND ACCEPTANCE OF PRE-CAST DRAINAGE STRUCTURES, NOISE WALL PANELS, AND EARTH RETAINING WALL PRODUCTS FOR QUALITY AND ASSURANCE PURPOSES ONLY. NOTE THAT ALL PRE-CAST DRAINAGE STRUCTURES SHALL HAVE A "QC" STAMP OR ETCHING ON PRODUCT. ALL PRODUCTS USED SHALL BE ON THE CURRENT TDOT QUALIFIED PRODUCT LIST (QPL), LOCATED AT <http://www.tn.gov/tdot/topic/qualified-products>. THE PRODUCERS AND/OR SUPPLIERS SHALL BE ON THE CURRENT TDOT PRODUCER/SUPPLIER REPORT LOCATED AT <https://www.tdot.tn.gov/applications/producersupplier>.

29. TREE REMOVALS FOR LINEAR STORMWATER PROJECTS SHALL BE AT A TWO TO ONE REPLACEMENT RATIO. THIS POLICY WILL NOT APPLY TO THE REMOVAL OF TREES THAT ARE DEAD, DISEASED, INVASIVE, POTENTIALLY HAZARDOUS, BRADFORD PEAR (PYRUS CALLERYANA), OR ASH (FRAXINUS) SPECIES. TREES THAT CANNOT BE PLANTED NEAR THE REMOVAL SITE CAN BE PLANTED AT AN ALTERNATE LOCATION APPROVED BY MWS. HACKBERRIES WILL BE REPLACED ON A ONE TO ONE BASIS. REPLACEMENT TREES SHALL BE AT LEAST ONE INCH DIAMETER AT BREAST HEIGHT (DHB) AND SIX FEET IN HEIGHT FOR CANOPY SPECIES. DOWNWARD ADJUSTMENTS CAN BE MADE FOR UNDERSTORY AND ORNAMENTAL TREES. SUCH TREES SHOULD BE CHOSEN FROM THE URBAN FORESTRY RECOMMENDED LIST (<https://www.nashville.gov/Codes/Land-Use-and-Zoning-Information/Urban-Forestry/Tree-and-Shrub-List>) AND SHALL BE OF A FORM AND QUALITY SET OUT IN THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1, LATEST EDITION).

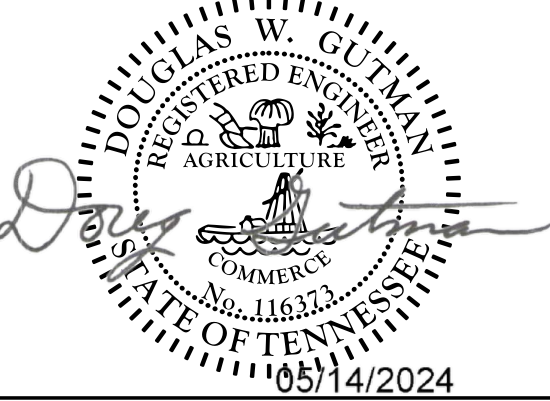
NASHVILLE DEPARTMENT OF TRANSPORTATION GENERAL NOTES:

1. ALL ASPHALT ROADWAY REPAIRS SHALL INCLUDE FULL LANE WIDTH RESURFACING.
2. ALL ASPHALT ROADWAY REPAIRS SHALL UTILIZE A 2-FOOT CUTBACK ON ALL SIDES EXCEPT THE EDGE OF PAVEMENT.
3. NEW UTILITY CUTS WILL BE MILLED AND PAVED TO ANY EXISTING UTILITY CUT OR DAMAGED PAVEMENT WITHIN 10 FEET. IF THE EXISTING CUT OR DAMAGED PAVEMENT IS LESS THAN 10 FEET IN LENGTH, THE EXISTING CUT SHALL ALSO BE MILLED AND PAVED.
4. ASPHALT REPAIR GREATER THAN 24-INCHES, ADJACENT TO CURB & GUTTER ALONG A ROADWAY SHALL HAVE FULL LANE WIDTH PAVING.
5. FLOWABLE FILL IS REQUIRED ON ALL DOWNTOWN STREETS, COLLECTORS, AND ARTERIAL STREETS. FLOWABLE FILL MAY ALSO BE REQUIRED ON OTHER STREETS AT THE DISCRETION OF THE UTILITY INSPECTORS.
6. ALL REPAIRS WILL HAVE A 1-YEAR WARRANTY.
7. PERMIT OFFICE WILL NEED TO BE NOTIFIED WHEN REPAIRS ARE FINISHED TO START WARRANTY PERIOD.
8. SEE NDOT STANDARDS 270 THROUGH 275. IF ANY CUTS ARE MADE IN THE ROADWAY, THE UTILITY CUT GUIDELINES MUST BE FOLLOWED. UTILITY CUT GUIDELINES CAN BE FOUND IN THE PERMIT OFFICE OR AT WWW.MPW.NASHVILLE.GOV/IMS/PAVING/DOCUMENTS/APPENDIX_D.PDF.

FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
DATE:	
DATE:	

CONSOR ENGINEERS, LLC
101 WESTPARK DRIVE, SUITE 300
BRENTWOOD, TN 37027
(615) 425 2000

SEALED BY



METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

AARON DRIVE
STORMWATER
IMPROVEMENTS

GENERAL NOTES

SCALE N.T.S.

SHEET 02 OF 12

NO BOUNDARY SURVEY WAS PERFORMED BY CONSOR ENGINEERS, LLC FOR THE PURPOSE OF THIS DRAWING. THIS SURVEY WAS DONE UNDER THE AUTHORITY OF T.C.A. 62-18-126 AND IS NOT A GENERAL PROPERTY SURVEY AS DEFINED UNDER RULE 0820-3-07.

COORDINATE VALUES ARE NAD83(2011) WITH NO DATUM ADJUSTMENT, AND ARE TIED TO THE TENNESSEE GEODETIC REFERENCE NETWORK. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

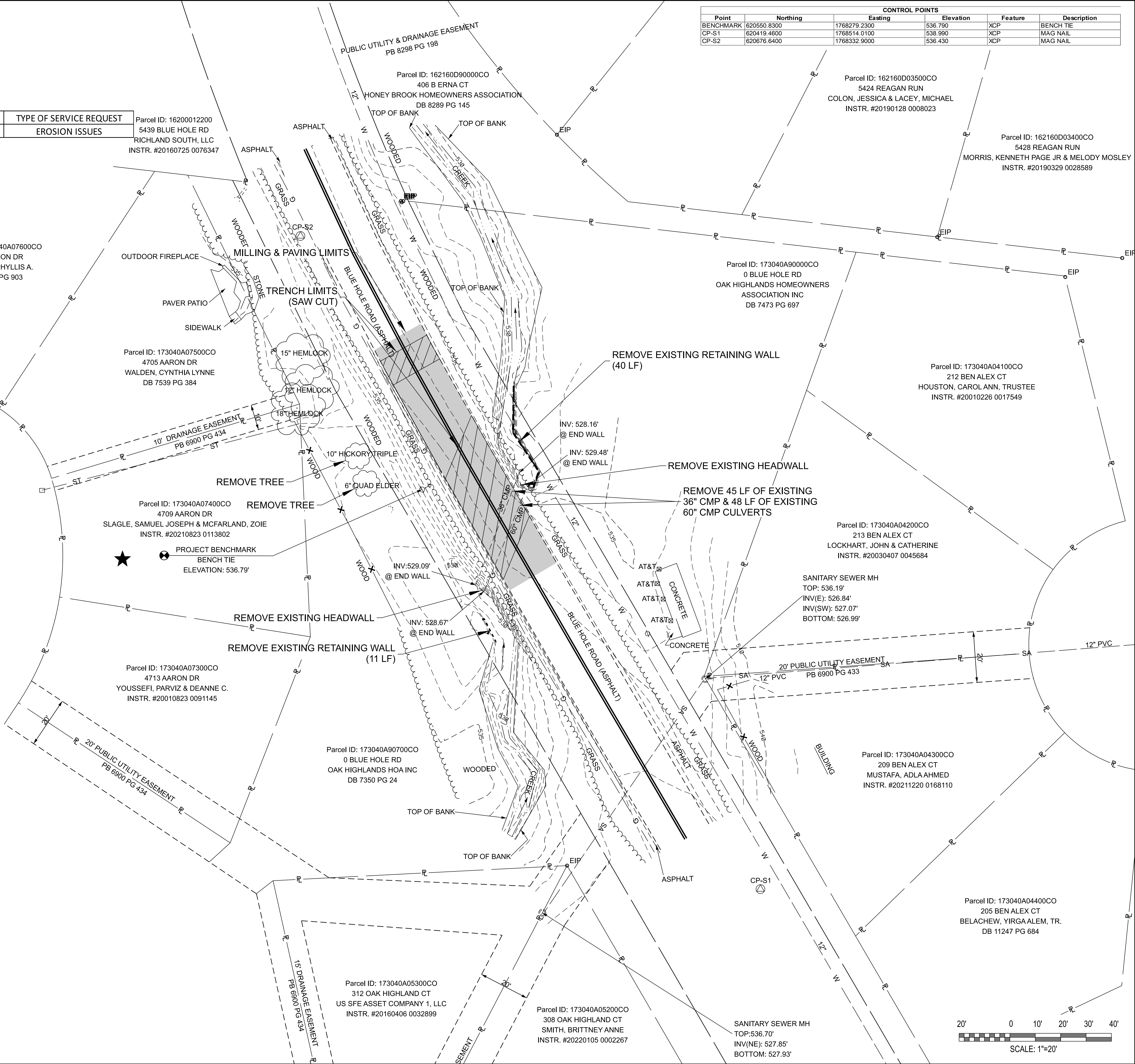
★ - SERVICE REQUEST PROPERTIES

LOCATION ID	SERVICE REQUEST NUMBER	ADDRESS	TYPE OF SERVICE REQUEST
1	1021300	4709 AARON DRIVE	EROSION ISSUES

TREE REMOVAL TABLE		
SIZE	SPECIES	NO. OF TREES TO REPLACE
6"	QUAD ELDER	2
10"	HICKORY TRIPLE	2

LEGEND

- Control Point
- Benchmark
- Iron Pin
- Sanitary Sewer Manhole
- Top of Bank
- Single Tree
- Milling and Paving Limits
- Trench Limits
- Water Line
- Gas Line
- Storm Pipe
- ST Storm Sewer
- SA Sanitary Sewer Line
- Edge of Pavement
- Driveway
- Fence
- Property Line
- Right-of-Way Line
- Easement Line
- Major Contour Line
- Minor Contour Line



CONTROL POINTS					
Point	Northing	Easting	Elevation	Feature	Description
BENCHMARK	620550.8300	1768279.2300	536.790	XCP	BENCH TIE
CP-S1	620419.4600	1768514.0100	538.990	XCP	MAG NAIL
CP-S2	620676.6400	1768332.9000	536.430	XCP	MAG NAIL

FILE NO.

AARON DRIVE

DATE:

05-14-2024

DESIGNED BY:

ECD

DRAWN BY:

ECD

CHECKED BY:

DWG

REVISION BLOCK

DATE:

DATE:

DATE:

CONSOR ENGINEERS, LLC

101 WESTPARK DRIVE, SUITE 300

BRENTWOOD, TN 37027

(615) 425 2000

SEALED BY

DOUGLAS W. GUTMAN

REGISTERED ENGINEER

AGRICULTURE

05/14/2024

METROPOLITAN GOVERNMENT

OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE

METRO WATER SERVICES

STORMWATER DIVISION

AARON DRIVE

STORMWATER

IMPROVEMENTS

PRESENT LAYOUT & DEMOLITION PLAN

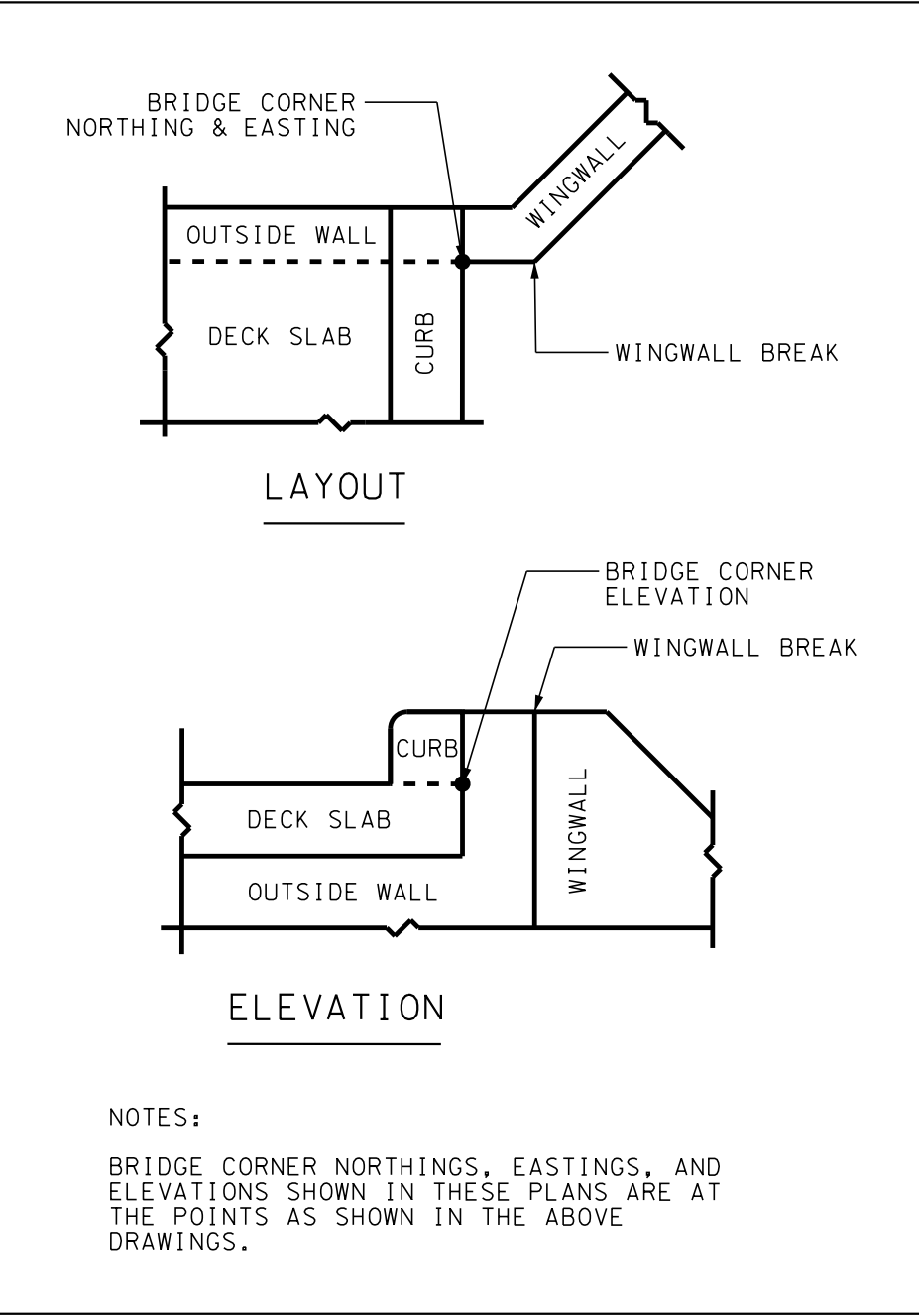
SCALE: 1" = 20'

SHEET 03 OF 12

LOCATION ID	SERVICE REQUEST NUMBER	ADDRESS	TYPE OF SERVICE REQUEST
1	1021300	4709 AARON DRIVE	EROSION ISSUES

★ - SERVICE REQUEST PROPERTIES

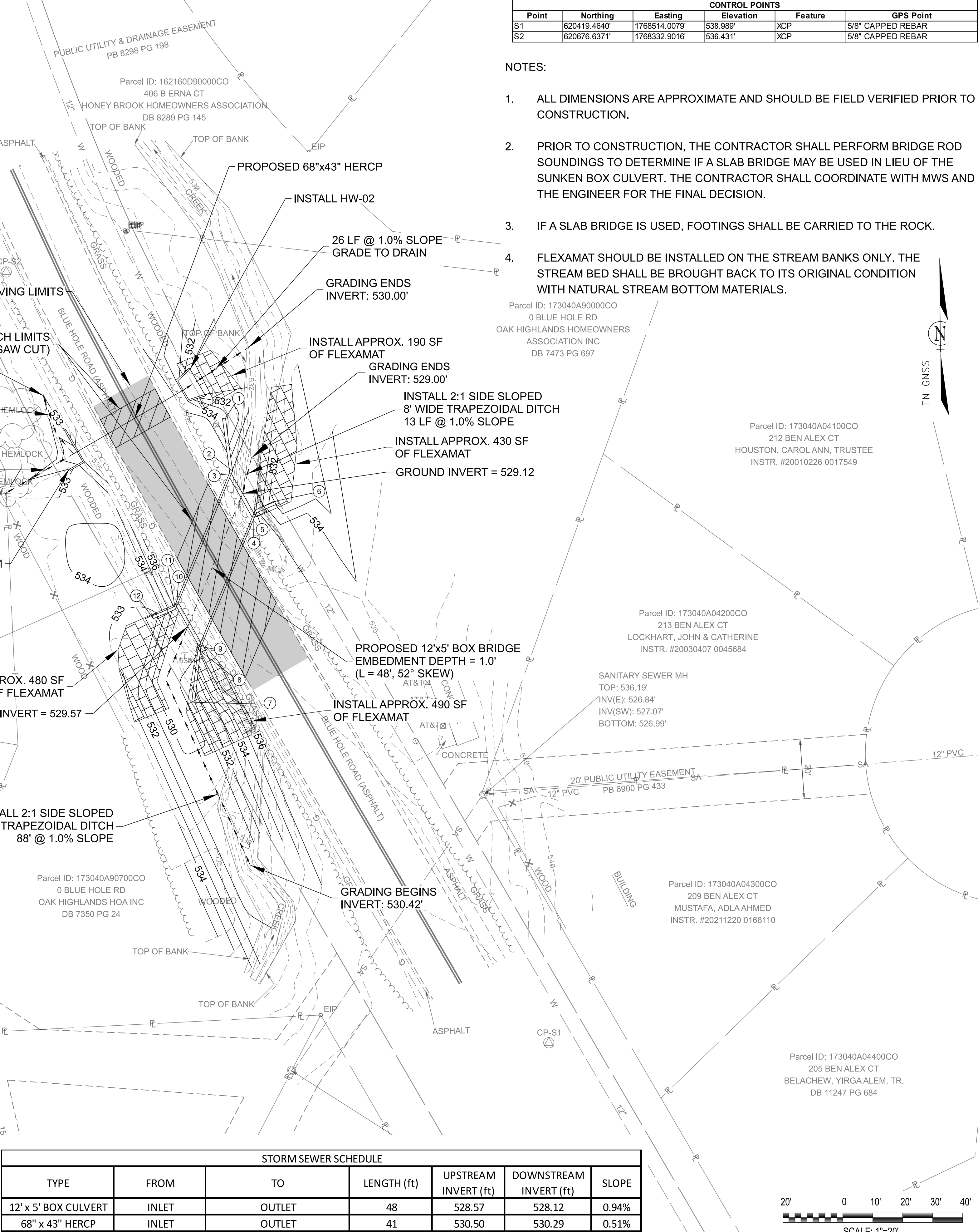
LEGEND	
	Control Point
	Benchmark
	Iron Pin
	Sanitary Sewer Manhole
	Top of Bank
	Single Tree
	Milling and Paving Limits
	Trench Limits
	Flexamat
	L Headwall
	Winged Headwall
	Water Line
	Gas Line
	Storm Pipe
	Storm Sewer
	Sanitary Sewer Line
	Edge of Pavement
	Driveway
	Fence
	Property Line
	Right-of-Way Line
	Easement Line
	Major Contour Line
	Minor Contour Line



POINT	LOCATION	NORTHING	EASTING	ELEVATION
1	NW WINGWALL CORNER	620,627.88	1,768,406.08	533.62
2	NW WINGWALL BREAK	620,610.29	1,768,408.42	535.20
3	NW BRIDGE CORNER	620,609.37	1,768,408.04	534.20
4	NE BRIDGE CORNER	620,596.16	1,768,415.57	534.20
5	NE WINGWALL BREAK	620,597.28	1,768,416.04	535.20
6	NE WINGWALL CORNER	620,600.35	1,768,423.42	532.12
7	SE WINGWALL CORNER	620,533.09	1,768,395.84	533.07
8	SE WINGWALL BREAK	620,550.84	1,768,396.89	535.65
9	SE BRIDGE CORNER	620,551.76	1,768,397.28	534.65
10	SW BRIDGE CORNER	620,565.01	1,768,389.76	534.65
11	SW WINGWALL BREAK	620,564.08	1,768,389.38	535.65
12	SW WINGWALL CORNER	620,561.01	1,768,381.99	532.57

WINGWALL	ANGLE	LENGTH (ft)
NW WINGWALL	30°	17.75
NE WINGWALL	45°	8.00
SW WINGWALL	45°	8.00
SE WINGWALL	16°	17.75

Drainage Structure Schedule								
Structure	Type	Grate / Top Elev	Invert In	Invert Out	Skew	Remarks	Northing	Eastng
HW-01	68"x43" L-Shaped Headwall	535.54	530.50		90° 00'	See Detail on Sheet 11	620616.64	1768356.53
HW-02	68"x43" Winged Headwall	535.21		530.29	90° 00'	See Detail on Sheet 11	620637.24	1768391.98



FILE NO. AARON DRIVE

DATE: 05-14-2024

DESIGNED BY: ECD

DRAWN BY: ECD

CHECKED BY: DWG

REVISION BLOCK

DATE:

DATE:

DATE:

CONSOR ENGINEERS, LLC
101 WESTPARK DRIVE, SUITE 300
BRENTWOOD, TN 37027
(615) 425 2000

SEALED BY

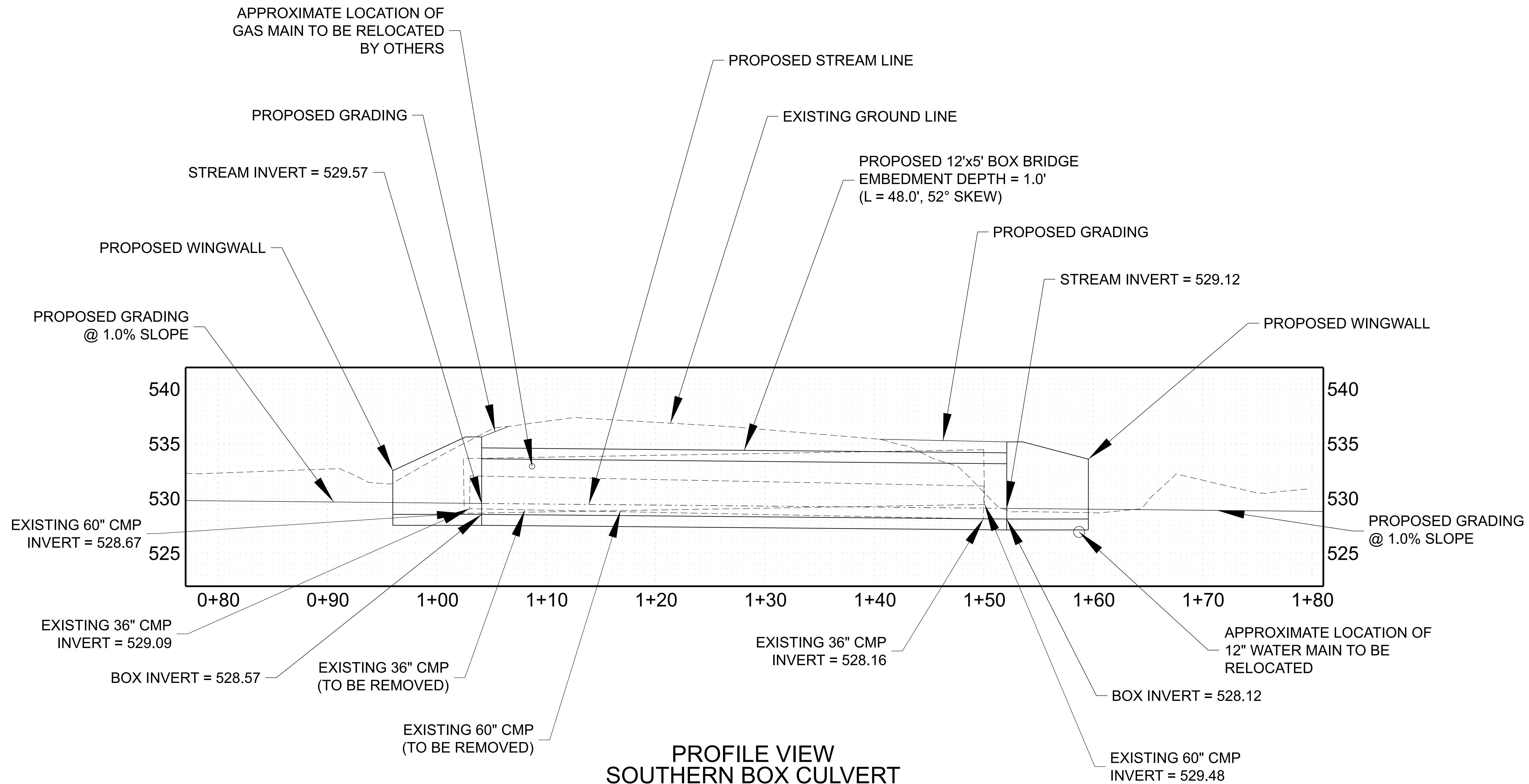
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

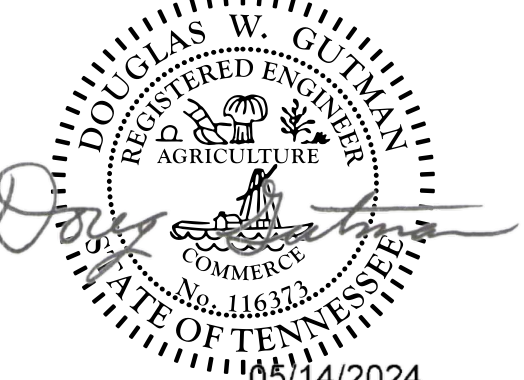
AARON DRIVE
STORMWATER
IMPROVEMENTS

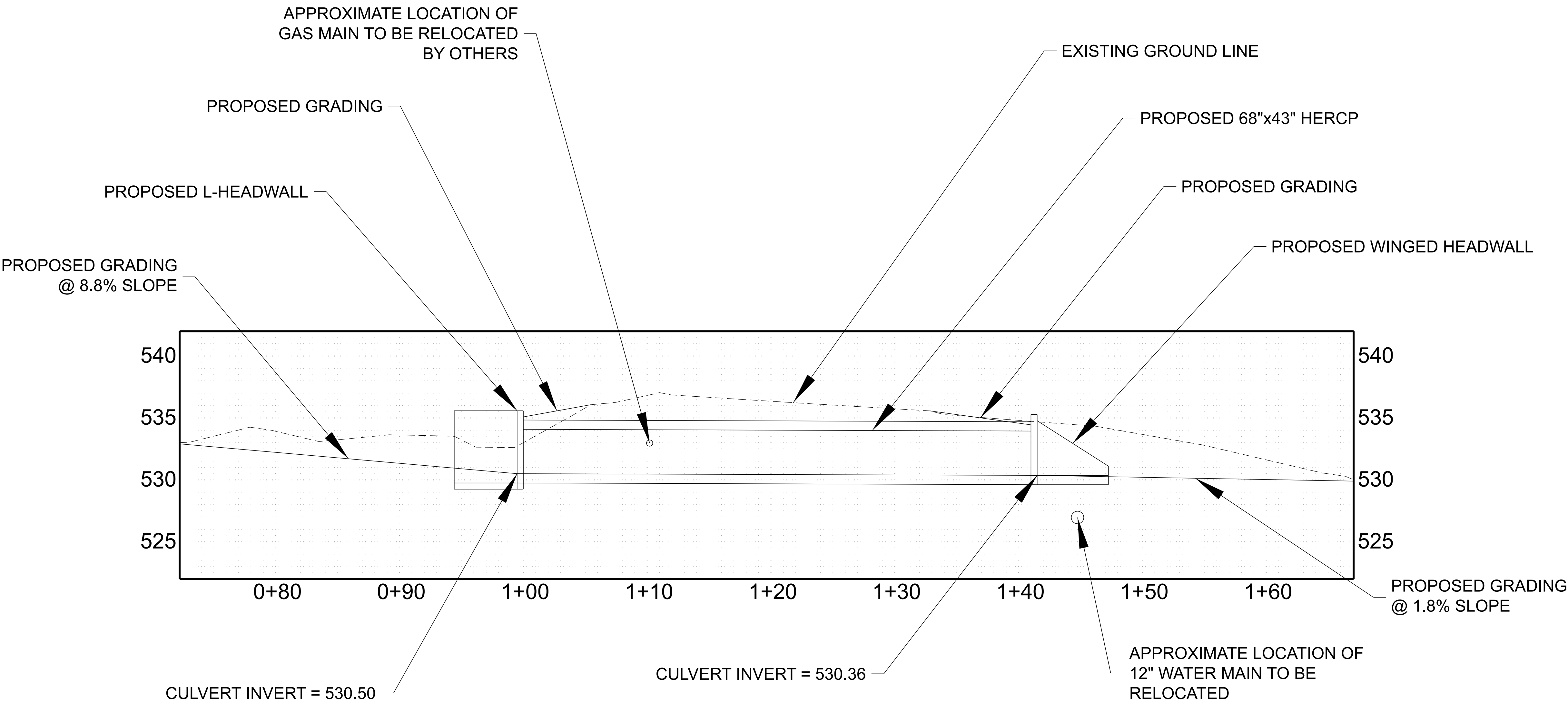
PROPOSED LAYOUT

SCALE: 1" = 20'

SHEET 04 OF 12



FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
DATE:	
DATE:	
CONSOR ENGINEERS, LLC 101 WESTPARK DRIVE, SUITE 300 BRENTWOOD, TN 37027 (615) 425 2000	
SEALED BY	
 05/14/2024	
METROPOLITAN GOVERNMENT OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE METRO WATER SERVICES STORMWATER DIVISION	
AARON DRIVE STORMWATER IMPROVEMENTS	
PROPOSED PROFILE (NW WALL)	
SHEET 05 OF 12	



PROFILE VIEW
NORTHERN CULVERT

FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
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REVISION BLOCK	
DATE:	
DATE:	
DATE:	

CONSOR ENGINEERS, LLC
101 WESTPARK DRIVE, SUITE 300
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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

AARON DRIVE
STORMWATER
IMPROVEMENTS

PROPOSED PROFILE
(NORTH CULVERT)

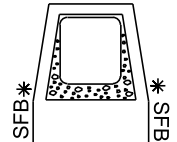
SHEET 06 OF 12

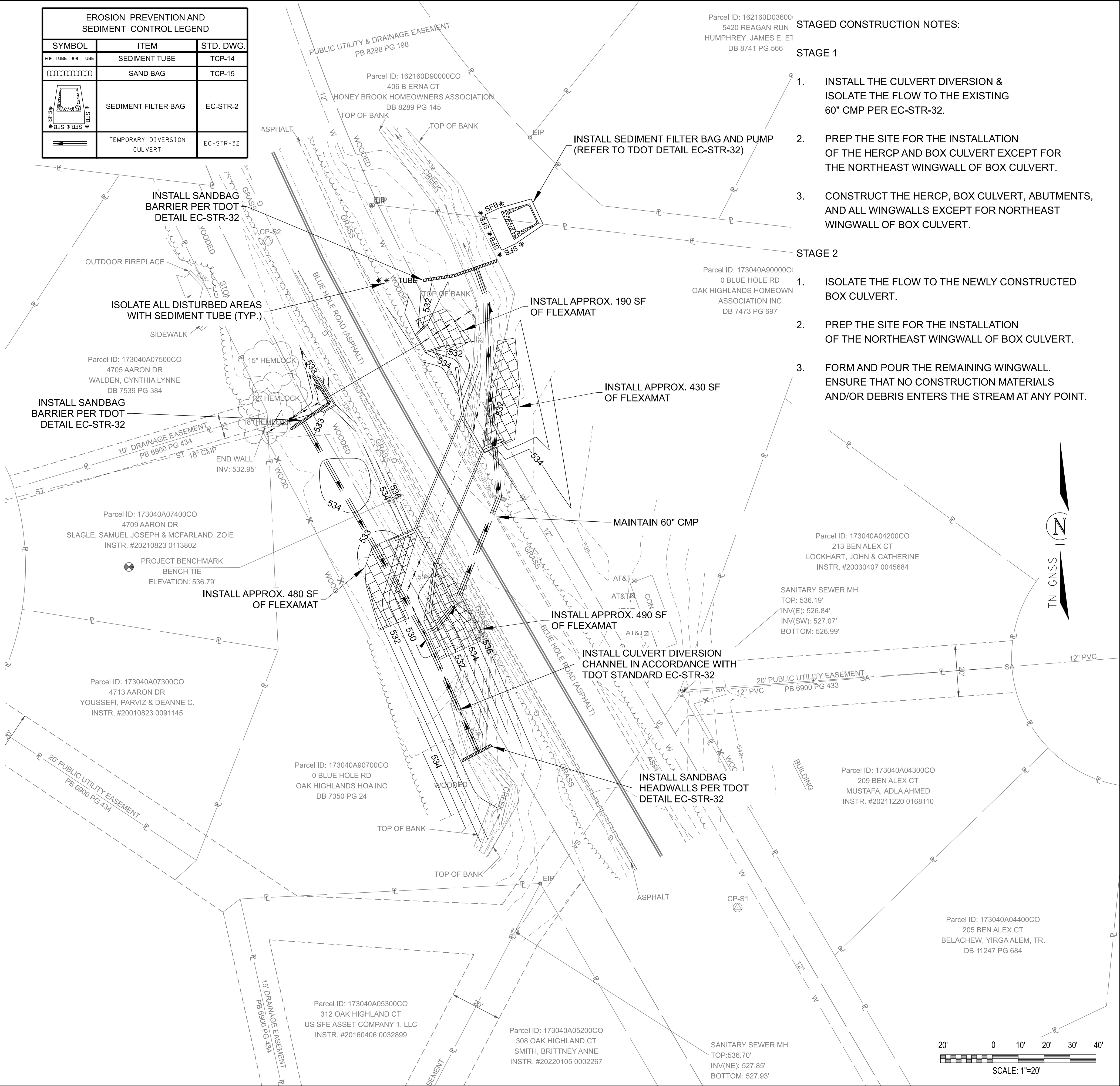
EROSION PREVENTION & SEDIMENT CONTROL (E.P.S.C.) NOTES:

1. THE USE AND PLACEMENT OF EROSION CONTROL DEVICES SHALL BE IN ACCORDANCE WITH METRO WATER SERVICES BEST MANAGEMENT PRACTICES, LATEST EDITION, AND/OR APPLICABLE TDEC ARAP, USACE NWP, AND/OR TDOT STANDARDS. THE MOST STRINGENT PRACTICE SHALL GOVERN.
2. NO WORK WILL BE INITIATED ON THE PROJECT UNTIL THE EROSION/ SILTATION MEASURE SHOWN ON THE PLANS AND DETAILS ARE PROPERLY IN PLACE.
3. IF, AT ANY TIME DURING THE CONSTRUCTION PHASE OF THIS PROJECT, METRO REPRESENTATIVE DEEMS THAT THE EROSION/SILTATION MEASURES INSTALLED FAIL TO FUNCTION PROPERLY, NEED MAINTENANCE OR REPAIR, OR NEED NEW REPLACEMENT IN KIND, THE CONTRACTOR WILL EFFECT SUCH ACTIONS AS ARE NEEDED TO CORRECT THE SITUATION AT NO ADDITIONAL COST TO THE OWNER. NECESSARY REPAIRS OR REPLACEMENT OF EPSC MEASURES SHALL BE ACCOMPLISHED PROMPTLY. WHEN NOTIFIED OF DEFICIENT EPSC MEASURES, THE CONTRACTR HAS 48 HOURS OR BEFORE THE NEXT RAIN EVENT TO REGAIN COMPLIANCE OR OTHERWISE RUN THE RISK OF THE JOB BEING SHUTDOWN. NO ADDITIONAL CONTRACT DAYS WILL BE GIVEN IN THIS INSTANCE.
4. AREAS AND TIME OF EXPOSURE OF UNPROTECTED SOILS SHALL BE KEPT TO A MAXIMUM OF 15 DAYS.
5. USE TEMPORARY VEGETATION AND/OR MULCH TO PROTECT BARE AREAS FROM EROSION DURING CONSTRUCTION.
6. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE METHODS.
7. DISTURBED AREAS ARE TO BE GRADED TO DRAIN TO SEDIMENT BARRIERS, AS INDICATED ON PLAN, DURING AND UPON COMPLETION OF CONSTRUCTION.
8. UPON STABILIZATION OF THE PROJECT SITE WITH A GOOD (ACCEPTABLE) STAND OF GRASS AND/OR GROUND COVER, THE EROSION/SILTATION INSTALLATIONS WILL BE REMOVED AND THE AREA DISTURBED WILL BE SEEDED AND MULCHED WITH THE SAME TREATMENT AS OTHER NEW GRASSED AREAS OF THE PROJECT. INCLUDE COSTS OF REMOVAL OF ESC MEASURES IN OTHER ITEMS.
9. ALL ESC MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL RAIN EVENTS, AND DAILY DURING PROLONGED RAINFALL, TO ENSURE MEASURES ARE WORKING PROPERLY.
10. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. AS NECESSARY, PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
12. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE. UPON COMPLETION OF GENERAL GRADING COVER ALL DISTURBED AREAS WITH TOPSOIL, TO A MINIMUM DEPTH OF 4". CONTRACTOR SHALL SUPPLY ADDITIONAL TOPSOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE. ADDITIONAL TOPSOIL SHALL BE PAID FOR UNDER ITEM 203-08.01 "FURNISHING AND SPREADING TOPSOIL (4"THICK)" IN SQUARE YARDS.
13. ALL ESC MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
14. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.

NOTE:

1. INSTALL EROSION CONTROL MATTING (TCP-09) ON ALL SLOPES 3:1 OR GREATER, IN PROPOSED CHANNELS (NOT BLUE-LINE STREAMS), AND AROUND THE PROPOSED WINGWALLS.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
*** TUBE *** TUBE	SEDIMENT TUBE	TCP-14
	SAND BAG	TCP-15
	SEDIMENT FILTER BAG	EC-STR-2
	TEMPORARY DIVERSION CULVERT	EC-STR-32



STAGED CONSTRUCTION NOTES:

STAGE 1

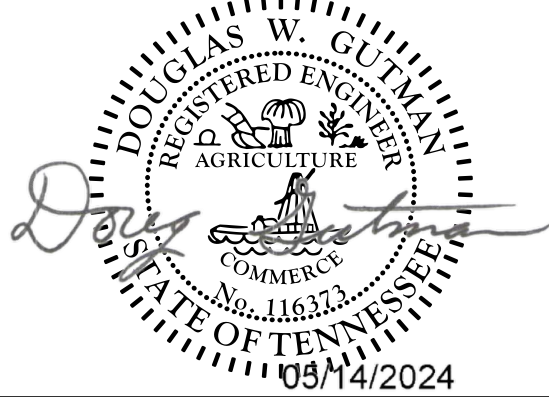
1. INSTALL THE CULVERT DIVERSION & ISOLATE THE FLOW TO THE EXISTING 60" CMP PER EC-STR-32.
2. PREP THE SITE FOR THE INSTALLATION OF THE HERCP AND BOX CULVERT EXCEPT FOR THE NORTHEAST WINGWALL OF BOX CULVERT.
3. CONSTRUCT THE HERCP, BOX CULVERT, ABUTMENTS, AND ALL WINGWALLS EXCEPT FOR NORTHEAST WINGWALL OF BOX CULVERT.

STAGE 2

1. ISOLATE THE FLOW TO THE NEWLY CONSTRUCTED BOX CULVERT.
2. PREP THE SITE FOR THE INSTALLATION OF THE NORTHEAST WINGWALL OF BOX CULVERT.
3. FORM AND POUR THE REMAINING WINGWALL. ENSURE THAT NO CONSTRUCTION MATERIALS AND/OR DEBRIS ENTERS THE STREAM AT ANY POINT.

CONSOR ENGINEERS, LLC
101 WESTPARK DRIVE, SUITE 300
BRENTWOOD, TN 37027
(615) 425 2000

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METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

AARON DRIVE
STORMWATER
IMPROVEMENTS

EPSC LAYOUT

SCALE: 1" = 20'

SHEET 07 OF 12

GENERAL NOTES:

1.

All water and sewer construction shall conform to the current standard specifications and details of the Metropolitan Government of Nashville and Davidson County Department of Water and Sewerage Services (MWS).
2.

The Contractor shall obtain and comply with all necessary standards and permits from any federal, state, and/or local authority having jurisdiction over any phase of construction associated with the project.
3.

The types and locations of existing utilities shown on the drawings are approximate and shall be independently verified by the Contractor. The Contractor shall be responsible for the location and preserving existing utilities prior to and during construction. Repairs or replacements to any MWS utility damaged by construction activities shall be the responsibility of the Contractor with no additional payment allowed.
4.

The Contractor shall bring to the attention of MWS and document any pre-existing damage or conditions prior to beginning work. Repairs or replacements to any items damaged by water and sewer construction activities shall be the responsibility of the Contractor with no additional payment allowed.
5.

Maintain proper vertical and horizontal separation between water and sanitary sewer mains. For more information, see TDEC Design Criteria for Sewage Works **Section 2.4.1.2 Relation to Water Mains & Community Public Water Systems Design Criteria Section 9.2 Separation of Water Mains and Sewers**. When a conflict exists and proper separation is not attainable, the Contractor shall coordinate with MWS for the necessary measures to ensure system integrity.
6.

The Contractor shall verify the size and material for each water service line and reconnect all live water services, whether indicated on the drawing or not, per MWS.
7.

Water service lines 2-1/2 inches in diameter and smaller shall be replaced from the water main to the meter with copper.
8.

Water service lines greater than 2-1/2 inches in diameter shall be replaced from the water main to the property line valve or meter with ductile iron pipe.
9.

Contact MWS if lead services are discovered. The Contractor shall follow the current MWS lead service replacement procedure. This may cause some delays and additional coordination. Replacement of lead service lines requires an additional sampling protocol that will delay the replacement of the service line until the protocol can be coordinated with the customer.
10.

When existing meter boxes require adjusting and/or relocating, water meters and shutoffs shall be a minimum of 24" not to exceed a maximum of 32" below finished grade.
11.

The Contractor is responsible for notifying MWS Inspection personnel prior to any work or connections being conducted on the MWS System.
12.

The Contractor shall not operate any valves on the existing water system and/or water mains placed in service without prior approval and only under the supervision of MWS. Operating valves shall be scheduled in writing by the Contractor and must be approved in advance by MWS.
13.

Metro Water Services will make every reasonable effort to isolate and shut down the flow of water when required for the work; however, there may be circumstances that prevent timely water shut downs such as: faulty valves, water main breaks, lack of forces due to higher priority situations, etc. The cost for Contractor standby time due to these types of delays is considered incidental and should be incorporated into the price of other bid items with no additional payment allowed.
14.

The Contractor shall not make connections to the existing water system until applicable tests, including: disinfection, hydrostatic, etc., have been performed and reported to MWS and found to be in compliance. Reduced Pressure Backflow Prevention Devices (RPBP) or dual check valves will be required on all test and fill lines needed for water main construction and must be approved by MWS.
15.

All pipe, pipe fittings, plumbing fittings, and fixtures including, but not limited to, coated or uncoated brass or bronze materials that could come in contact with drinking water shall be in accordance with the 2011 reduction of lead in drinking water act that amends the Safe Drinking Water Act, Section 1417 effective January 4, 2014. The following internet link provides further clarification and direction on the requirement: <http://nepis.epa.gov/adobe/pdf/p100grdz.pdf>.
16.

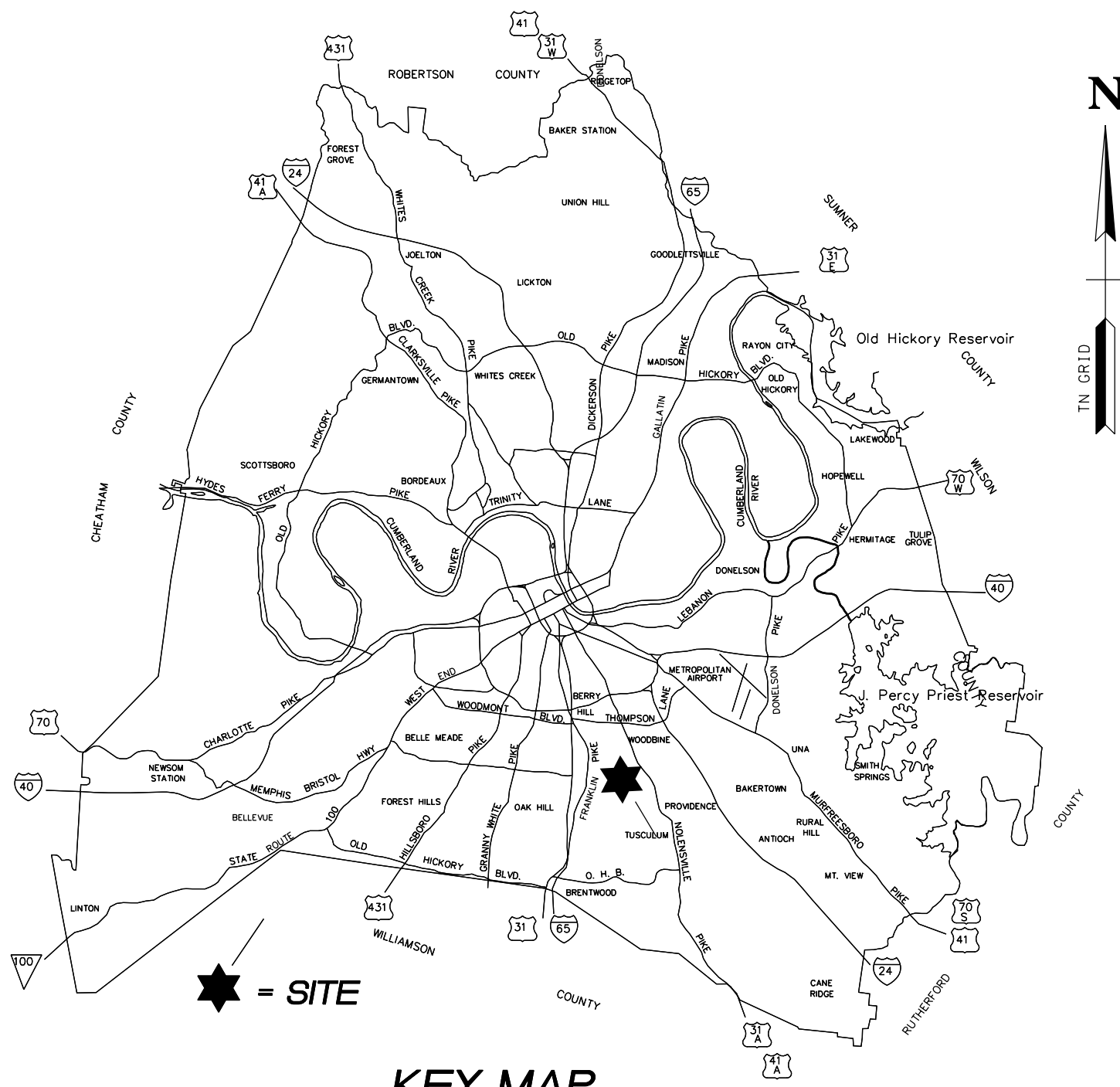
If a water main, or other MWS system component, requires relocation or addition and is not indicated on the approved drawings, the Contractor shall notify MWS immediately. Prior to relocation, the drawings shall require: modification depicting the relocation, approval from a registered professional engineer and the appropriate regulatory agencies, and a MWS based project number assigned.
17.

If a water service line is disconnected, the proper MWS disinfection protocol shall be implemented prior to the service line being reconnected to the existing water system.
18.

No discharge of wastewater or debris shall be released to the environment. Should the Contractor's actions cause an overflow or bypass of wastewater to the environment, site cleanup will be the responsibility of the Contractor consistent with MWS' Spill and Overflow Response Plan.
19.

Prior to implementing the plugging of any line, bypass pumping, or similar actions, the Contractor shall provide a detailed plan of approach to MWS for review and comment. MWS approval of any such plan does not relieve the contractor of the responsibility for the adequacy of the plan or proper execution.
20.

The Contractor shall complete all work in full compliance with the Metro Stormwater Management Regulations, so as to create no stormwater quality or quantity compliance issues. Illicit discharges of pollutants, either direct or indirect, to a storm sewer, stormwater conveyance, or stream within Metro Nashville Davidson County are prohibited, per Metro ordinance 15.64.205 (Non-Stormwater Discharges).



CONSTRUCTION DETAILS:

Contractor shall comply with all applicable and current MWS details located on the webpage.
See Approved Construction Specifications and Details:
(<https://www.nashville.gov/Water-Services/Developers/Water-and-Sewer.aspx>)

Applicable details of note for this project include:

Water Details

- WDET010 (Crossing under Obstructions)
- WDET010B (Creek Crossing For Water Mains)
- WDET010C (Thrust Collar (Reverse Kicker))
- WDET011 (Service Line Detail)

UTILITY OWNERS					
WATER & SANITARY SEWER: METRO WATER & SEWER 1600 2nd AVENUE NORTH NASHVILLE, TN 37208 CONTACT PERSON: MICHAEL MORRIS (615) 862-4570 michael.morris@nashville.gov	INSPECTION: METRO WATER & SEWER 1600 2ND AVENUE NORTH NASHVILLE, TN 37208 CONTACT PERSON: JUSTIN PENDLEY, PE (615) 862-4555 justin.pendley@nashville.gov	STORM WATER: METRO WATER & SEWER 1600 2nd AVENUE NORTH NASHVILLE, TN 37208 CONTACT PERSON: RICKY SWIFT (615) 862-4784 ricky.swift@nashville.gov	STREETS: NASHVILLE DEPT. OF TRANSPORTATION 740 SOUTH 5TH STREET NASHVILLE, TN 37206 CONTACT PERSON: MIKE DAVIS (615) 862-8760 mike.davis@nashville.gov	NASHVILLE DEPT. OF TRANSPORTATION: 750 SOUTH 5TH STREET NASHVILLE, TN 37206 CONTACT PERSON: RORY ROWAN (615) 862-8782 rory.rowan@nashville.gov	ADA: ADA COMPLIANCE DIVISION 730 2ND AVE S NASHVILLE, TN 37210 CONTACT PERSON: JERRY HALL (615) 862-8744 jerry.hall@nashville.gov
TELEPHONE: AT&T 333 COMMERCE ST., 23RD FLOOR NASHVILLE, TN 37201 CONTACT PERSON: WILL DAVENPORT (615) 801-6960 wd5635@att.com	ELECTRIC: NASHVILLE ELECTRIC SERVICE 1214 CHURCH STREET NASHVILLE, TN 37203 CONTACT PERSON: JON SIPES (615) 747-2530 jsipes@nespower.com	GAS: PIEDMONT GAS 83 CENTURY BLVD NASHVILLE, TN 37214 CONTACT PERSON: DON LAMONT NEVILS (615) 335-7929 don.nevils@duke-energy.com	CABLE: COMCAST 660 MAINSTREAM DRIVE NASHVILLE, TN 37228 CONTACT PERSON: GARY MCKINNEY (615) 244-7462 EXT. 1115332 NAS-NashvilleConstructionBetterments@comcast.com	FIBER: GOOGLE FIBER 1101 MCGAVOCK STREET, STE 200 NASHVILLE, TN 37203 CONTACT PERSON: RICK BOLTON (629) 888-2258 gfiber-bna-relocations@google.com	TELECOMMUNICATIONS: VERIZON 101 MOLLOY STREET NASHVILLE, TN 37201 CONTACT PERSON: DEREK DEE (615) 919-5470 derek.r.dee@verizon.com

Metro Water ServicesNashville, TN

* Approved for Construction *

Under authority delegated by the Tennessee Department of Environment and Conservation Division of Water Resources, this document has been reviewed by the Department of Water and Sewerage Services or contracted professional and is hereby approved for construction.

This approval shall not be construed as an assurance that the improvements depicted in the document bearing this stamp will function as intended.

Public SewerPublic Water

DateMWS Engineer

This approval expires one year from date shown below

FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
DATE:	
DATE:	
CONSOR ENGINEERS, LLC 101 WESTPARK DRIVE, SUITE 300 BRENTWOOD, TN 37027 (615) 425 2000	
MWS PROJECT NUMBER: 24WC0039	
SEALED BY	
DOUGLAS W. GUTMAN REGISTERED ENGINEER AGRICULTURE COMMERCIAL No. 116322 STATE OF TENNESSEE 05/14/2024	
METROPOLITAN GOVERNMENT OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE METRO WATER SERVICES STORMWATER DIVISION	
AARON DRIVE STORMWATER IMPROVEMENTS	
UTILITY NOTES AND DETAILS	
SCALE: N.T.S.	
SHEET 09 OF 12	

DISCLAIMER

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPEARANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT THE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE OR NO MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

Parcel ID: 173040A07600CO
4701 AARON DR
SIMPSON, PHYLLIS A.
DB 8799 PG 903

Parcel ID: 16200012200
5439 BLUE HOLE RD
RICHLAND SOUTH, LLC
INSTR. #20160725 0076347

Parcel ID: 173 OTH
4709 AARON DR
GLE, SAMUEL JOSEPH & MCFARLAND, ZOIE
INSTR. #20210823 0113802

PROJECT BENCHMARK
BENCH TIE
ELEVATION: 536.79'

Parcel ID: 173040A90700CO
0 BLUE HOLE RD
OAK HIGHLANDS HOA INC
DB 7350 PG 24

Parcel ID: 173040A05300CO
312 OAK HIGHLAND CT
US SFE ASSET COMPANY 1, LLC
INSTR. #20160406 0032899

Parcel ID: 173040A05200CO
308 OAK HIGHLAND CT
SMITH, BRITTNEY ANNE
INSTR. #20220105 0002267

Parcel ID: 162160D03500CO
5424 REAGAN RUN
LON, JESSICA & LACEY, MICHAEL
INSTR. #20190128 0008023

Parcel ID: 162160D03400CO
5428 REAGAN RUN
MORRIS, KENNETH PAGE JR & MELODY MOSLEY
INSTR. #20190329 0028589

Parcel ID: 173040A90000CO
0 BLUE HOLE RD
OAK HIGHLANDS HOMEOWNERS
ASSOCIATION INC
DB 7473 PG 697

Parcel ID: 173040A04100CO
212 BEN ALEX CT
HOUSTON, CAROL ANN, TRUSTEE
INSTR. #20010226 0017549

Parcel ID: 173040A04200CO
213 BEN ALEX CT
LOCKHART, JOHN & CATHERINE
INSTR. #20030407 0045684

SANITARY SEWER MH
TOP: 536.19'
INV(E): 526.84'
INV(SW): 527.07'
BOTTOM: 526.99'

Parcel ID: 173040A04300CO
209 BEN ALEX CT
MUSTAFA, ADLA AHMED
INSTR. #20211220 0168110

Parcel ID: 173040A04400CO
205 BEN ALEX CT
BELACHEW, YIRGA ALEM, TR.
DB 11247 PG 684

SANITARY SEWER MH
TOP: 536.70'
INV(NE): 527.85'
BOTTOM: 527.93'

20' 0 10' 20' 30' 40'

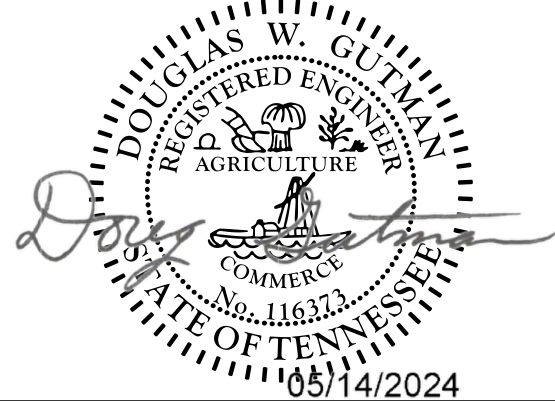
SCALE: 1"=20'

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST FIELD VERIFY IF PROPOSED WATER/SEWER ADJUSTMENTS ARE NECESSARY. A MWS REPRESENTATIVE MUST BE PRESENT.
2. PROVIDE THRUST COLLARS FOR ALL UNRESTRAINED PIPES.
3. IF THE BOX CULVERT IS INSTALLED AS A SLAB BRIDGE, CONTRACTOR SHALL NOT INSTALL SLAB CULVERT ROCK REINFORCEMENT DOWELS WITHIN THE UTILITY TRENCH.

CONSOR ENGINEERS, LLC
101 WESTPARK DRIVE, SUITE 300
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MWS PROJECT NUMBER:
24WC0039

SEALD BY



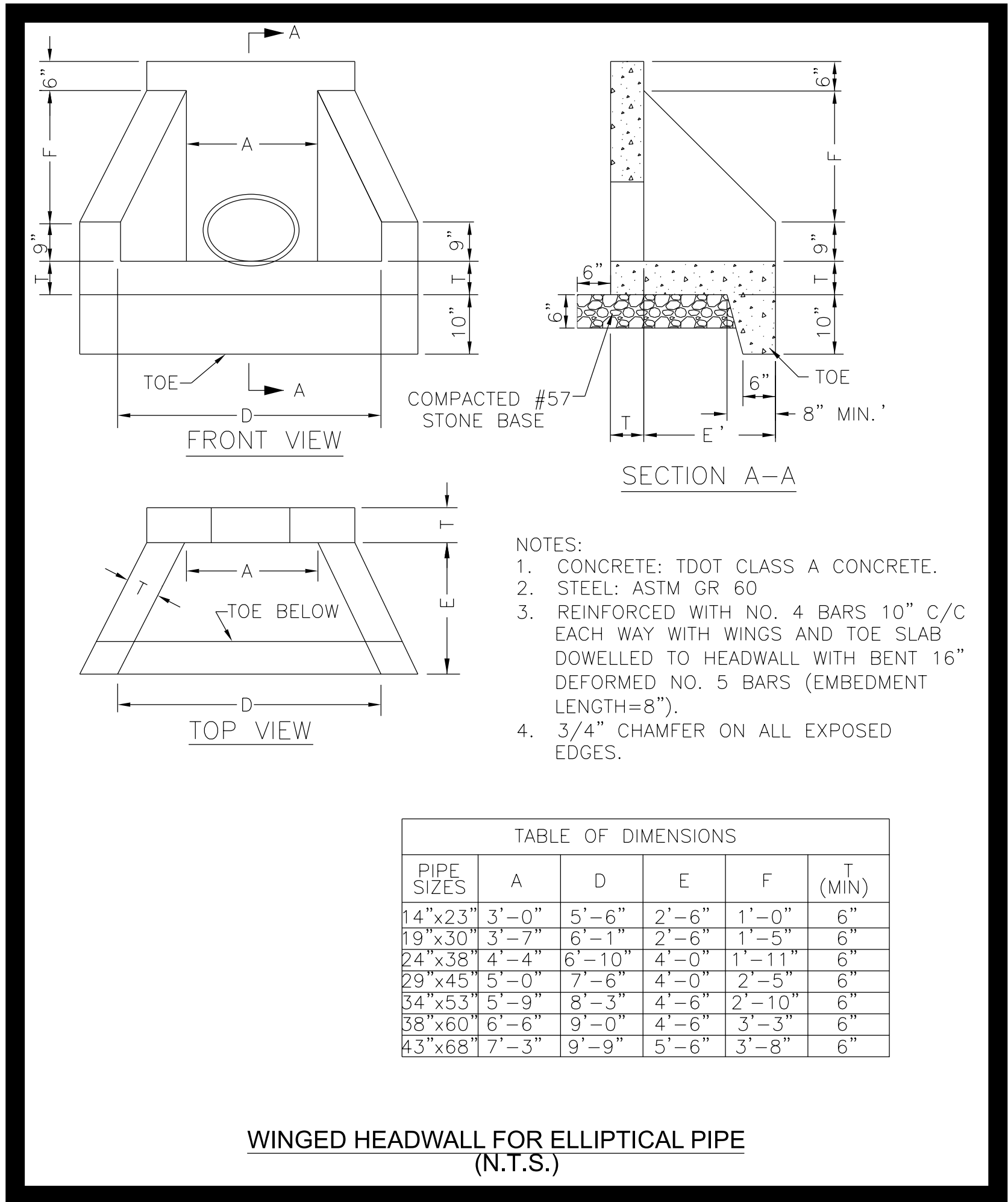
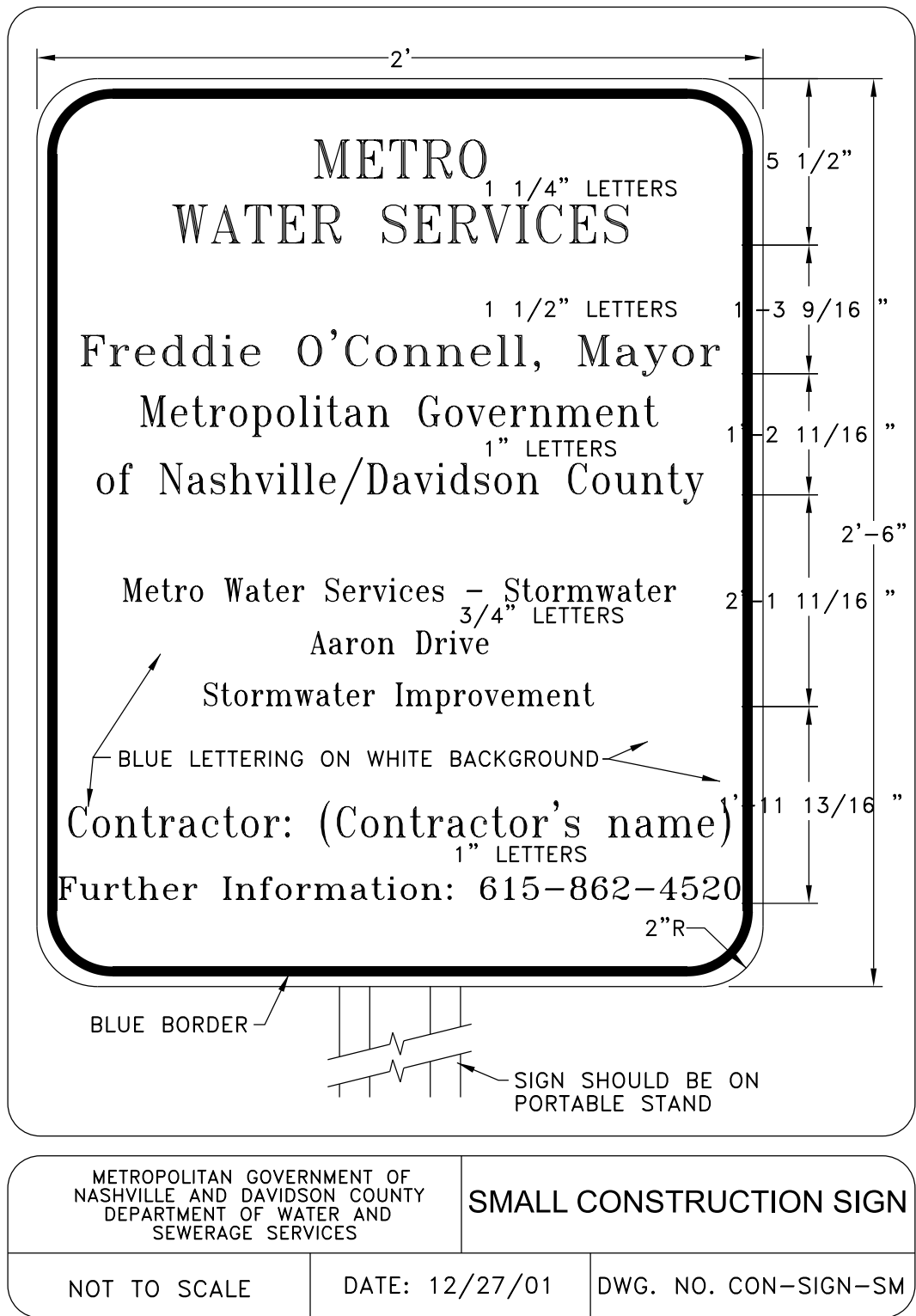
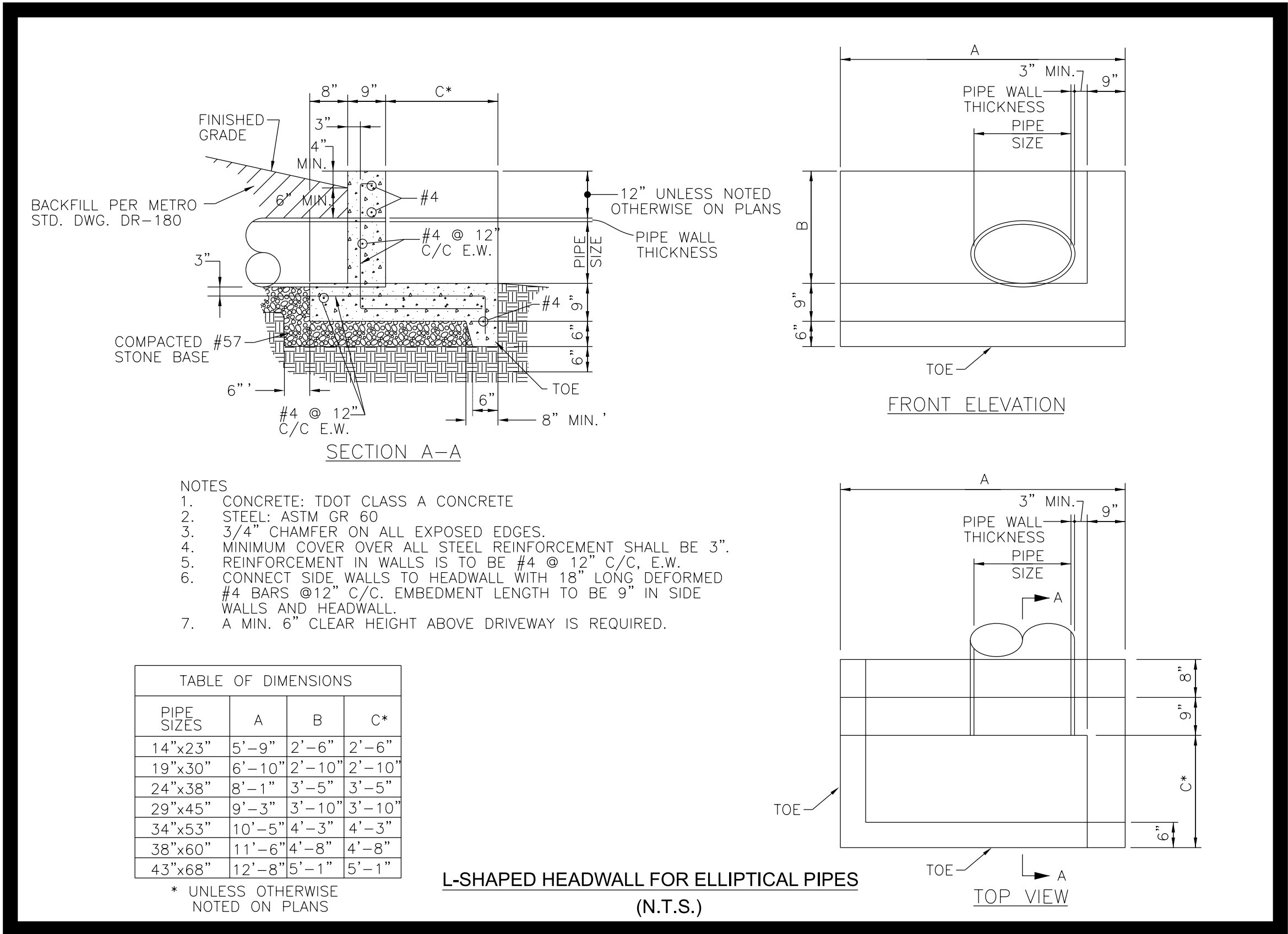
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

AARON DRIVE STORMWATER IMPROVEMENTS

UTILITY LAYOUT

SCALE: 1" = 20'

SHEET 10 OF 12



STANDARD DETAILS:

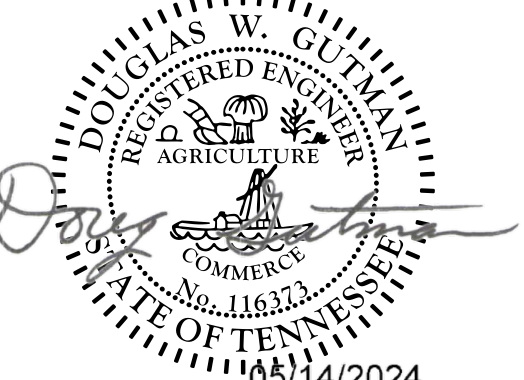
Applicable details for this project include:

MWS/NDOT DETAILS:

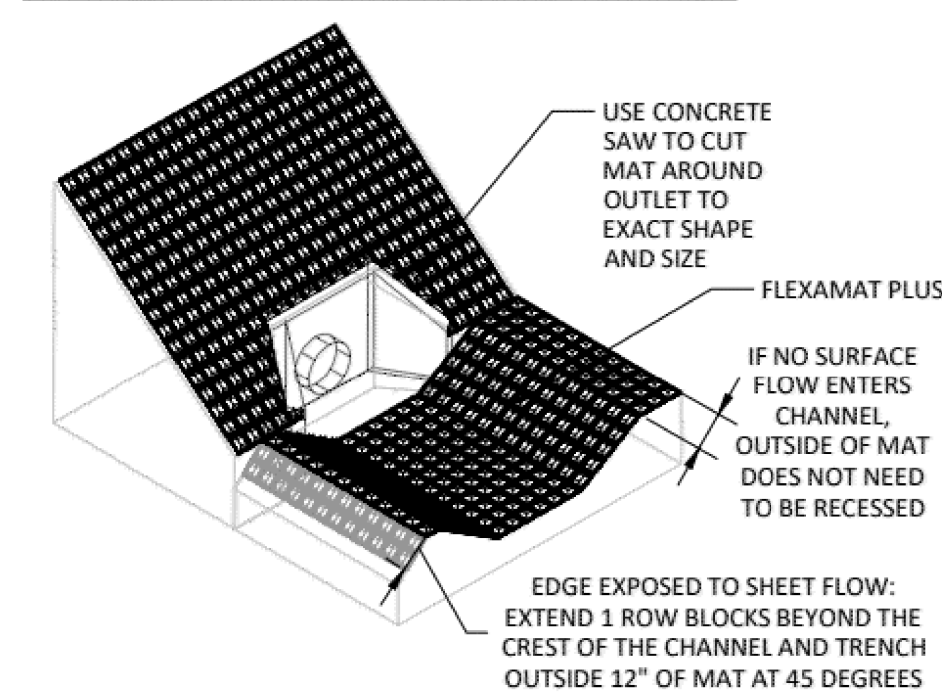
- DR-180 (Trench Backfill)
- TCP-14 (Weighted Sediment Tube)
- TCP-15 (Sand Bag Barrier)
- ST-252 (Residential Medium Density Minor and Local Street (50' ROW))
- ST-271A (Recessed Trench Repair with Crushed Stone)

TDOT DETAILS:

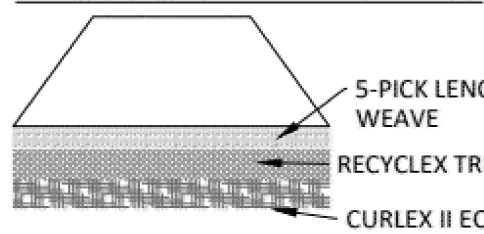
- EC-STR-1 (Dewatering Structure)
- EC-STR-2 (Sediment Filter Bag)
- EC-STR-32 (Temporary Diversion Culverts)
- STD-17-1 (Index of Drawings)
- STD-17-2 (Terminology of Drawings)
- STD-17-3 (General Notes)
- STD-17-4 (Design Section Limits)
- STD-17-5 (Typical Sections and Details)
- STD-17-6 (Typical Elevation)
- STD-17-9 (Interior Wall End Treatments)
- STD-17-10 (Typical Wingwall Details and Notes)
- STD-17-14 (Wingwall Dimensions and Quantities)
- STD-17-15 (Wingwall and Special Retaining Wall Design Sections)
- STD-17-16 (Wingwall Design Sections)
- STD-17-17 (Backfill and Drainage Details)
- STD-17-18 (Backfill Details)
- STD-17-25 (Stage Construction Joint Detail (Fill Above Top of Slab Not Greater Than 5'-6"))
- STD-17-28 (End Section Details)
- STD-17-56 (Box Bridge, 1 Barrel at 12', Clear Heights 4'-0" - 6'-0", 0' Thru 60' Fill)
- STD-17-116 (Standard Reinforced Concrete Slab Bridge, 1 Barrel At 12', Clear Heights 4'-0" Thru 6'-0", 0' Thru 60' Fill)

FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
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DATE:	
CONSOR ENGINEERS, LLC 101 WESTPARK DRIVE, SUITE 300 BRENTWOOD, TN 37027 (615) 425 2000	
SEALED BY	
	
METROPOLITAN GOVERNMENT OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE METRO WATER SERVICES STORMWATER DIVISION	
AARON DRIVE STORMWATER IMPROVEMENTS	
STANDARD DETAILS	
SCALE: N.T.S.	
SHEET 11 OF 12	

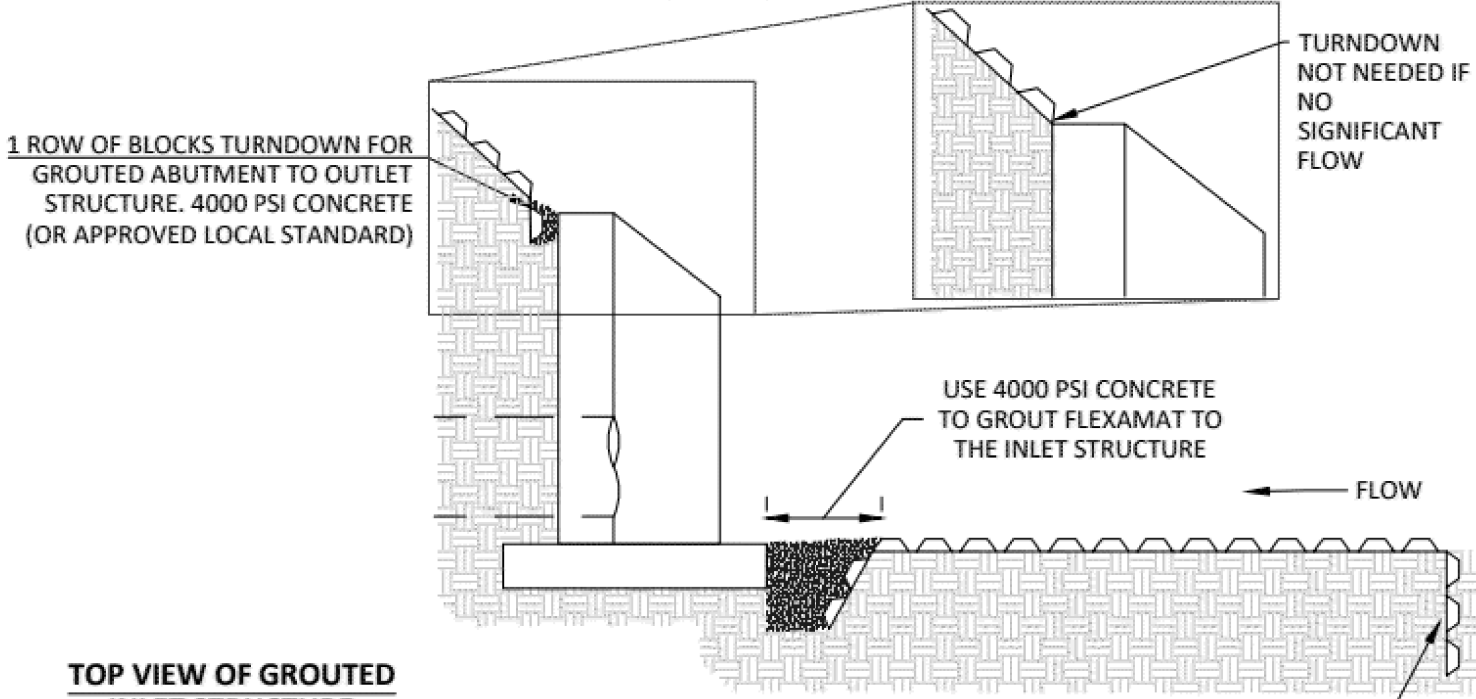
ISOMETRIC VIEW OF INLET AND SLOPE PROTECTION



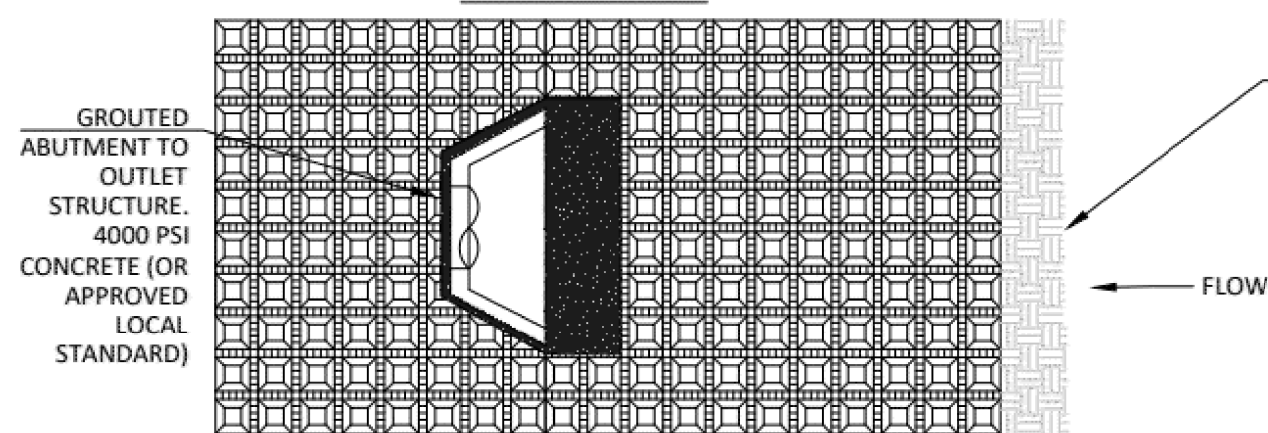
FLEXAMAT PLUS UNDERLAYMENT



PROFILE VIEW OF TRANSITION TO INLET STRUCTURE



TOP VIEW OF GROUTED INLET STRUCTURE



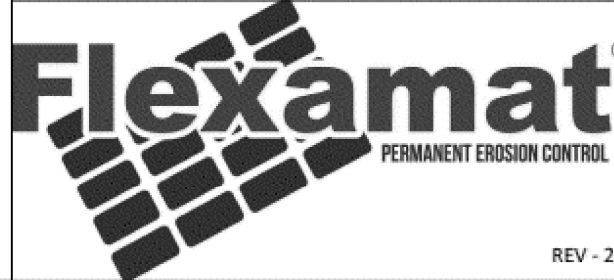
FLEXAMAT PLUS - INLET ARMORING

CONSTRUCTION NOTES:

- GRADE CHANNEL SO THAT WATER WILL FLOW DOWN CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL.
- ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS.
- PRIOR TO FLEXAMAT PLUS INSTALLATION SEED AND FERTILIZER SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
- INSTALL FLEXAMAT ROLLS. AVAILABLE WIDTHS ARE 4', 5.5', 8', 10', 12', AND 16' AVAILABLE IN CUSTOM LENGTHS. FOR WIDTHS WIDER THAN 16', INSTALL MAT WITH GEOGRID EXTENSION AND PLUS UNDERLAYMENT EXTENSIONS.
 - WHERE POSSIBLE AVOID LONGITUDINAL ABUTMENT SEAMS IN CHANNEL BOTTOM.
 - FOR INLET PROTECTION WIDER THAN 16' SEE CHANNEL PARALLEL TO FLOW INSTALLATION DETAIL.
 - FOR INLET PROTECTION THAT REQUIRES MORE THAN 1 MAT IN LENGTH TO COVER CHANNEL SEE CHANNEL PARALLEL TO FLOW INSTALLATION DETAIL.
- AT THE TRANSITION TO THE INLET STRUCTURE, USE 4,000 PSI CONCRETE TO TRANSITION TO THE INLET STRUCTURE.
- AT THE BEGINNING OF THE ARMORED AREA, ALONG THE INITIAL LEADING EDGE EXPOSED TO FLOW, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH COHESIVE FILL.

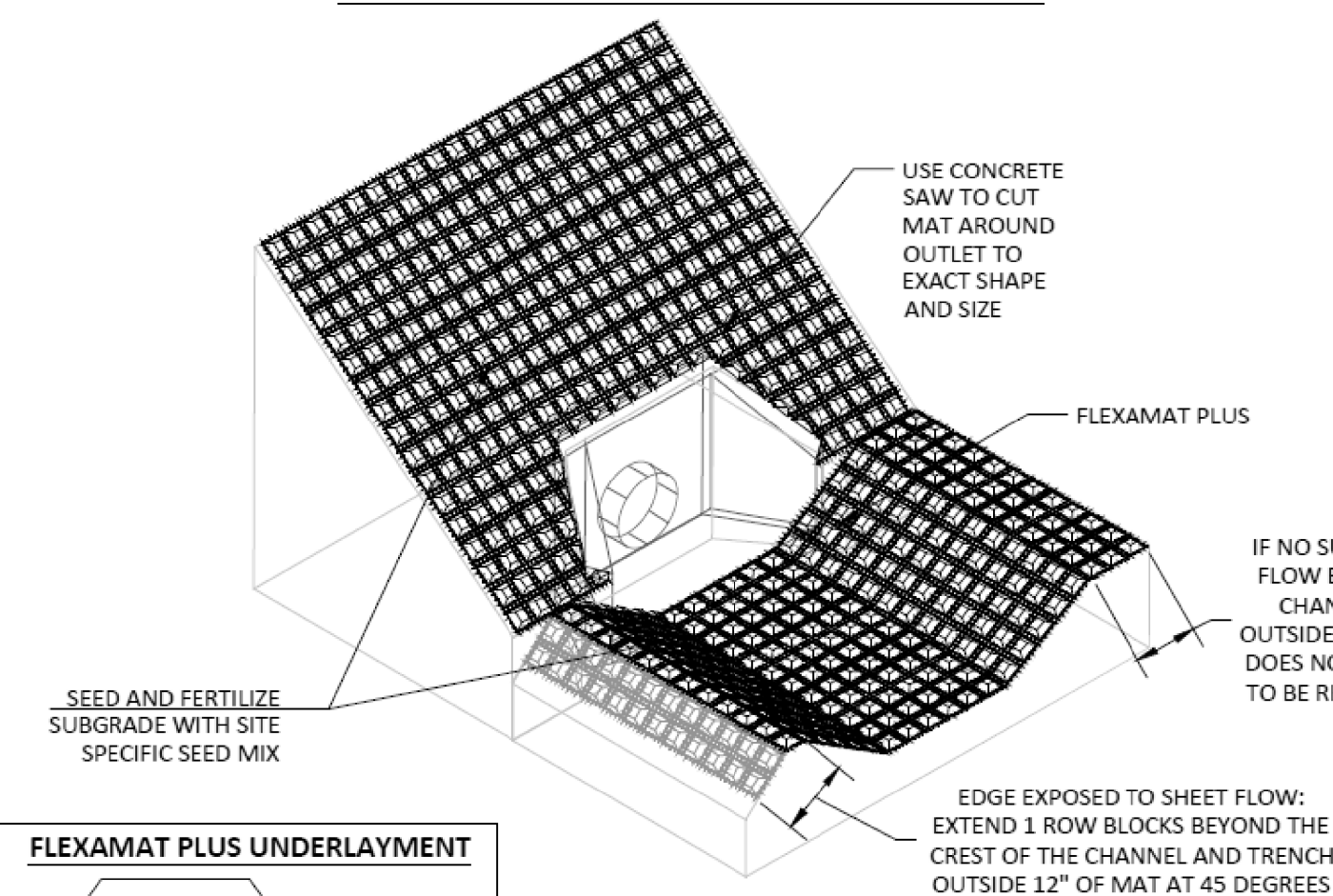
MOTZ
ENTERPRISES, INC.

Flexamat
(513)772-6689
Info@Flexamat.com
Flexamat.com

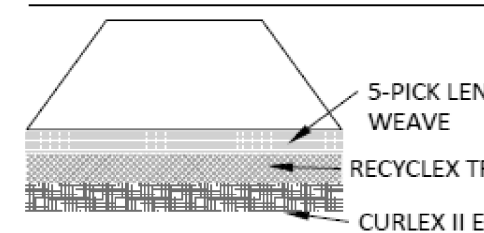


REV - 2

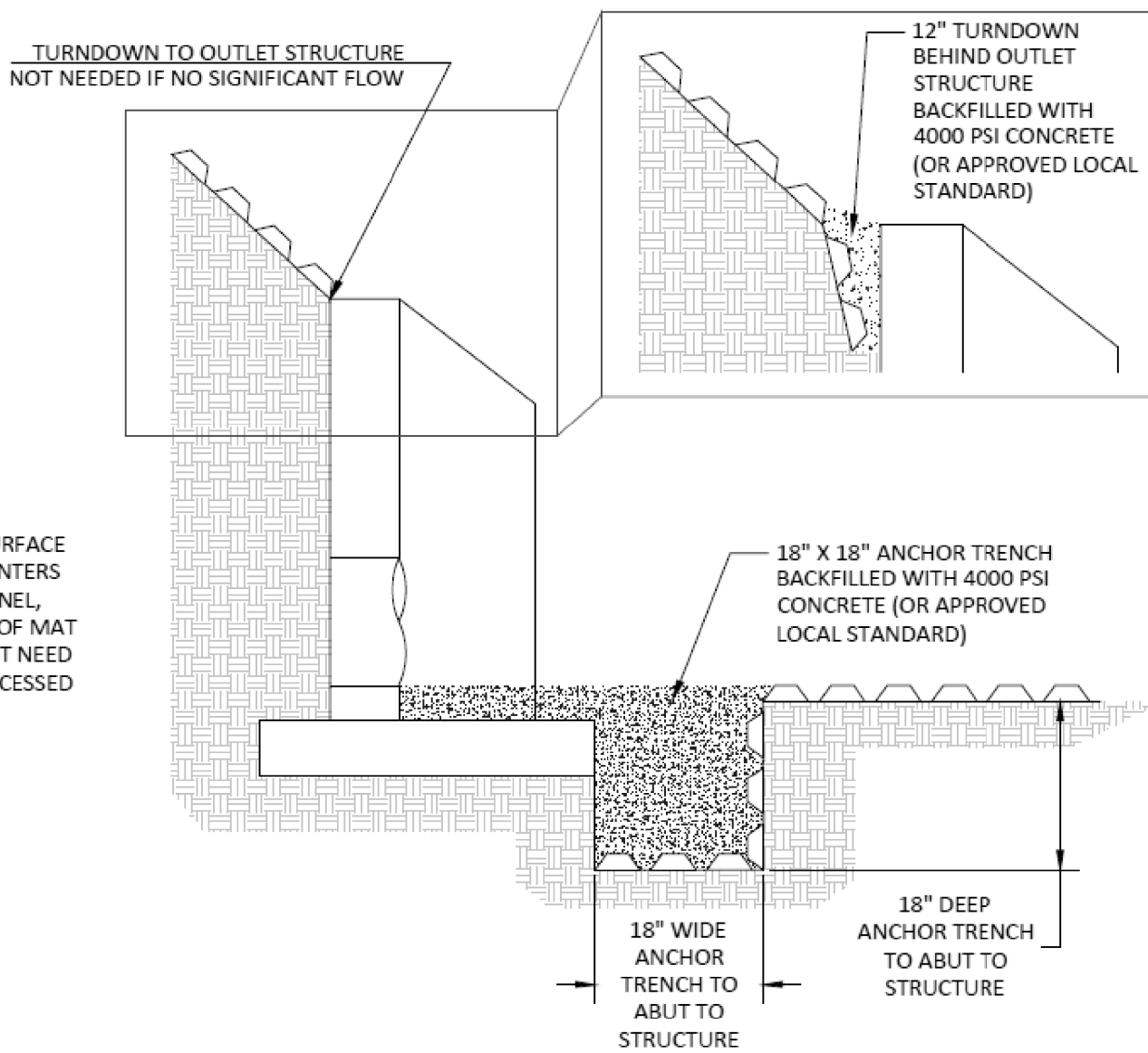
ISOMETRIC VIEW OF OUTLET AND SLOPE PROTECTION



FLEXAMAT PLUS UNDERLAYMENT



PROFILE VIEW OF ANCHOR TRENCHES



FLEXAMAT PLUS - OUTLET ARMORING

CONSTRUCTION NOTES:

- GRADE CHANNEL SO THAT WATER WILL FLOW DOWN CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS.
- PRIOR TO FLEXAMAT PLUS INSTALLATION SEED AND FERTILIZER SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
- INSTALL FLEXAMAT ROLLS. AVAILABLE WIDTHS ARE 4', 5.5', 8', 10', 12', AND 16' AVAILABLE IN CUSTOM LENGTHS. FOR WIDTHS WIDER THAN 16', INSTALL 15.5' WIDE MAT WITH 12" GEOGRID EXTENSION AND 6" UNDERLAYMENT EXTENSION.
 - WHERE POSSIBLE AVOID LONGITUDINAL ABUTMENT SEAMS IN CHANNEL BOTTOM.
 - FOR OUTLET PROTECTION WIDER THAN 16' SEE CHANNEL PARALLEL TO FLOW INSTALLATION DETAIL.
 - FOR OUTLET PROTECTION THAT REQUIRES MORE THAN 1 MAT IN LENGTH TO COVER CHANNEL SEE CHANNEL PARALLEL TO FLOW INSTALLATION DETAIL.
- AT THE BEGINNING OF CHANNEL, THE INITIAL LEADING EDGE OF FLEXAMAT EXPOSED TO CONCENTRATED FLOW SHALL BE EMBEDDED 18" VERTICALLY INTO ANCHOR TRENCH. THE TRENCH SHALL BE FILLED WITH 4,000 PSI CONCRETE.
- AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH A COHESIVE FILL.

GUIDANCE TABLE FOR STORMWATER
OUTFALL PROTECTION

PIPE DIAMETER		FLEXAMAT WIDTH	FLEXAMAT LENGTH (*MIN)
12"	8 CFS	5.5'	5'
18"	20 CFS	8'	8'
24"	30 CFS	8'	10'
36"	75 CFS	12'	16'
48"	100 CFS	16'	20'
60"	150 CFS	20'	25'

*CONSULT
MANUFACTURER FOR
GUIDANCE IF DESIGN
DISCHARGE VARIES
SIGNIFICANTLY FROM
VALUES LISTED IN
TABLE.
*LENGTH OF
PROTECTION WILL
VARY ON THE LENGTH
OF THE SLOPE, DEGREE
OF SLOPE, OR IF IT IS
DISCHARGING ONTO A
FLAT AREA. OUTFALLS
DISCHARGING ONTO
SLOPES, IT IS
RECOMMENDED TO
EXTEND FLEXAMAT
PLUS THE LENGTH OF
THE SLOPE AND 3'
PAST THE TOE.

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Flexamat
(513)772-6689
Info@Flexamat.com
Flexamat.com

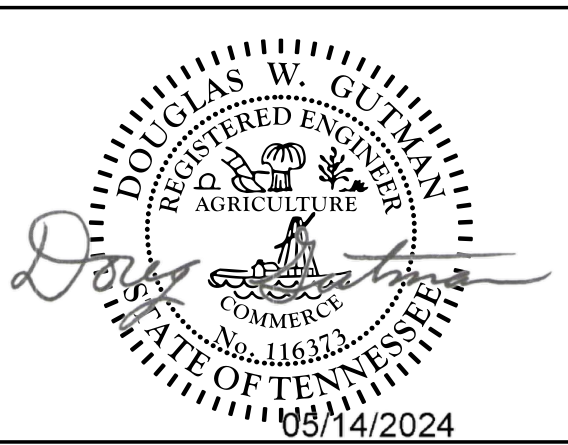


REV - 1

FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
DATE:	
DATE:	

CONSOR ENGINEERS, LLC
101 WESTPARK DRIVE, SUITE 300
BRENTWOOD, TN 37027
(615) 425 2000

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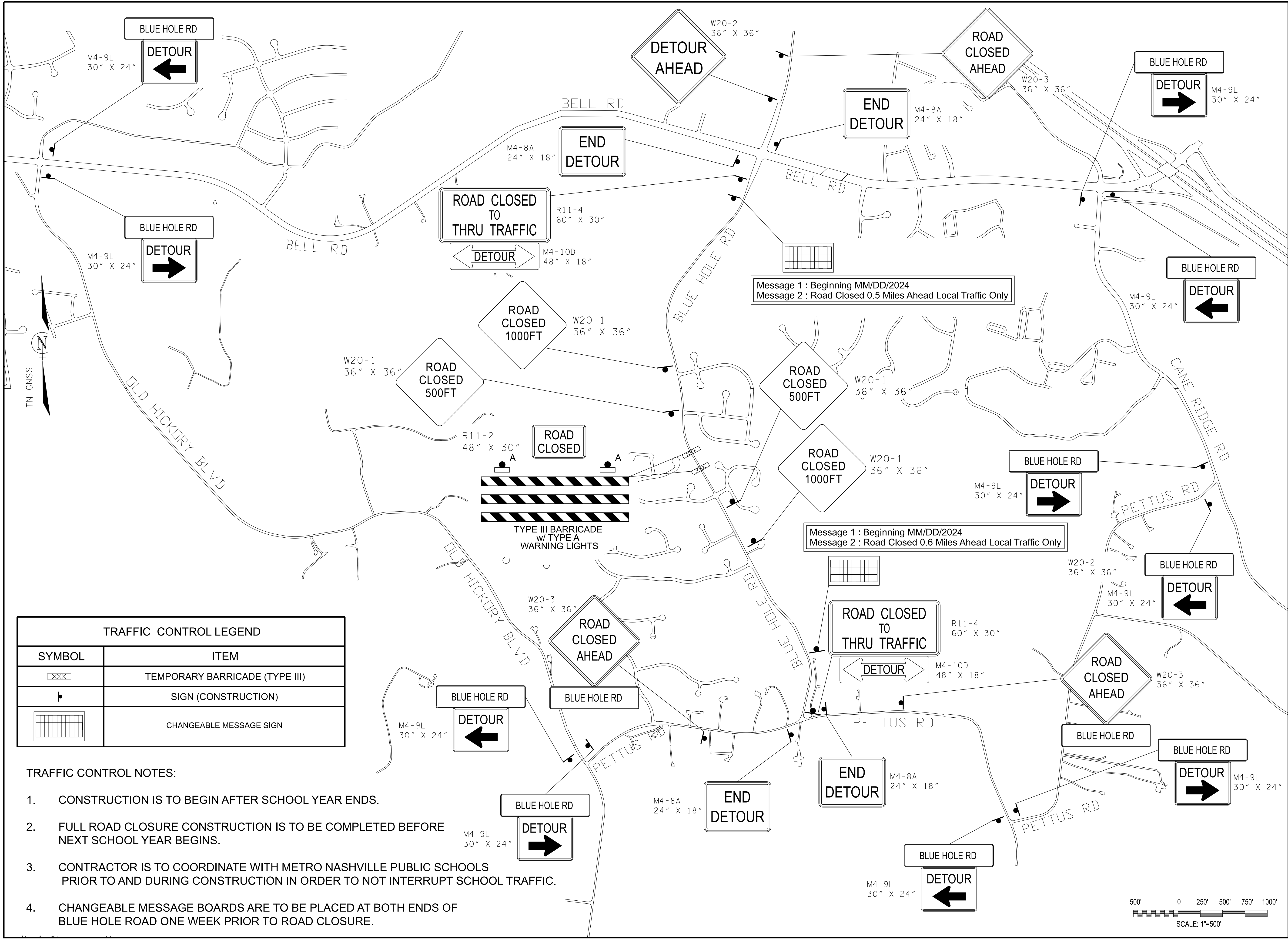
METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

AARON DRIVE
STORMWATER
IMPROVEMENTS

STANDARD DETAILS

SCALE: N.T.S.

SHEET 12 OF 12



FILE NO.	AARON DRIVE
DATE:	05-14-2024
DESIGNED BY:	ECD
DRAWN BY:	ECD
CHECKED BY:	DWG
REVISION BLOCK	
DATE:	
DATE:	
DATE:	

CONSOR ENGINEERS, LLC
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BRENTWOOD, TN 37027
(615) 425 2000

SEALED BY

05/14/2024

METROPOLITAN GOVERNMENT
OF NASHVILLE & DAVIDSON COUNTY, TENNESSEE
METRO WATER SERVICES
STORMWATER DIVISION

**AARON DRIVE
STORMWATER
IMPROVEMENTS**

TRAFFIC CONTROL PLAN

SCALE: 1" = 500'

SHEET 08 OF 12