

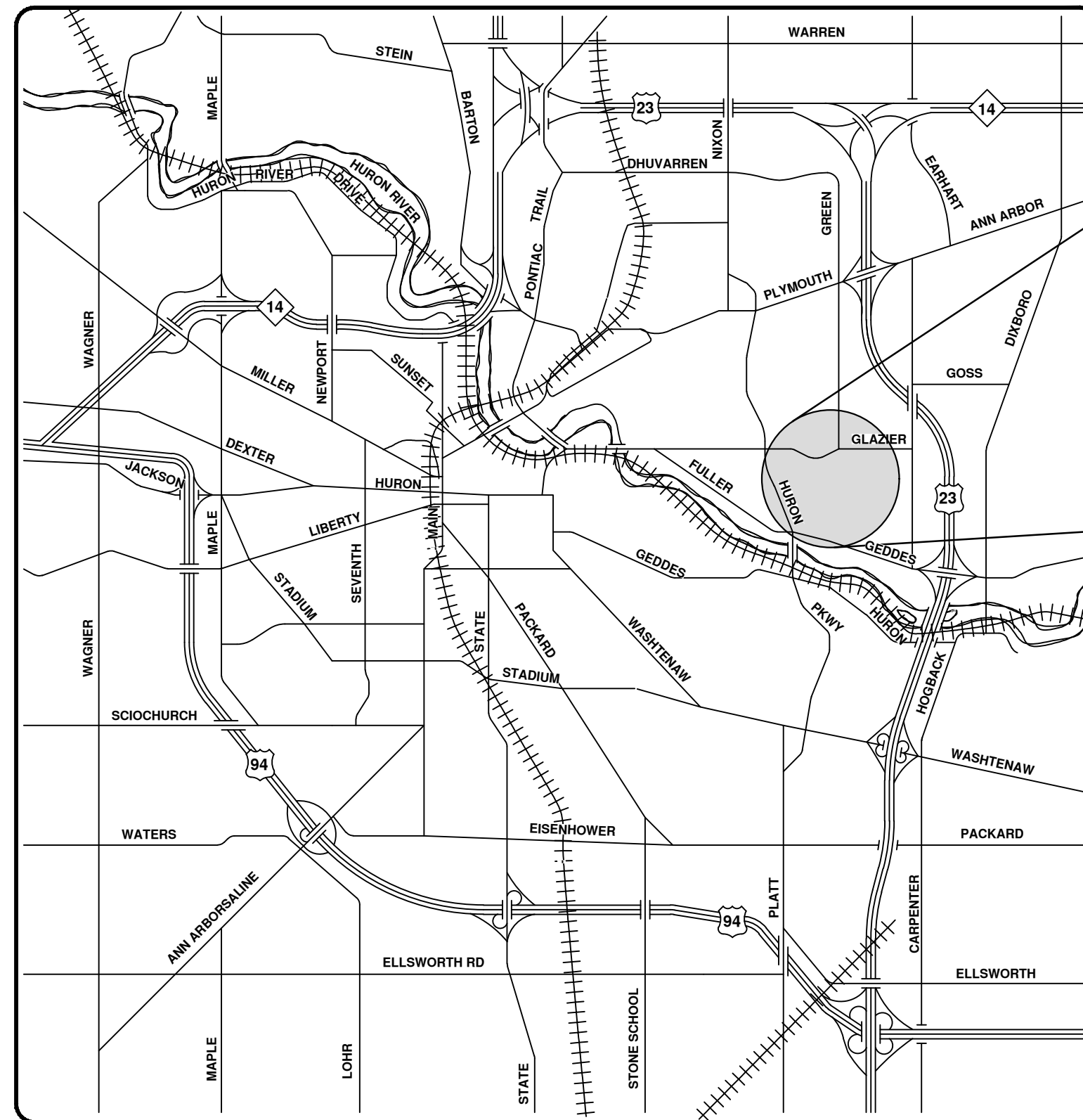
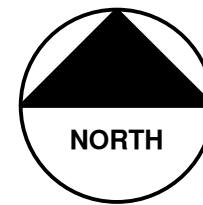


CITY OF ANN ARBOR ENGINEERING

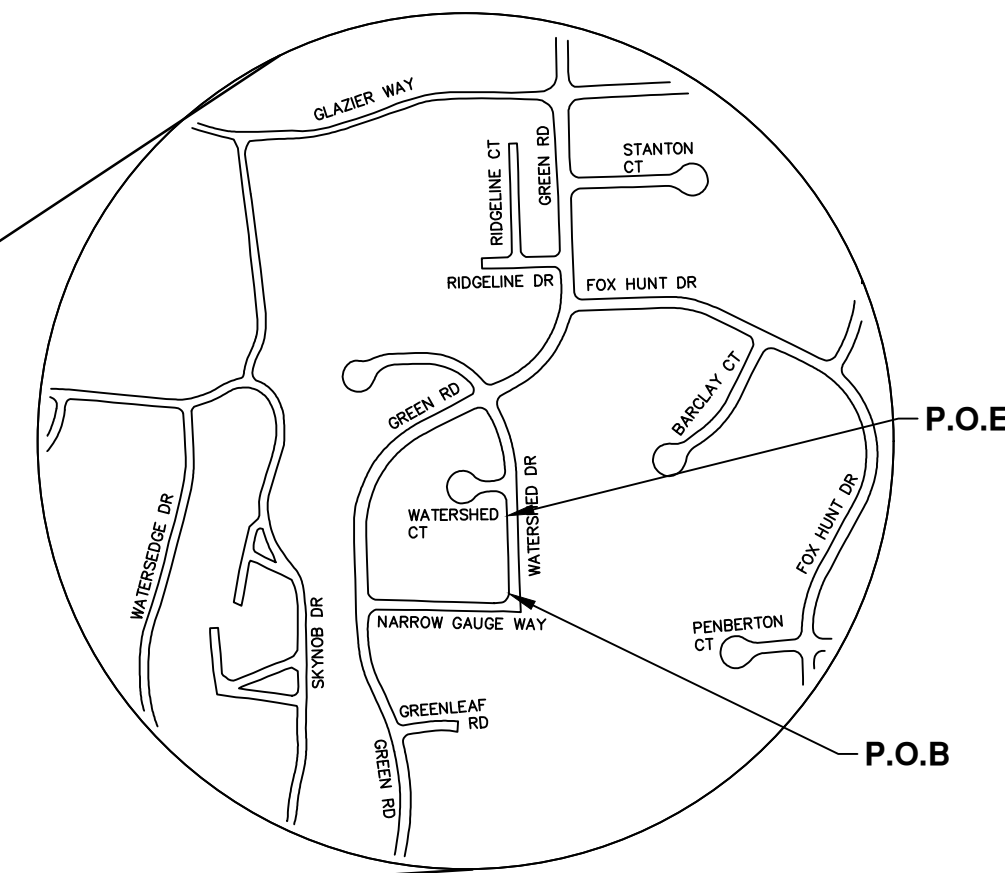
WATERSHED DRIVE RETAINING WALL

BID No. ITB#4510, FILE No. 2014040

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	STANDARD NOTES & LEGEND
3	ROSETTA OUTCROPPING SCHEMATICS
4	ROSETTA OUTCROPPING DETAILS
5	WALL LAYOUT PLAN & REMOVALS
6-7	WALL ELEVATIONS - ANCHORS
8	WALL ELEVATIONS - BLOCK SCHEMATIC



VICINITY MAP



NOTES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

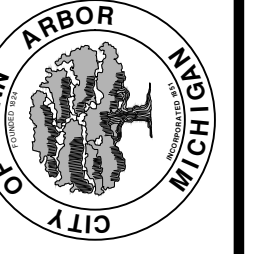
THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.



REV.	DESCRIPTION	DATE	DRAWN	CHECKED

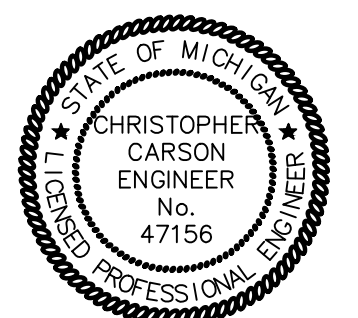
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-0667
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
CONTRACT FOR CONSTRUCTION OF WATERSHED DRIVE RETAINING WALL. RETAINING WALL TO BE CONSTRUCTED IN FRONT OF EXISTING WOODEN RETAINING WALL UTILIZING DRIVEN EARTH ANCHORS. PROJECT IS LOCATED ALONG WEST SIDE OF WATERSHED DRIVE, BETWEEN WATERSHED COURT AND NARROW GAUGE WAY.

SCALE	
DRAWING No.	2014040-1
SHEET No.	1 OF 8

PREPARED UNDER THE SUPERVISION OF
Christopher Carson
CHRISTOPHER CARSON, P.E. - MI LICENSE No. 47156
PROJECT MANAGER
DATE: 1 / 2017



EXISTING LEGEND

	FIRE HYDRANT		WATER MAIN
	GATE VALVE IN BOX		WATER MAIN ABANDONED
	GATE VALVE IN WELL		STORM SEWER
	STOP BOX		STORM SEWER ABANDONED
	WATER VAULT		SANITARY SEWER
	WELL		SANITARY SEWER ABANDONED
	CATCH BASIN (SQ)		GAS MAIN
	CATCH BASIN (RD)		GAS MAIN (DEAD)
	STORM MANHOLE		ELECTRICAL OVER HEAD
	NON-CURB CATCH BASIN (SQ)		ELECTRICAL UNDER GROUND
	END SECTION		ELECTRICAL DUCT BANK
	SANITARY MANHOLE		TELEPHONE OVER HEAD
	CLEAN-OUT		TELEPHONE UNDER GROUND
	POST		TELEPHONE DUCT BANK
	PEDESTRIAN SIGNAL		CABLE TV OVER HEAD
	SIGN		CABLE TV UNDER GROUND
	HAND HOLE		FIBER OPTIC
	ORNAMENTAL LIGHT		FIBER OPTIC DUCT BANK
	FLOOD LIGHT		BOUNDARY
	UNKNOWN MANHOLE		BUILDING
	TELEPHONE MANHOLE		CENTERLINE OF DITCH
	TELEPHONE RISER		CENTERLINE/CROWN OF ROAD
	GAS VALVE		CONTOUR MAJOR
	GAS VENT		CONTOUR MINOR
	GAS BOX		EDGE OF WATER
	ELECTRICAL RISER		FLOODPLAIN
	TRANSFORMER		FENCE
	UTILITY POLE		GRAVEL
	LAMP POLE		GUARDRAIL
	GUY ANCHOR		STONE WALL
	GUY POLE		R.O.W.
	MONITORING WELL		TREELINE
	MAILBOX		WETLAND
	SOIL BORING		EDGE OF BRUSH
	TRAVERSE POINT		HEDGE
	BENCH MARK		TREE (DECIDUOUS)
	IRON PIPE		TREE (CONIFEROUS)
	MON BOX		SHRUB (DECIDUOUS)
			STUMP
			TREE TO REMAIN & PROTECT (DECIDUOUS) CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10
			TREE TO REMAIN & PROTECT (CONIFEROUS) CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10

PROPOSED LEGEND

	HYDRANT (PLAN)		WATER MAIN
	WATER GATE WELL		STORM SEWER
	REDUCER		SANITARY SEWER
	WATER GATE VALVE		FIBER OPTIC
	WATER STOP BOX		ELECTRICAL
	WATER VAULT		CENTERLINE OF DITCH
	INLET		CENTERLINE OF ROAD
	DOUBLE INLET		FENCE
	INLET JUNCTION CHAMBER		GRAVEL
	ROUND CATCH BASIN		SILT FENCE
	STORM MANHOLE		PROTECTIVE FENCE
	FLARED END SECTION		GUARDRAIL
	SANITARY MANHOLE		LOT/UNIT
	CLEAN-OUT		CURB
	BARREL		TEMPORARY GRADING PERMIT
	SIGN		CONTOUR MAJOR
	PUSH BUTTON		CONTOUR MINOR
	HAND HOLE		WATER EASEMENT
			STORM EASEMENT
			SANITARY EASEMENT
			R.O.W.
			LIMITS OF CONSTRUCTION
			LIMIT OF GRADING
			STONE WALL
			DETECTABLE WARNING
			ASPHALT
			CONCRETE
			SIDEWALK
			TREE (DECIDUOUS)
			TREE (CONIFEROUS)
			TREE TO BE REMOVED (DECIDUOUS)
			TREE TO BE REMOVED (CONIFEROUS)
			STUMP TO BE REMOVED

CONSTRUCTION NOTES:

- 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.
- THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- 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.
- 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".
- "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.
- POSTAL DELIVERY AND REFUSE PICKUP SERVICE SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.
- WHERE STREET CURBS ARE UNDERMINED DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.
- 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".
- ALL CURB, SIDEWALK, DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY ENGINEER BEFORE THE WORK IS DONE.
- THE LOCATION OF MATERIAL STOCK PILES AND ON-SITE STAGING AREAS TO BE APPROVED BY THE ENGINEER.
- 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.

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING 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
* NO COST TO CONTRACTOR	

PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.	
PERMIT	ISSUING AUTHORITY

CONTACT INFORMATION		
PUBLIC UTILITIES	OWNER	CONTACT
WATER		
SANITARY		
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
FORESTRY		
SIGNS SIGNALS STREET LIGHTS		(734) 794-6361
PRIVATE UTILITIES	OWNER	CONTACT
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	CLAY COMBEE (734) 397-4112
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	(734) 996-2135
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016

Know what's below.
Call before you dig.

NO.	DATE	DESCRIPTION	REV.

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WATERSHED DRIVE RETAINING WALL

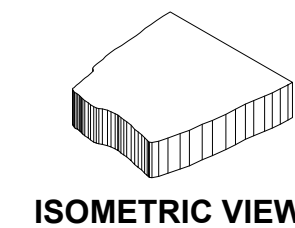
SCALE: NTS

DRAWING No. 2014040-2

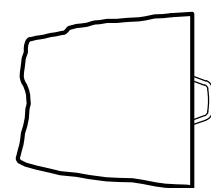
SHEET No. 2 OF 8

STANDARD NOTES & LEGEND

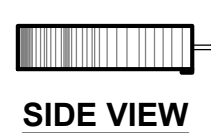
6" x 2' (15.2 cm x 61.0 cm) BLOCK
 Height = 6.0" (15.2 cm)
 Width = 20.6" (52.3 cm)
 Length = 24.1" (61.2 cm)
 Block Setback = 1.5" (3.8 cm)
 Volume = 1.725 cft (0.049 m³)
 Weight = 250 lbs (113 kg)
 Center of Gravity = 11.0" (27.9 cm)



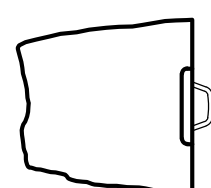
ISOMETRIC VIEW



TOP VIEW

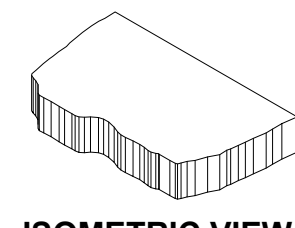


SIDE VIEW

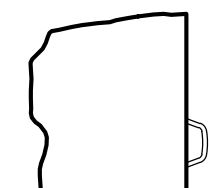


BOTTOM VIEW

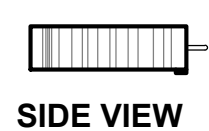
6" x 3' (15.2 cm x 91.4 cm) BLOCK
 Height = 6.0" (15.2 cm)
 Width = 17.9" (45.5 cm)
 Length = 35.8" (90.9 cm)
 Block Setback = 1.5" (3.8 cm)
 Volume = 2.244 cft (0.064 m³)
 Weight = 324 lbs (147 kg)
 Center of Gravity = 9.5" (24.1 cm)



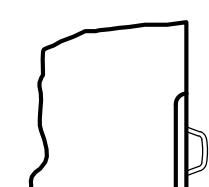
ISOMETRIC VIEW



TOP VIEW

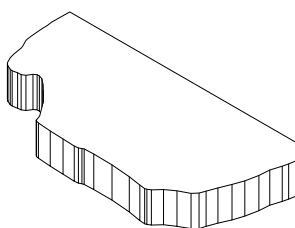


SIDE VIEW

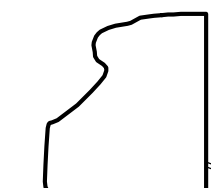


BOTTOM VIEW

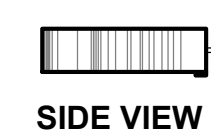
6" x 4' (15.2 cm x 121.9 cm) BLOCK
 Height = 6.0" (15.2 cm)
 Width = 18.3" (46.5 cm)
 Length = 48.0" (121.9 cm)
 Block Setback = 1.5" (3.8 cm)
 Volume = 3.053 cft (0.086 m³)
 Weight = 442 lbs (200 kg)
 Center of Gravity = 9.8" (24.9 cm)



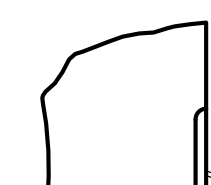
ISOMETRIC VIEW



TOP VIEW

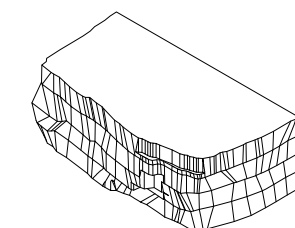


SIDE VIEW

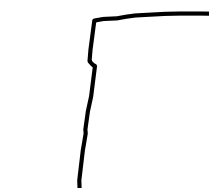


BOTTOM VIEW

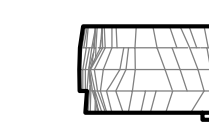
12" x 3' (30.5 cm x 91.4 cm) BLOCK
 Height = 12.0" (30.5 cm)
 Width = 17.4" (44.2 cm)
 Length = 35.5" (90.2 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 4.279 cft (0.121 m³)
 Weight = 620 lbs (281 kg)
 Center of Gravity = 8.7" (22.1 cm)



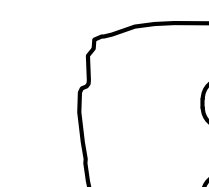
ISOMETRIC VIEW



TOP VIEW

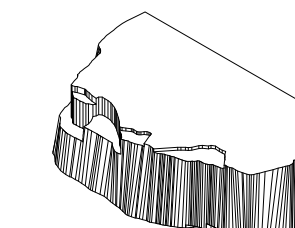


SIDE VIEW

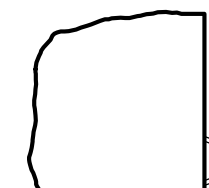


BOTTOM VIEW

12" x 3.5' (30.5 cm x 106.7 cm) BLOCK
 Height = 12.0" (30.5 cm)
 Width = 18.2" (46.2 cm)
 Length = 40.9" (103.9 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 5.168 cft (0.146 m³)
 Weight = 749 lbs (340 kg)
 Center of Gravity = 9.4" (23.9 cm)



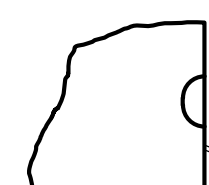
ISOMETRIC VIEW



TOP VIEW

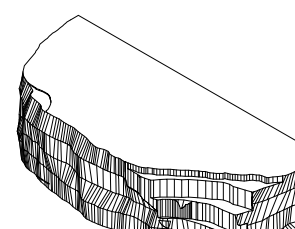


SIDE VIEW

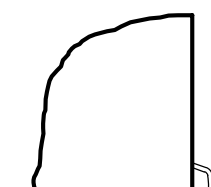


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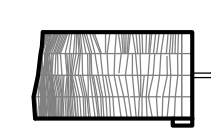
12" x 4' (30.5 cm x 121.9 cm) BLOCK
 Height = 12.0" (30.5 cm)
 Width = 18.6" (47.2 cm)
 Length = 47.8" (121.4 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 6.162 cft (0.174 m³)
 Weight = 893 lbs (405 kg)
 Center of Gravity = 9.5" (24.1 cm)



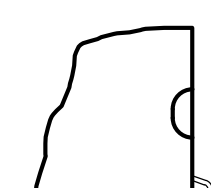
ISOMETRIC VIEW



TOP VIEW

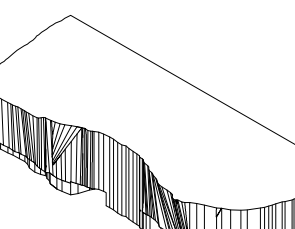


SIDE VIEW

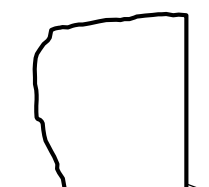


BOTTOM VIEW

12" x 4.5' (30.5 cm x 137.2 cm) BLOCK
 Height = 12.0" (30.5 cm)
 Width = 17.6" (44.7 cm)
 Length = 53.7" (136.4 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 6.554 cft (0.186 m³)
 Weight = 950 lbs (431 kg)
 Center of Gravity = 8.9" (22.6 cm)



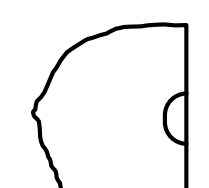
ISOMETRIC VIEW



TOP VIEW

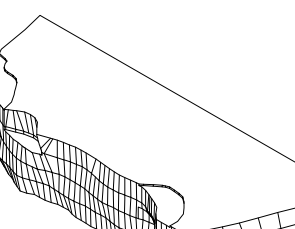


SIDE VIEW

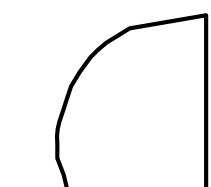


BOTTOM VIEW

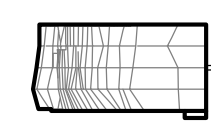
12" x 5' (30.5 cm x 152.4 cm) BLOCK
 Height = 12.0" (30.5 cm)
 Width = 16.4" (41.7 cm)
 Length = 59.7" (151.6 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 7.604 cft (0.215 m³)
 Weight = 1103 lbs (500 kg)
 Center of Gravity = 9.8" (24.9 cm)



ISOMETRIC VIEW



TOP VIEW

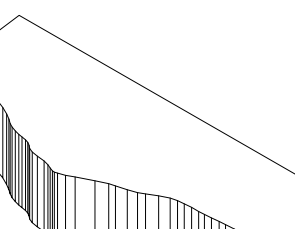


SIDE VIEW

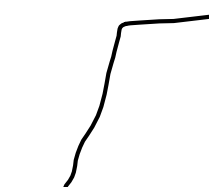


BOTTOM VIEW

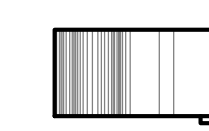
12" x 5.5' (30.5 cm x 167.6 cm) BLOCK
 Height = 11.9" (30.2 cm)
 Width = 17.3" (43.9 cm)
 Length = 65.8" (167.1 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 7.860 cft (0.223 m³)
 Weight = 1140 lbs (517 kg)
 Center of Gravity = 9.2" (23.4 cm)



ISOMETRIC VIEW



TOP VIEW

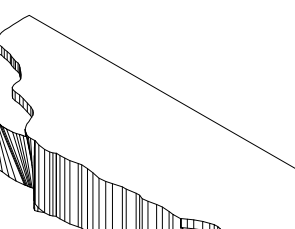


SIDE VIEW



BOTTOM VIEW

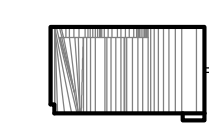
12" x 6' (30.5 cm x 182.9 cm) BLOCK
 Height = 11.9" (30.2 cm)
 Width = 18.0" (45.7 cm)
 Length = 71.7" (182.1 cm)
 Block Setback = 3.0" (7.6 cm)
 Volume = 8.926 cft (0.253 m³)
 Weight = 1294 lbs (587 kg)
 Center of Gravity = 9.4" (23.9 cm)



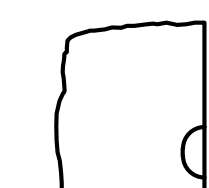
ISOMETRIC VIEW



TOP VIEW

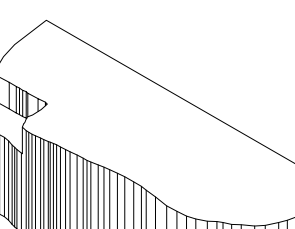


SIDE VIEW

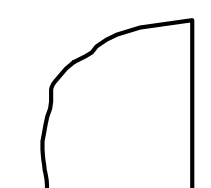


BOTTOM VIEW

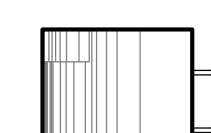
18" x 5' (45.7 cm x 152.4 cm) BLOCK
 Height = 18.0" (45.7 cm)
 Width = 18.2" (46.2 cm)
 Length = 59.5" (151.1 cm)
 Block Setback = 4.5" (11.4 cm)
 Volume = 11.266 cft (0.319 m³)
 Weight = 1633 lbs (741 kg)
 Center of Gravity = 9.6" (24.4 cm)



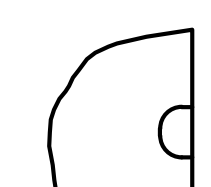
ISOMETRIC VIEW



TOP VIEW

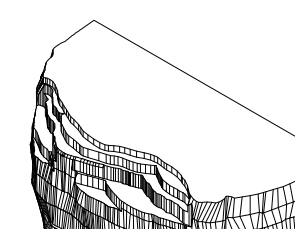


SIDE VIEW



BOTTOM VIEW

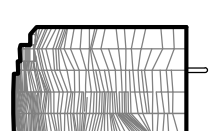
24" x 4' (61.0 cm x 121.9 cm) BLOCK
 Height = 24.0" (61.0 cm)
 Width = 18.9" (48.0 cm)
 Length = 47.4" (120.4 cm)
 Block Setback = 6.0" (15.2 cm)
 Volume = 12.420 cft (0.352 m³)
 Weight = 1801 lbs (817 kg)
 Center of Gravity = 9.9" (25.1 cm)



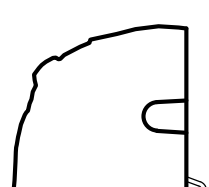
ISOMETRIC VIEW



TOP VIEW

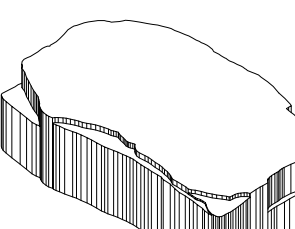


SIDE VIEW



BOTTOM VIEW

FOUR SIDED CORNER BLOCK
 Nominal Height = 12" (30 cm)
 Nominal Width = 30" (76 cm)
 Nominal Length = 48" (122 cm)
 Approximate Weight = 1170 lbs (530 kg)



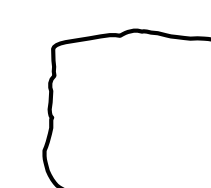
ISOMETRIC VIEW



TOP VIEW



SIDE VIEW



BOTTOM VIEW

NOTES:

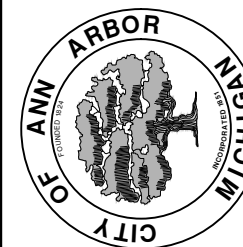
- The block properties shown here are average values of Rosetta[®] Hardscapes blocks.
- These blocks are schematic representations of Rosetta[®] Hardscapes blocks. They do not show full texture or all block projections. They are approximate and are intended for preliminary planning purposes only.
- Block weights shown are based on an assumed concrete unit weight of 145 lb/ft³ (22.8 kN/m³).
- Actual weights and volumes may vary.
- Center of gravity shown is measured from the back of the blocks.
- Average block width shown is calculated by dividing the block volume by the length at the back of the block and height at the center of gravity.
- Rosetta[®] blocks are manufactured with alternating sides up, providing 24 different block faces from the 12 standard retaining wall blocks.



Know what's below.
Call before you dig.

REV.	DATE	DRAWN	CHECKED

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 PUBLIC SERVICES
 301 EAST HURON STREET
 ANN ARBOR, MI 48106-0667
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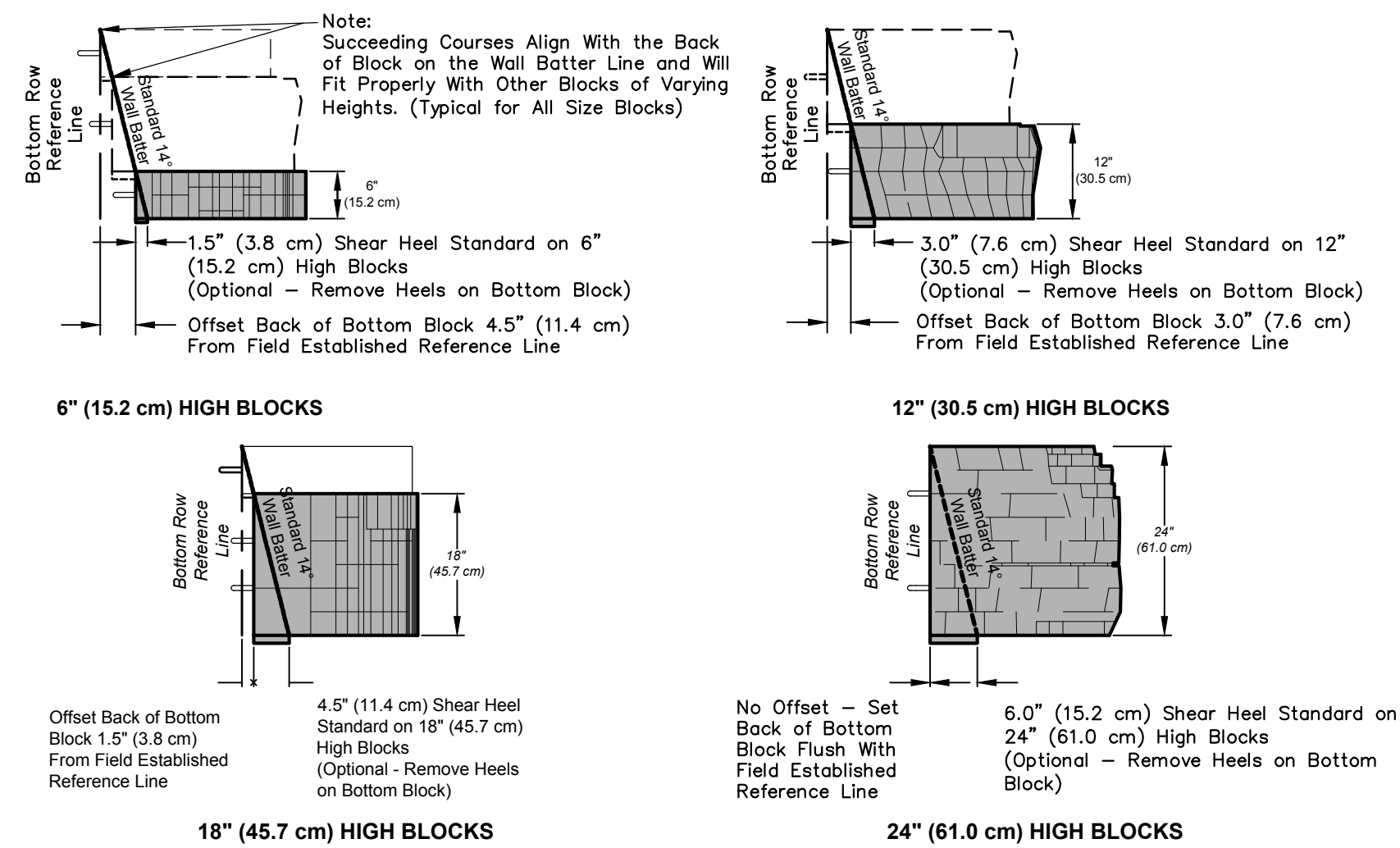
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 WATERSHED DRIVE RETAINING WALL

ROSETTA OUTCROPPING SCHEMATICS

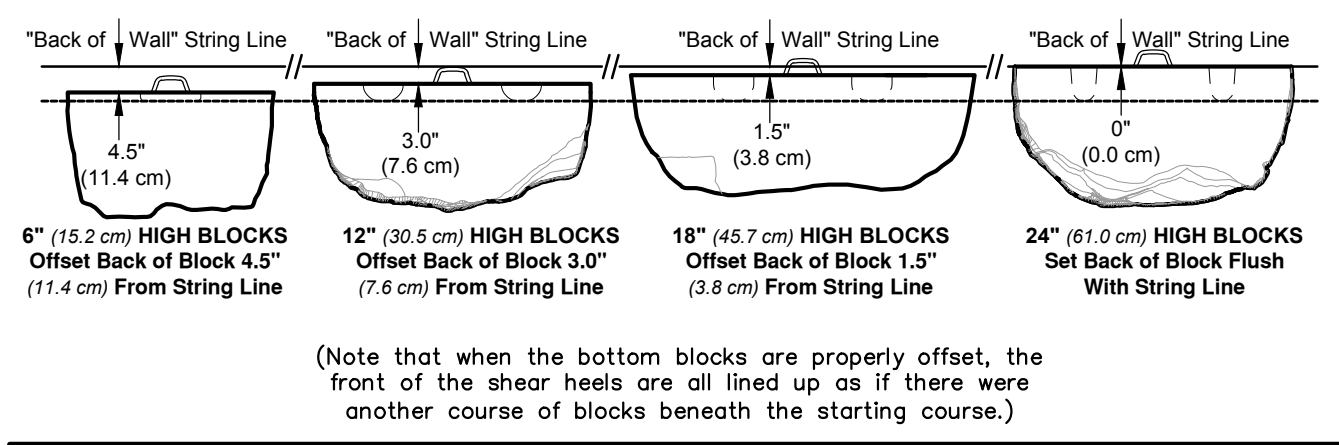
SCALE: NTS
 DRAWING No.
 2014040-3

SHEET No.

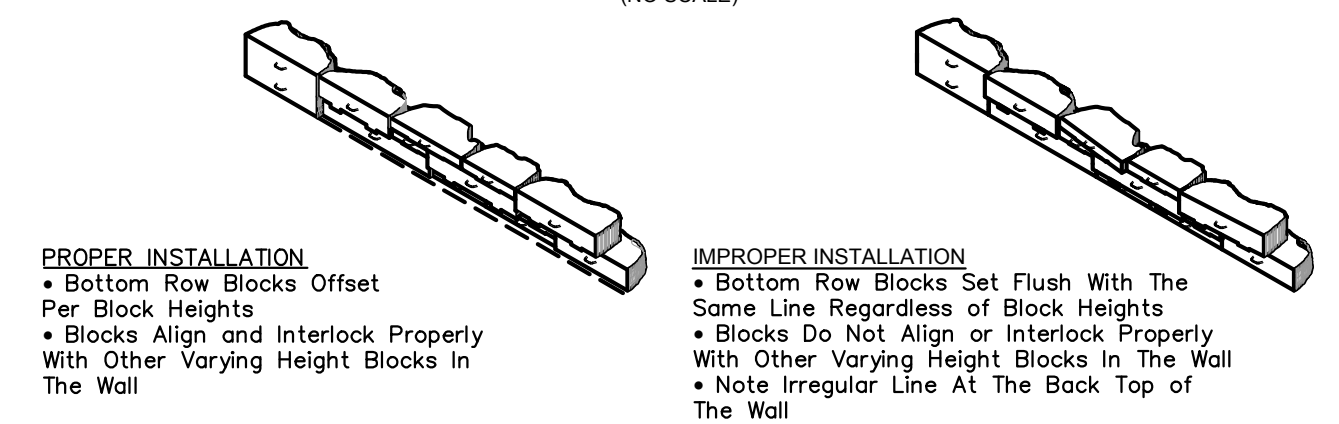
SIDE VIEWS OF DIFFERENT HEIGHT BLOCKS
(NO SCALE)



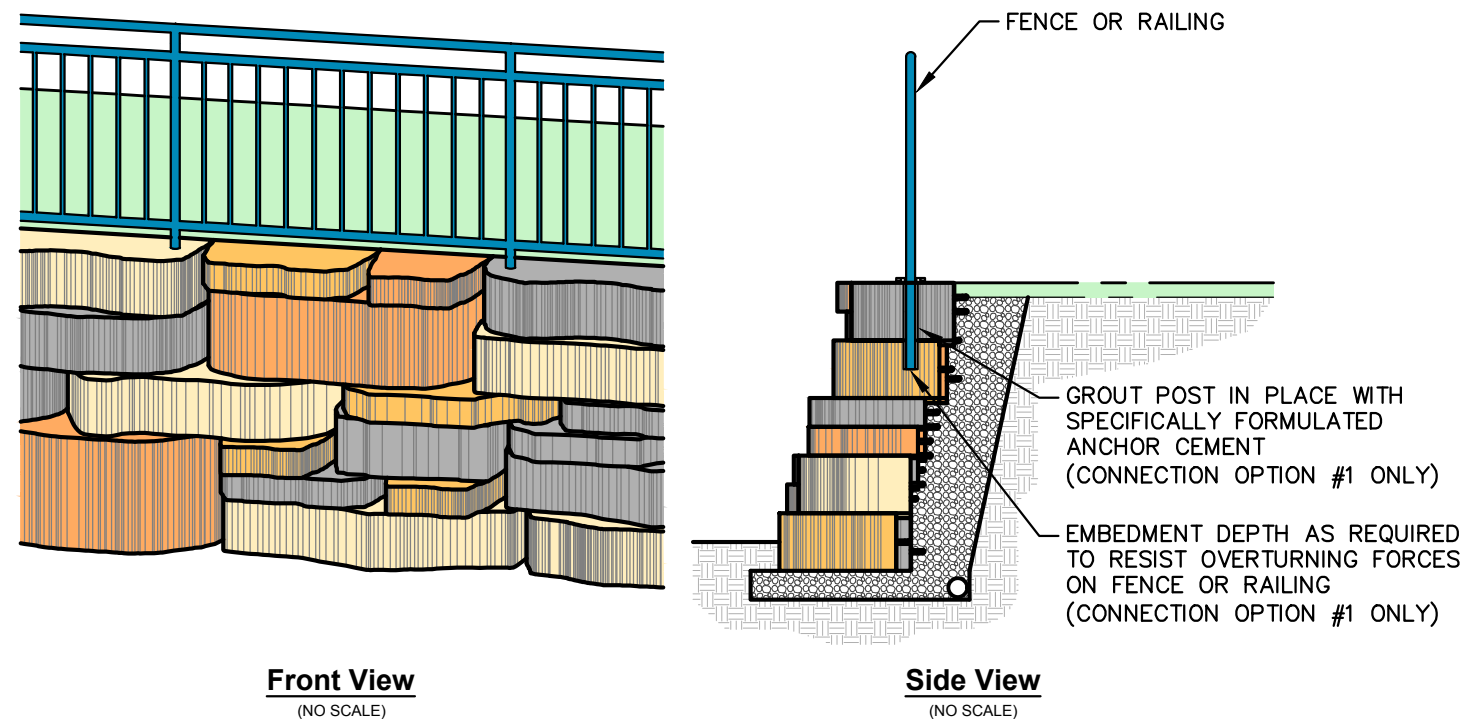
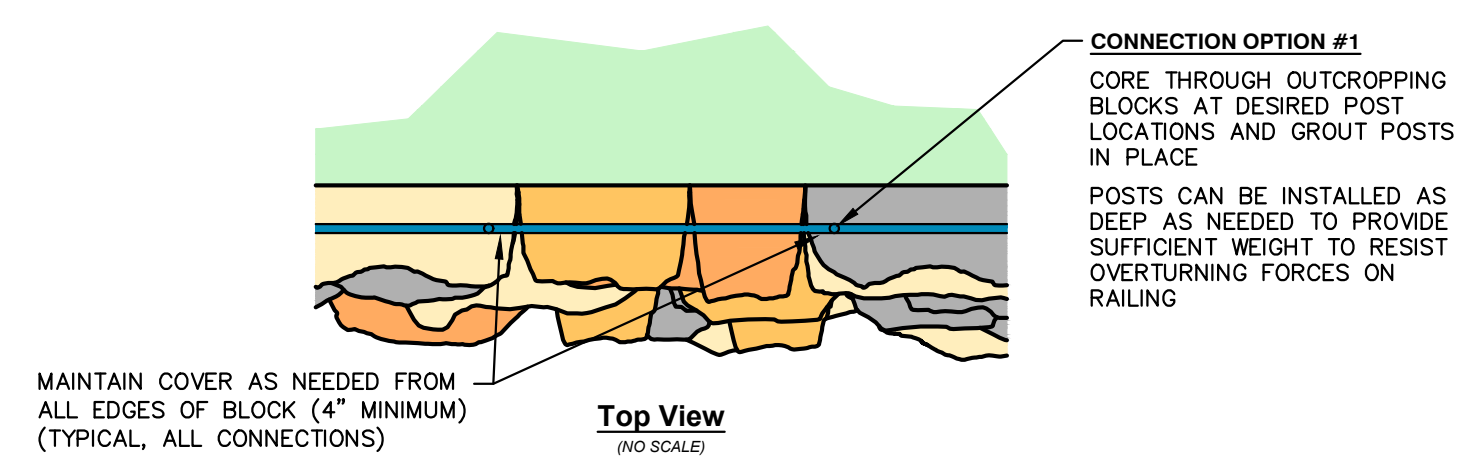
TOP VIEWS OF DIFFERENT HEIGHT BLOCKS
(NO SCALE)



PROSPECTIVE VIEW OF BACK OF WALL
(NO SCALE)

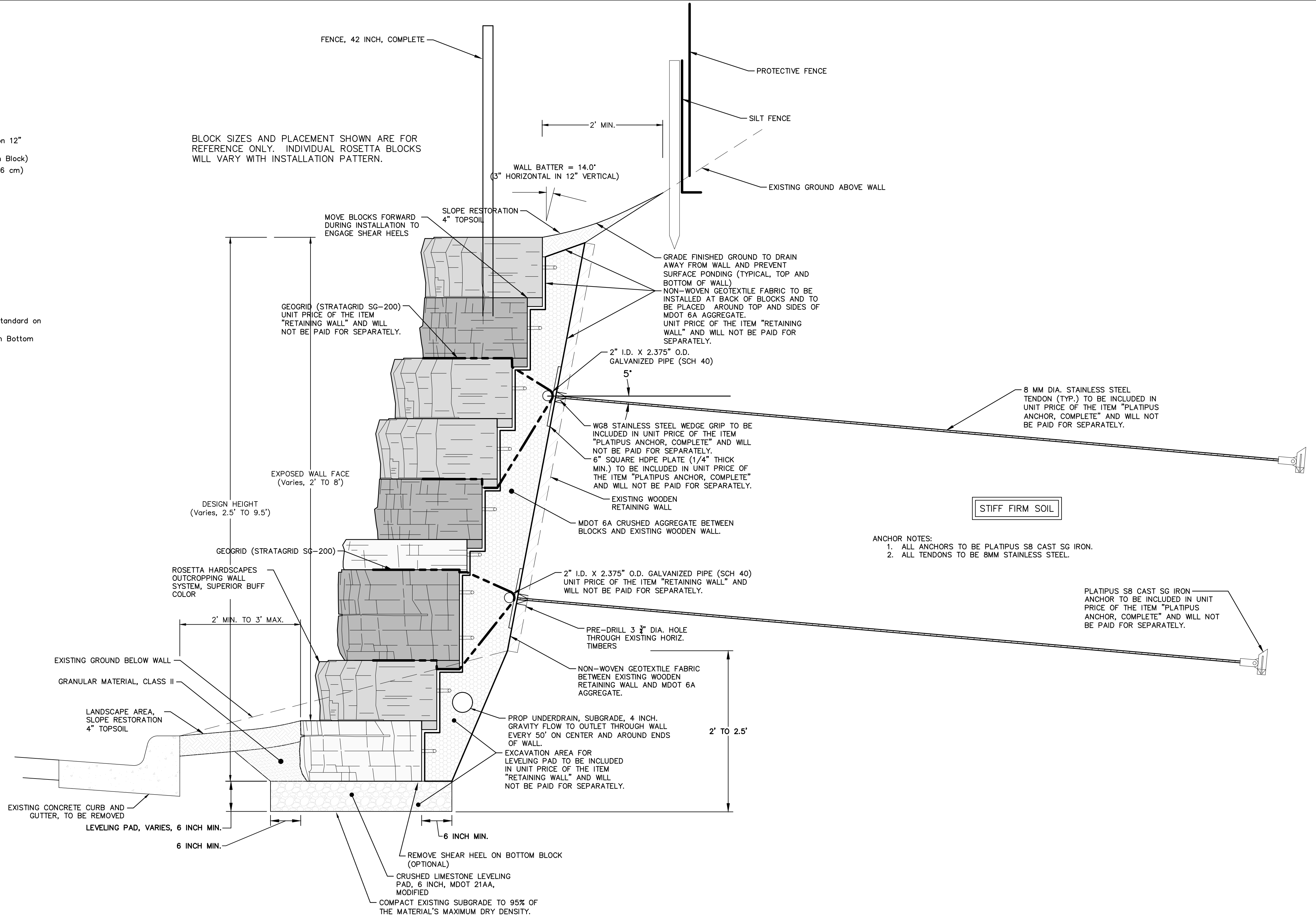


PROPER BOTTOM ROW INSTALLATION FOR ROSETTA HARDSCAPES BLOCKS



TYPICAL FENCE OR RAILING CONNECTIONS TO ROSETTA OUTCROPPING WALLS

BLOCK SIZES AND PLACEMENT SHOWN ARE FOR REFERENCE ONLY. INDIVIDUAL ROSETTA BLOCKS WILL VARY WITH INSTALLATION PATTERN.



TYPICAL WALL SECTION

811
Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED

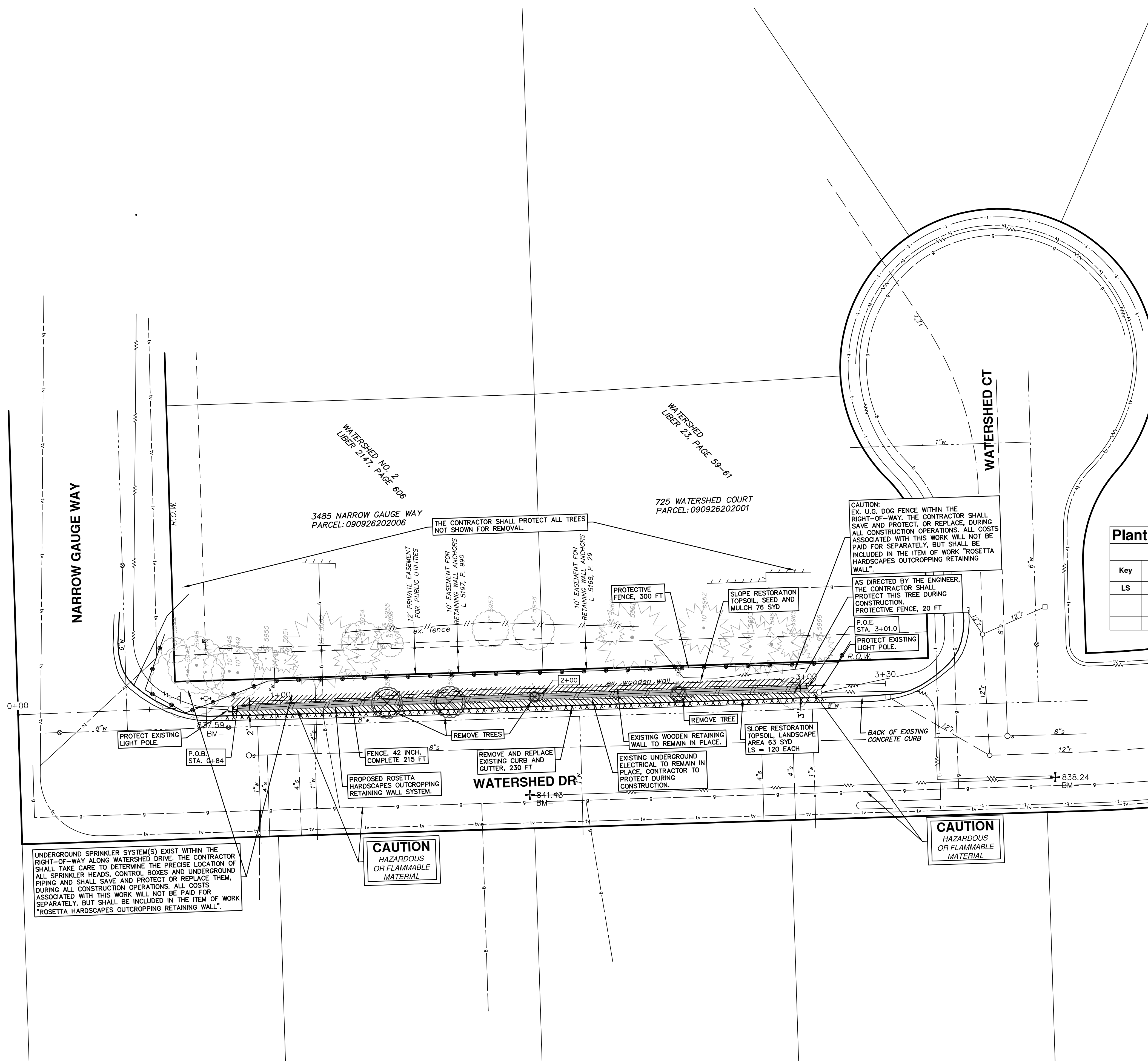
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WATERSHED DRIVE RETAINING WALL
ROSETTA OUTCROPPING DETAILS

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
PO BOX 866
ANN ARBOR MI 48106-0867
ANN ARBOR 734.754.4410
WWW.A2gov.org

CITY OF ANN ARBOR
SCALE: NTS
DRAWING No. 2014040-4
SHEET No. 4 OF 8

R:\2014040 Watershed Dr\Plan Production\Primary\2014040Det.dwg Dwg Created: 1-Aug-17 - 1-Aug-17 - _o2_standard bw.stb - Plot Date: 2-Aug-17

R:\2014040 Watershed Dr\Plan Production\Primary\2014040Rem.dwg Dwg Created: 1-Aug-17 -- a2_standard bw.stb -- Plot Date: 2-Aug-17



Plant Schedule

Key	QTY	Botanical Name	Common Name	Spacing	Form
LS		Liriope spicata	Lilyturf	12" o.c.	4-inch pot

UNDERGROUND SPRINKLER SYSTEM(S) EXIST WITHIN THE RIGHT-OF-WAY ALONG WATERSHED DRIVE. THE CONTRACTOR SHALL TAKE CARE TO DETERMINE THE PRECISE LOCATION OF ALL SPRINKLER HEADS, CONTROL BOXES AND UNDERGROUND PIPING AND SHALL SAVE AND PROTECT OR REPLACE THEM, DURING ALL CONSTRUCTION OPERATIONS. ALL COSTS ASSOCIATED WITH THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "ROSETTA HARDSCAPES OUTCROPPING RETAINING WALL".

CAUTION
HAZARDOUS
OR FLAMMABLE
MATERIAL

CAUTION
HAZARDOUS
OR FLAMMABLE
MATERIAL


DESIGN OF THE REINFORCED SOIL STRUCTURE IS BASED ON THE FOLLOWING PARAMETERS:

	EFFECTIVE FRICTION ANGLE	EFFECTIVE COHESION	MOIST UNIT WT
RETAINED SOILS	34°	0 psf	120 pcf
FOUNDATION SOILS	34°	0 psf	120 pcf

FACTORS OF SAFETY:
INTERNAL STABILITY:
MINIMUM FACTOR OF SAFETY FOR UNCERTAINTIES = 1.5
MINIMUM FACTOR OF SAFETY FOR GEOGRID PULLOUT = 1.5
MINIMUM FACTOR OF SAFETY FOR SLIDING AT LOWEST = 1.5
EXTERNAL STABILITY:
MINIMUM FACTOR OF SAFETY FOR SLIDING AT BASE = 1.5
MINIMUM FACTOR OF SAFETY FOR OVERTURNING = 2.0

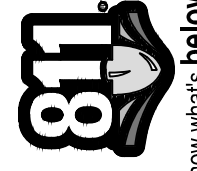
SOIL CONDITIONS:
NO SOIL INVESTIGATION WAS PERFORMED IN THE AREA OF THE ANCHORS. ANY CHANGE IN SOIL CONDITIONS OR PROJECT CHARACTERISTICS FROM THE ASSUMED CONDITIONS WILL VOID THE DESIGN.
SURCHARGE LOADING = N/A DUE TO 33.7 DEG. BACK SLOPE

HYDROSTATIC DESIGN BASED ON GROUNDWATER LEVEL BELOW THE BOTTOM OF THE WALL.
SEISMIC DESIGN = NONE
MAXIMUM APPLIED BEARING PRESSURE = 1,500 PSF



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
WATERSHED DRIVE RETAINING WALL
WALL LAYOUT PLAN & REMOVALS

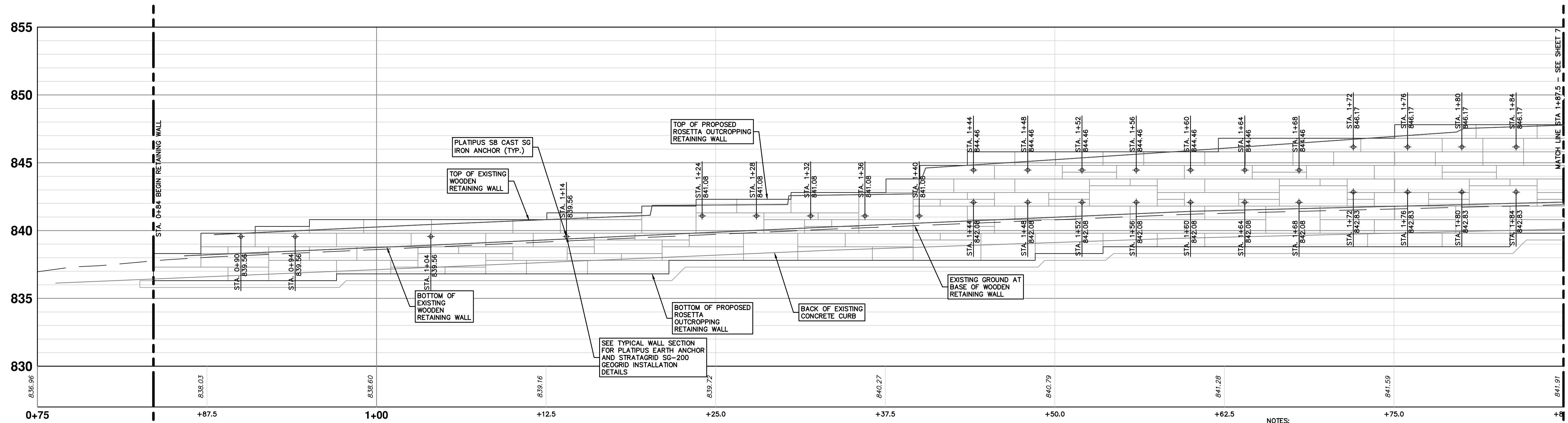
SCALE PLAN: 1" = 20'
DRAWING NO.: 2014040-5
SHEET NO. 5 OF 8



Know what's below.
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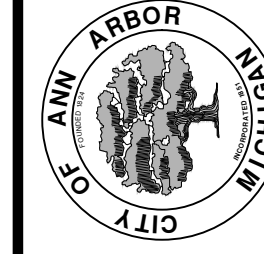
REV.	DESCRIPTION	DATE	DRAWN	CHECKED

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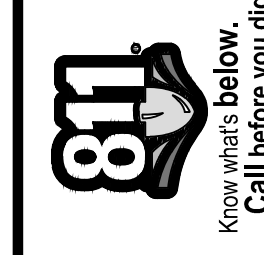


- NOTES:
 1. ALL ANCHORS TO BE PLATIPUS S8 CAST SG IRON.
 2. ALL TENDONS TO BE 8 MM STAINLESS STEEL.

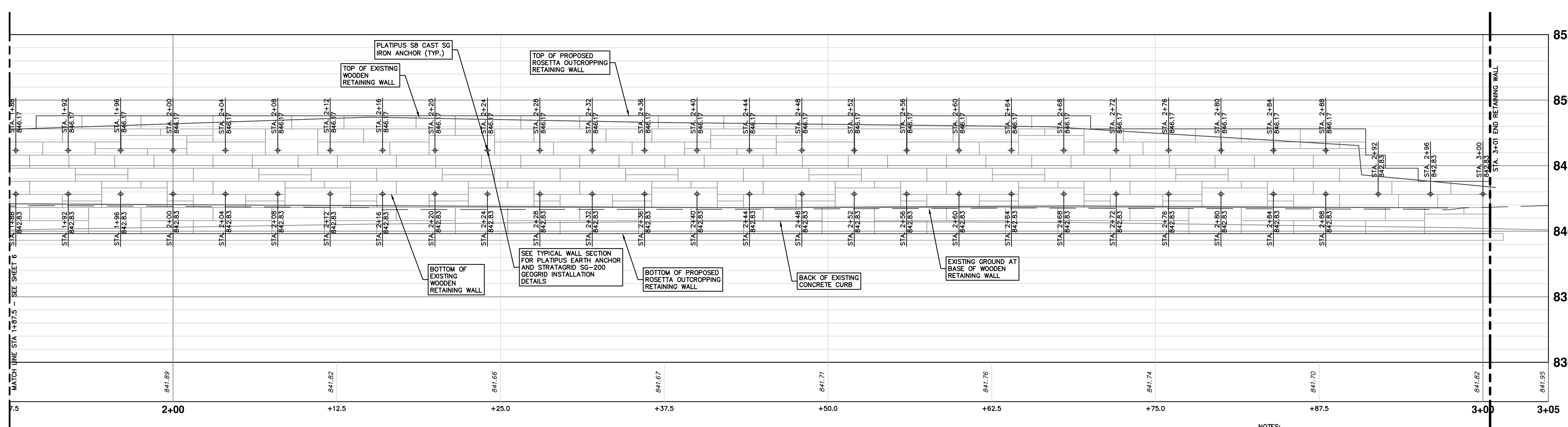
Platipus Anchor Schedule			
Watershed Drive Retaining Wall			
Wall Station	Elevation (ft)	Minimum Drive Length (ft)	Required Min. Holding Capacity (lbs)
0+90	839.56	12	6075
0+94	839.56	12	6075
1+04	839.56	12	6075
1+14	839.56	12	6075
1+24	841.08	12	6075
1+28	841.08	12	6075
1+32	841.08	12	6075
1+36	841.08	12	6075
1+40	841.08	12	6075
1+44	842.08	12	6075
	844.46	12	7000
1+48	842.08	12	6075
	844.46	12	7000
1+52	842.08	12	6075
	844.46	12	7000
1+56	842.08	12	6075
	844.46	12	7000
1+60	842.08	12	6075
	844.46	12	7000
1+64	842.08	12	6075
	844.46	12	7000
1+68	842.08	12	6075
	844.46	12	7000
1+72	842.83	12	6075
	846.17	12	7000
1+76	842.83	12	6075
	846.17	12	7000
1+80	842.83	12	6075
	846.17	12	7000
1+84	842.83	12	6075
	846.17	12	7000
1+88	842.83	12	6075
	846.17	12	7000
1+92	842.83	12	6075
	846.17	12	7000



REV.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			



R:\2014040 Watershed Dr\Plan Production\Primary\2014040 Anchors.dwg Dwg Created: 25-Jul-17 - _a2 standard bw.stb - Plot Date: 2-Aug-17



- NOTES:
 1. ALL ANCHORS TO BE PLATIPUS S8 CAST SG IRON.
 2. ALL TENDONS TO BE 8 MM STAINLESS STEEL.

Platipus Anchor Schedule Watershed Drive Retaining Wall			
Wall Station	Elevation (ft)	Minimum Drive Length (ft)	Required Min. Holding Capacity (lbs)
1+96	842.83	12	6075
2+00	846.17	12	7000
2+04	846.17	12	7000
2+08	842.83	12	6075
2+12	846.17	12	7000
2+16	842.83	12	6075
2+20	846.17	12	7000
2+24	842.83	12	6075
2+28	846.17	12	7000
2+32	842.83	12	6075
2+36	846.17	12	7000
2+40	842.83	12	6075
2+44	846.17	12	7000
2+48	842.83	12	6075
2+52	846.17	12	7000
2+56	842.83	12	6075
2+60	846.17	12	7000
2+64	842.83	12	6075
2+68	846.17	12	7000
2+72	842.83	12	6075
2+76	846.17	12	7000
2+80	842.83	12	6075
2+84	846.17	12	7000
2+88	842.83	12	6075
2+92	846.17	12	7000
2+96	842.83	12	6075
3+00	842.83	12	6075

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WATERSHED DRIVE RETAINING WALL


###

WALL ELEVATION - ANCHORS-2

SCALE PLAN: 1" = 4'
 VERT: 1" = 4'

DRAWING No. **2014040-7**

SHEET No. **7 OF 8**

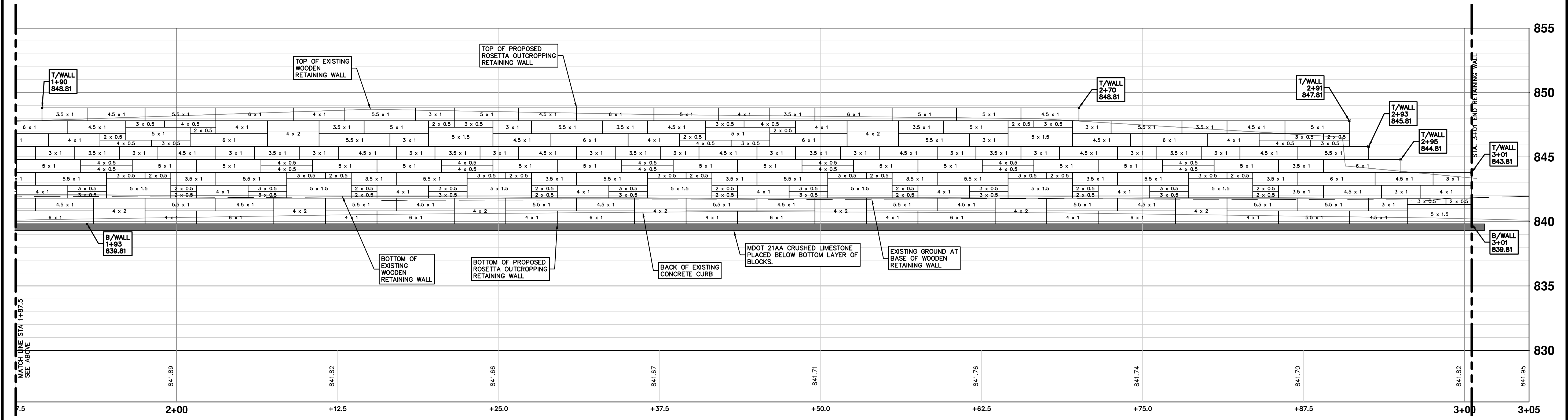
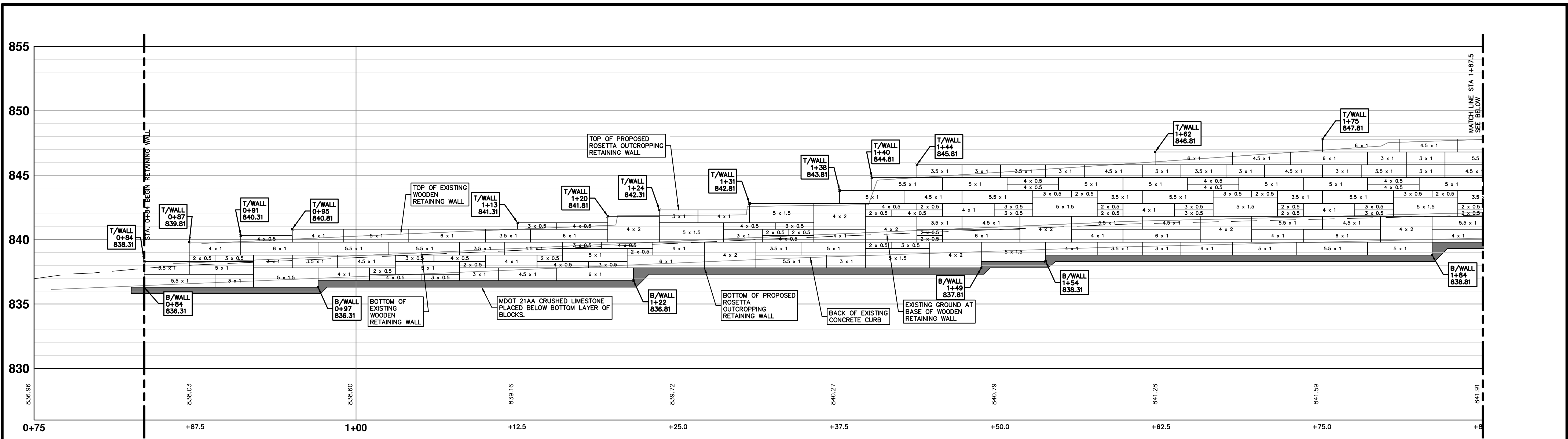


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REV.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			

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 Know what's below.
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R:\2014040 Watershed Dr\Plan Production\Primary\2014040 Wall.dwg Dwg Created: 7-Jul-17 - a2 standard bw.stb - Plot Date: 2-Aug-17



- NOTES:
1. 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 BLOCK.
 2. CONTRACTOR MUST MAINTAIN THE MINIMUM BLOCKS BURIED BELOW GRADE AS SHOWN ON THE ELEVATION VIEW.
 3. BLOCK TO CONSIST OF ROSETTA HARDSCAPES OUTCROPPING WALL SYSTEM.
 4. ANY CHANGES TO THE ABOVE REFERENCED DRAWINGS WILL VOID THIS DESIGN.
 5. FALL PROTECTION DESIGNED BY OTHERS. USE TYPICAL ROSETTA HARDSCAPES DETAILS (SHEET 4) FOR FENCE POST INSTALLATION.
 6. 4" DRAINAGE PIPE TO BE DAYLIGHTED AT ENDS OF WALL & AT INTERVALS OF 50' O.C. AND COVERED WITH RODENT GUARD.
 7. 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.

811
Know what's below.
Call before you dig.

BY: _____
CHECKED: _____

DATE: _____
DATE: _____

DESCRIPTION: _____

REV: _____

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

WATERSHED DRIVE RETAINING WALL

####

WALL ELEVATION - BLOCK SCHEMATIC

SCALE PLAN: 1" = 4'
VERT: 1" = 4'

DRAWING No. 2014040-8
SHEET No. 8 OF 8