

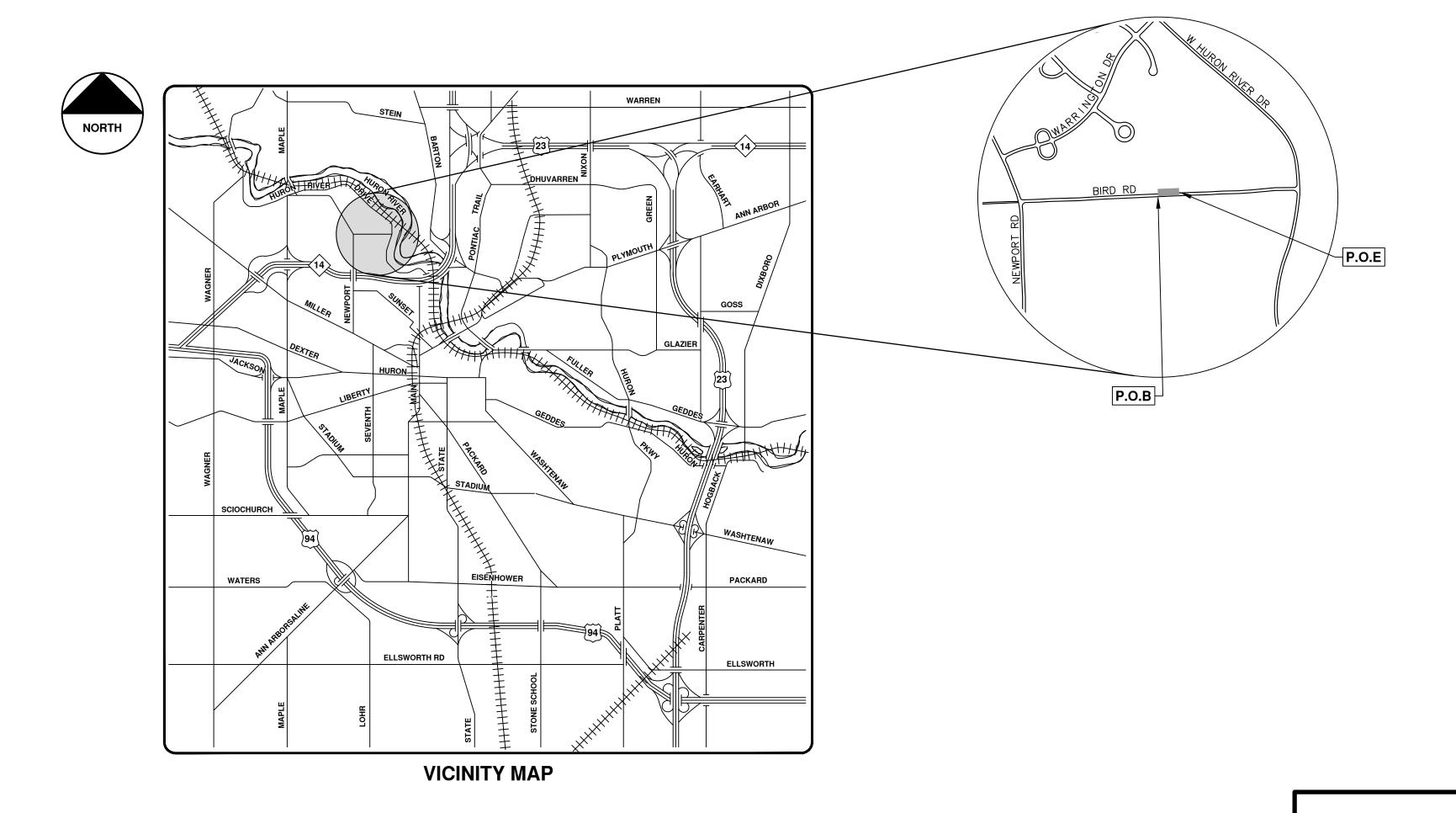
# CITY OF ANN ARBOR ENGINEERING

STANDARD SPECIFICATIONS, IT'S DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR

## BIRD ROAD RETAINING WALL

BID No. ITB#4611, FILE No. 2018029

	SHEET LIST TABLE					
SHEET NUMBER	SHEET TITLE					
1	COVER SHEET					
2	STANDARD NOTES					
3	LEGEND					
4	DETAILS					
5	REMOVALS					
6	WALL PLAN					
7	WALL PROFILE					



CHRISTOPHER CARSON, P.E. - MI LICENSE No. 47156 **PROJECT MANAGER** 

10/4/2019



#### **CONSTRUCTION NOTES:**

- 1. Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.
- 2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.
- 3. Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.
- 4. During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions".
- 5. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements. .
- 6. "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications.
- 7. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor..
- 8. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.
- 9. The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work shall be included in the item of work "General Conditions".
- 10. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.
- 11. The location of material stock piles and on—site staging areas to be approved by the Engineer.
- 12. Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re—set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified"
- 13. In areas where edge drain cannot be installed in accordance with City of Ann Arbor Detail SD-TD-11, the edge drain shall be installed at the depth as indicated on the plans, or as directed by Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth of less than 2' below top of proposed pavement.

NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

- 1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE
- 2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 55 ANN ARBOR UNIFIED DEVELOPMENT CODE, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
- 4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
- 5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN
- 6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF
- 7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING
- 8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
- 9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
- 11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
- 12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.
- 1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.
- SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:
  1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.
- 1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.
- 1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.
- 1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).
- CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.
- 1.6. COMPLETE ALL FINE GRADING.

SEQUENCE OF EROSION CONTROL MEASURES:

- 1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.
- 1.8. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.
- 1.9. CLEAN OUT STORM SEWER SYSTEMS.
- 1.10. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.
- 1.11. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. TH CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

#### TEMPORARY SEEDING:

- 1. SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
- 2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

#### PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR DRIOR TO THE REGINNING OF CONSTRUCTION

PERMIT	ISSUING AUTHORITY		
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING		
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING		
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE		
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE		

<b>PUBLIC UTILITIES</b>	OWNER	CONTACT
WATER		
SANITARY		
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD	(734) 794–6350
FORESTRY	ANN ARBOR, MI 48108	
SIGNS SIGNALS STREET LIGHTS		CHUCK FOJTIK (734) 794-6361
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEW (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIA (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLANI (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	JEFF LEHMAN SR (734) 996-5334
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	GREG SERICH (810) 244-3500
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188

PROJECT NAME BENCHMARKS				
BM#	ELEV	DESCRIPTION		
1	869.47	ARROW ON TOP OF HYDRANT #02-1696 IN FRONT OF HSE #1288 BIRD ROAD		

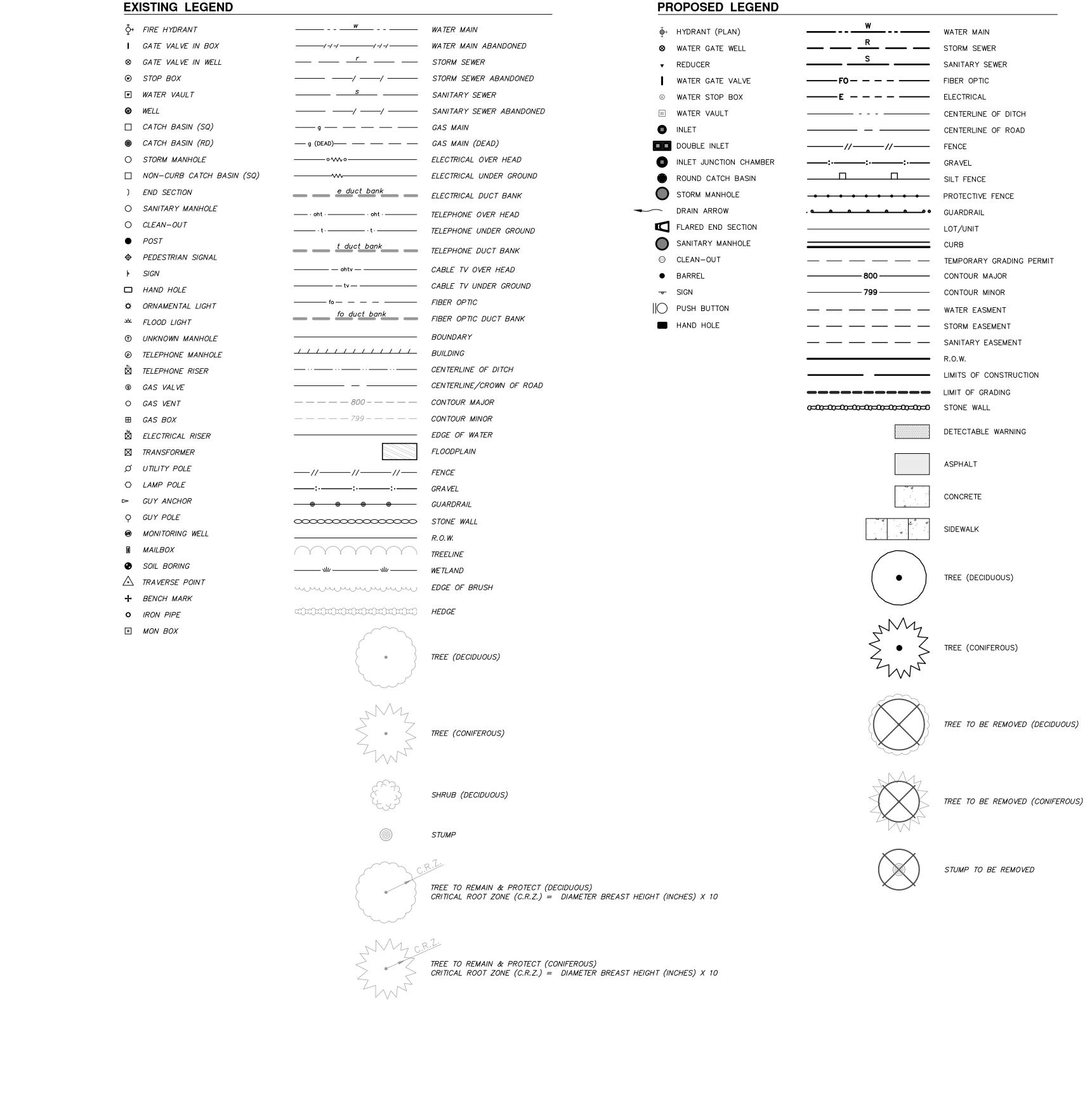


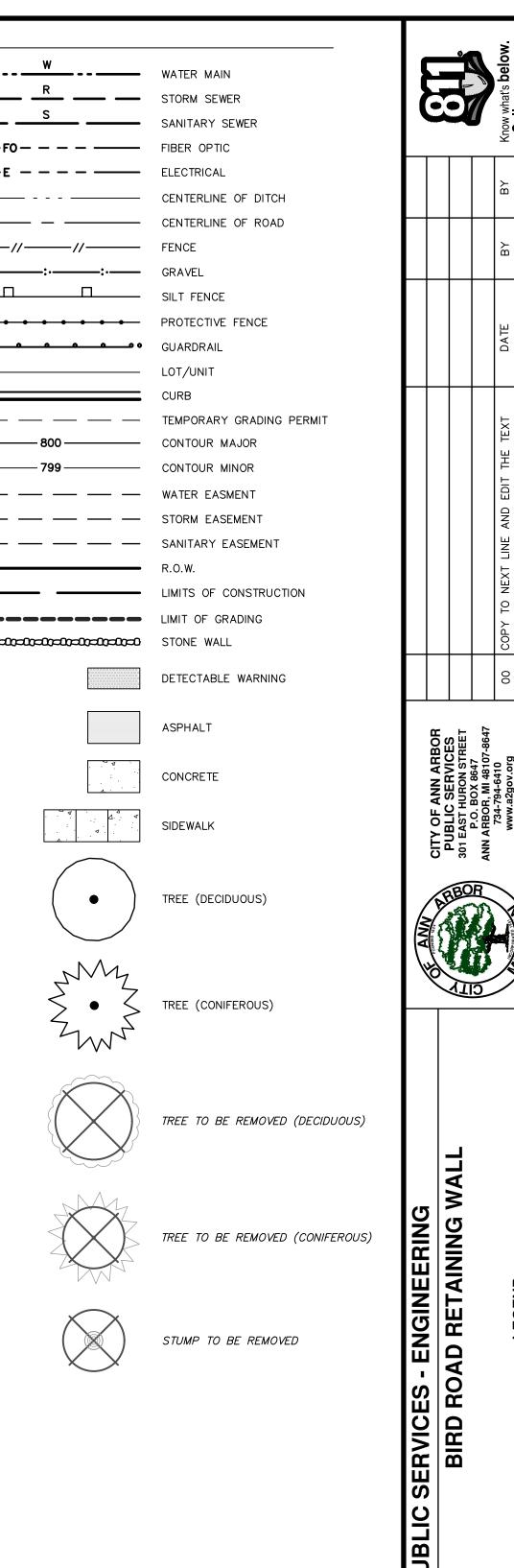
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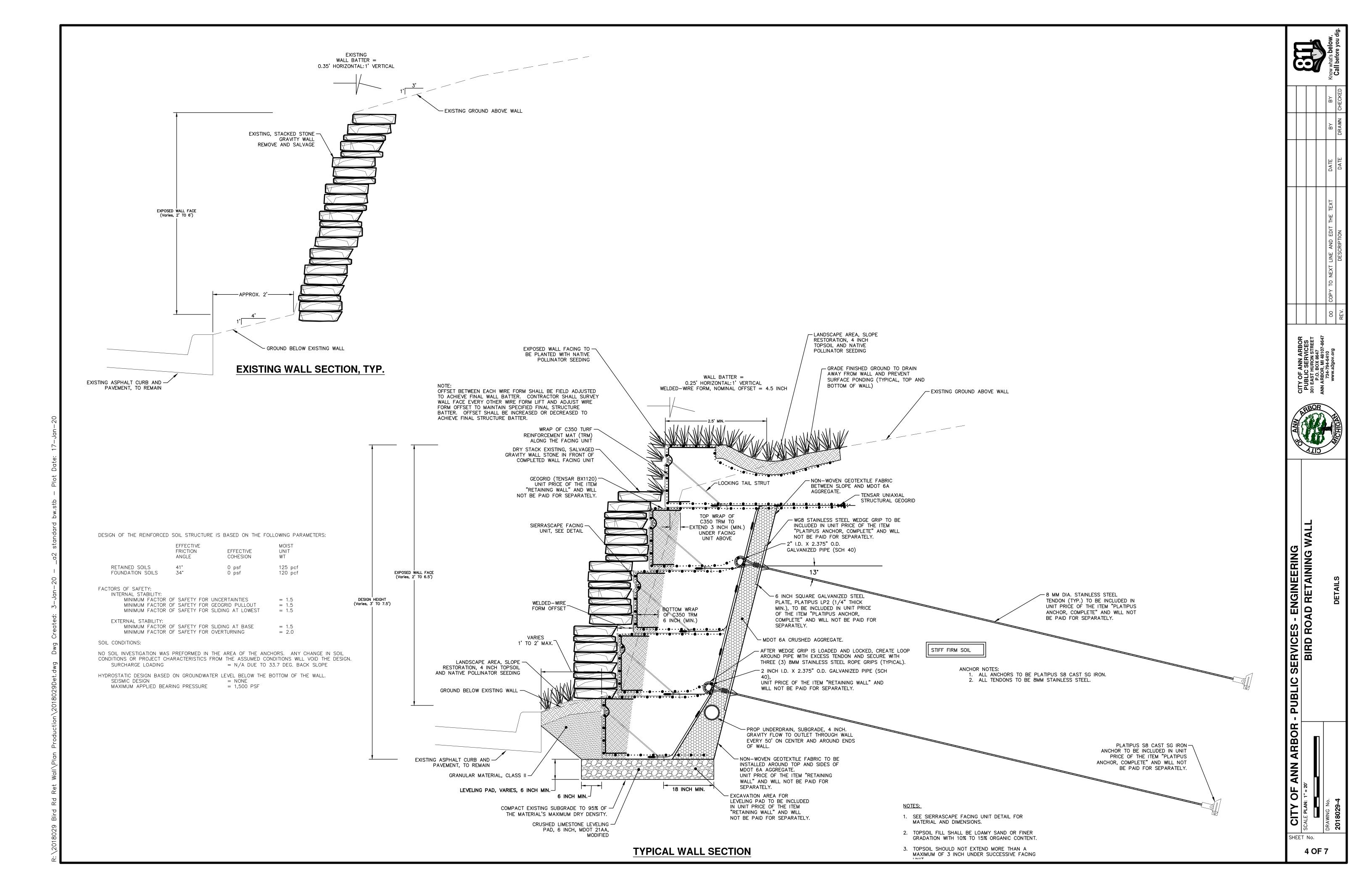
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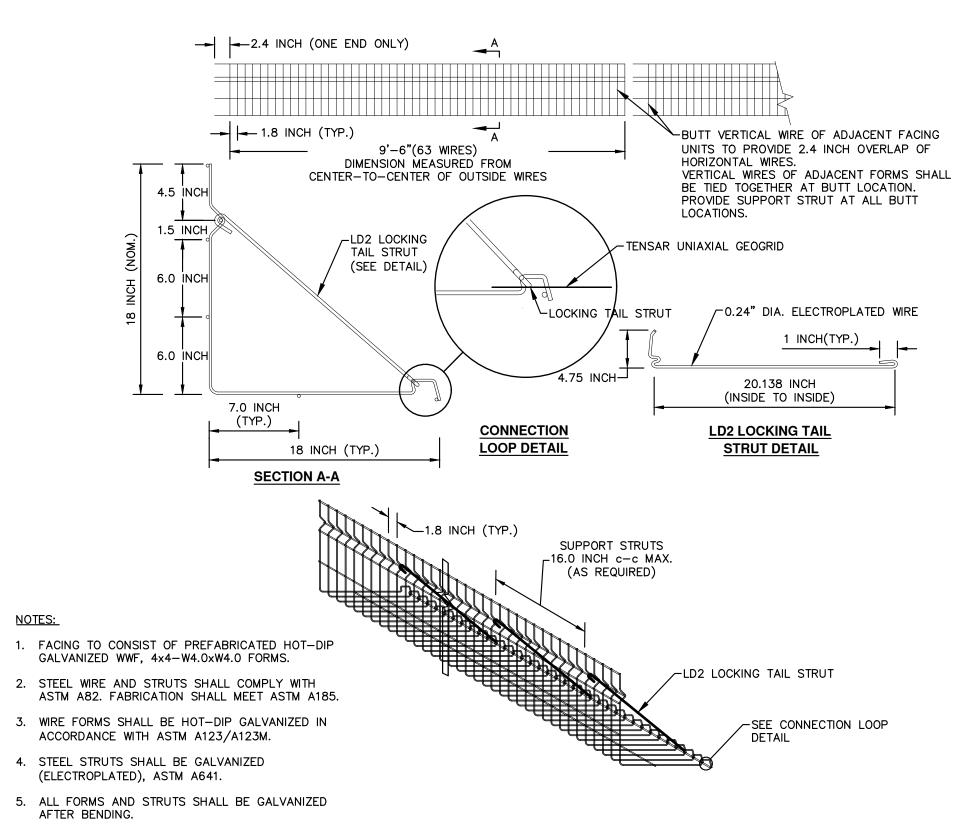
SHEET No. 2 OF 7



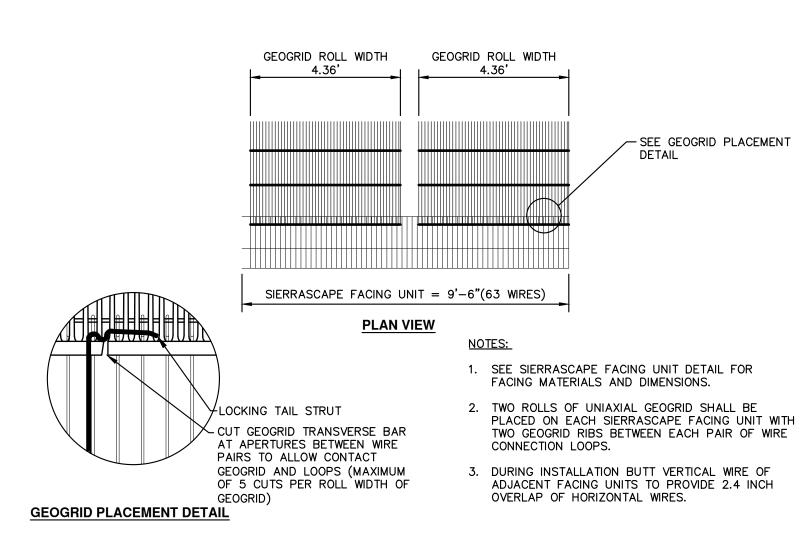


CITY OF ANN ARBOR SHEET No. 3 OF 7

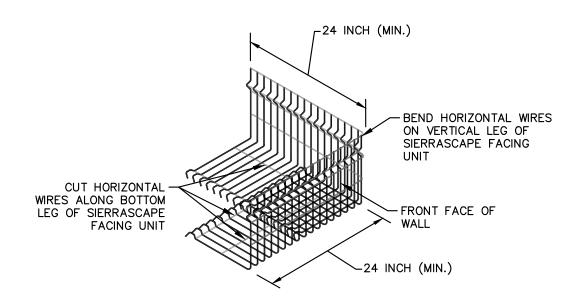




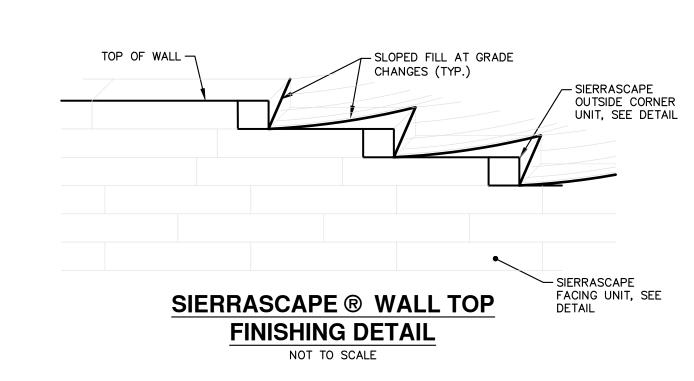
**SIERRASCAPE ® RETAINING WALL SYSTEM FACING UNIT** WELDED WIRE FORM NOT TO SCALE



### TYPICAL SIERRASCAPE ® **GEOGRID COVERAGE** NOT TO SCALE



SIERRASCAPE ® OUTSIDE **CORNER UNIT DETAIL** NOT TO SCALE

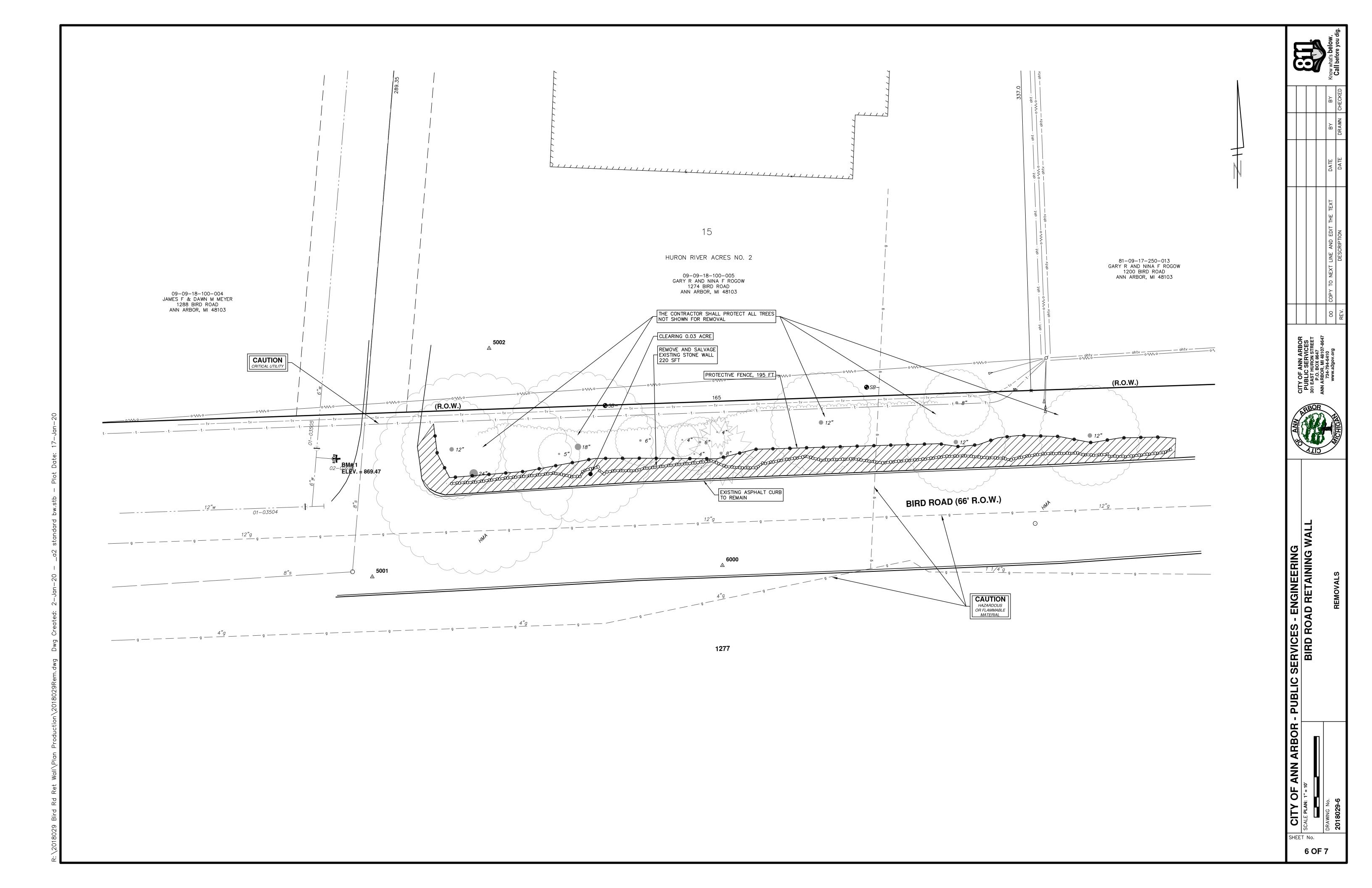


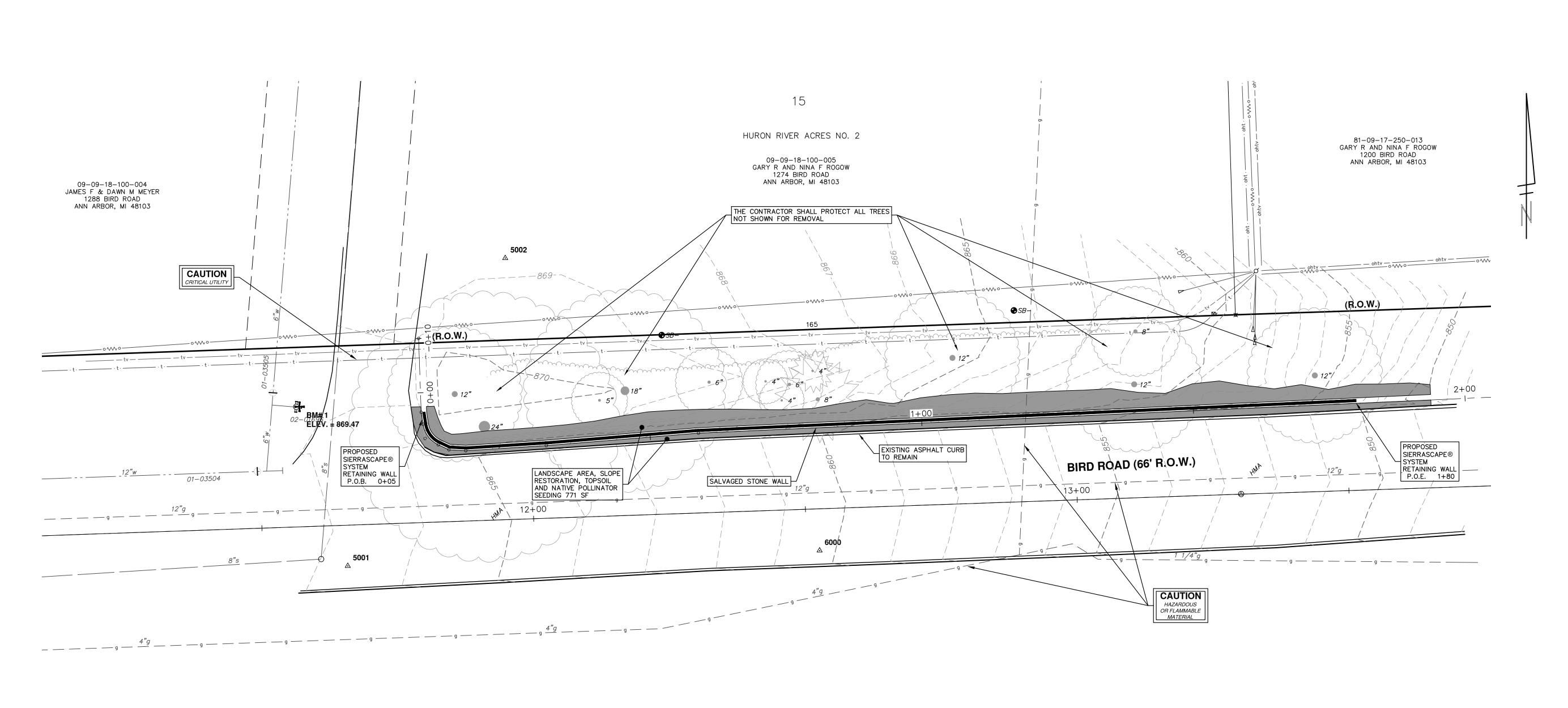


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SHEET No.

5 OF 7





1. ALL ANCHORS TO BE PLATIPUS S8 CAST SG IRON.

ALL TENDONS TO BE 8 MM STAINLESS STEEL.
 A LEVELING PAD OF 6-INCH MINIMUM MDOT 21AA CRUSHED LIMESTONE AGGREGATE, AS INDICATED ON ELEVATION VIEW, MUST BE PLACED BELOW THE BOTTOM LAYER OF FACING UNIT.

4. CONTRACTOR MUST MAINTAIN THE MINIMUM FACING UNIT BURIED BELOW GRADE AS SHOWN ON THE ELEVATION VIEW.

5. FACING UNIT TO CONSIST OF SIERRASCAPE WALL SYSTEM.

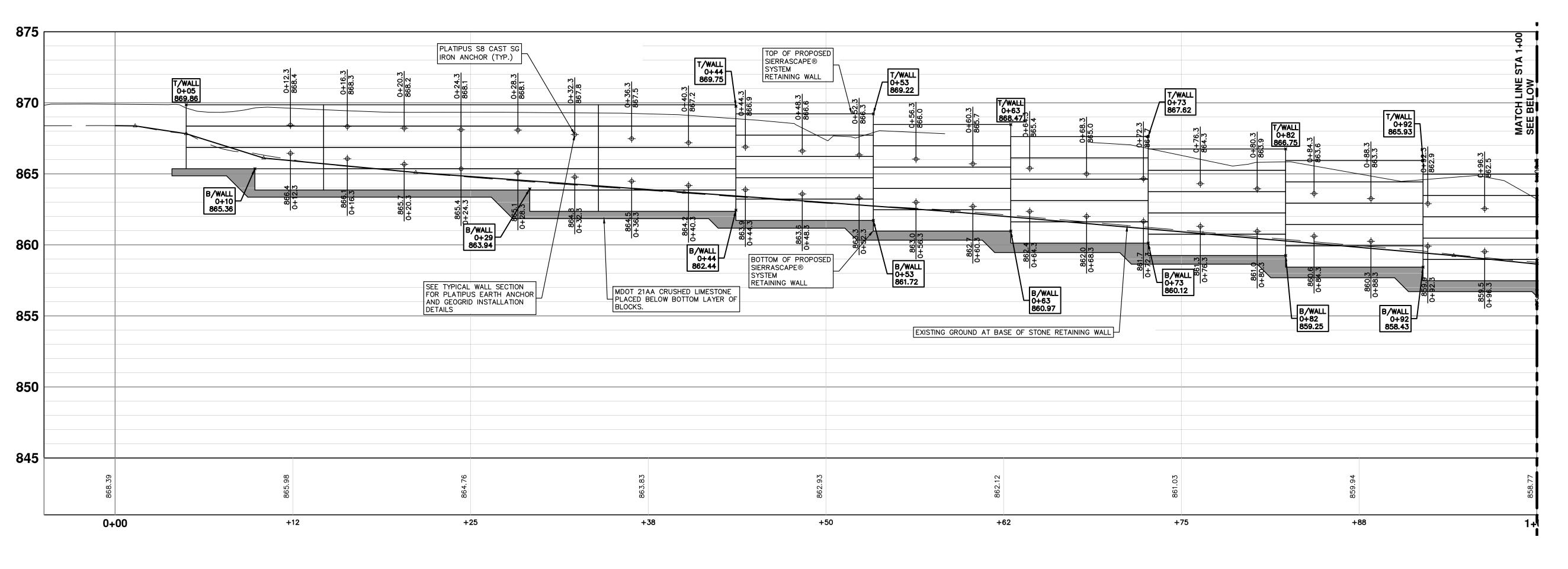
6. ANY CHANGES TO THE ABOVE REFERENCED DRAWINGS WILL VOID THIS DESIGN.

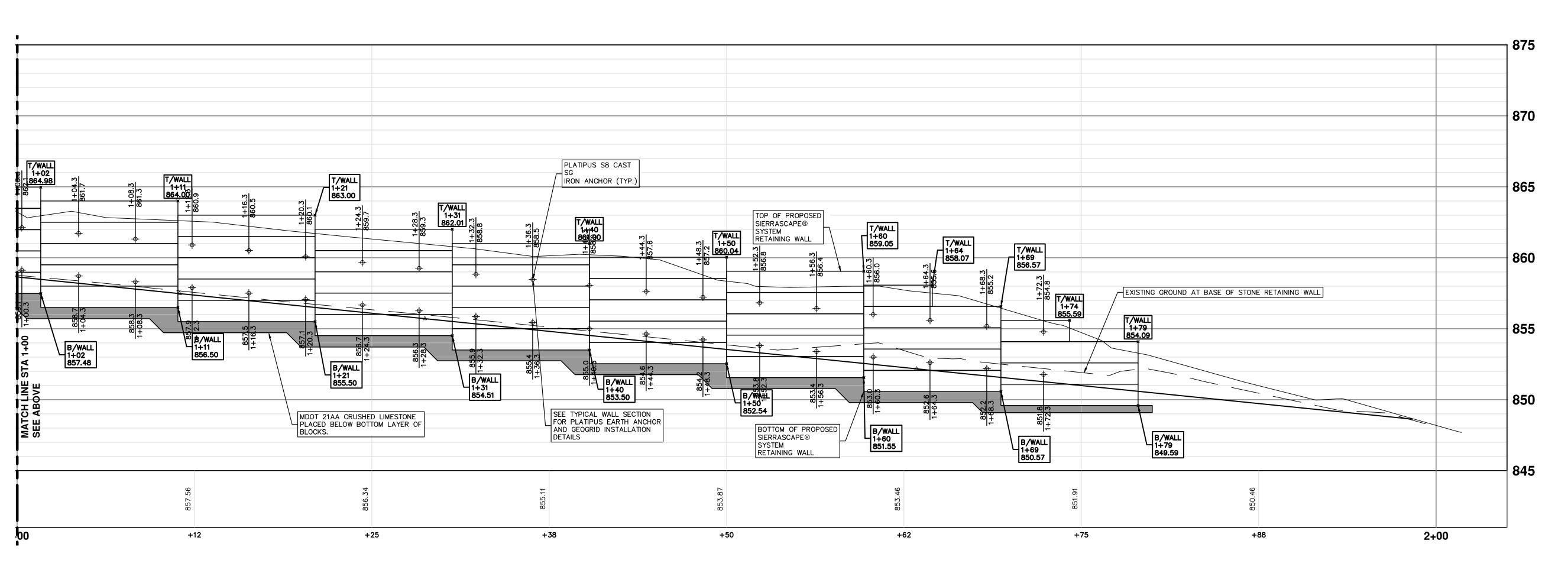
ANY CHANGES TO THE ABOVE REFERENCED DRAWINGS WILL VOID THIS DESIGN.
 DRAINAGE PIPE TO BE DAYLIGHTED AT ENDS OF WALL & AT INTERVALS OF 50' O.C., AND COVERED WITH RODENT GUARD.
 CONTRACTOR MUST REMOVE ALL TOPSOIL AND OTHER ORGANIC SOILS DOWN TO SUITABLE NATIVE SOIL PRIOR TO CONSTRUCTING THE LEVELING PAD. UNDERCUT MUST EXTEND OUTWARD AND DOWNWARD FROM THE FRONT OF THE WALL AT A SLOPE OF 1 UNITS VERTICAL TO 1 UNIT HORIZONTAL.

- PUBLIC SERVICES - ENGINEERING BIRD ROAD RETAINING V CITY OF ANN ARBOR

SHEET No.

7 OF 7





CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

| SCALE PLAN: 1"=4" PROFILE: 1"=4" BIRD ROAD RETAINING WALI

8 OF 7