

## Addendum No. 1

### ITB No. 4510, Watershed Drive Retaining Wall Due: Friday, August 25, 2017, 10:00AM (Local Time)

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

The following changes, additions, and/or deletions shall be made to the Invitation to Bid for **ITB No. 4510, Watershed Drive Retaining Wall**, on which proposals will be received on/or before **Friday, August 25, 2017, 10:00AM (Local Time)**.

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. This Addendum includes 16 page(s).

Bidder is to acknowledge receipt of this Addendum No. 1, including all attachments (if any) in its Bid by so indicating on Page ITB-1 of the ITB document. Bids submitted without acknowledgement of receipt of this addendum will be considered nonconforming.

**The following forms provided within this ITB Document must be included in submitted bids.**

- City of Ann Arbor Prevailing Wage Declaration of Compliance
- City of Ann Arbor Living Wage Ordinance Declaration of Compliance
- Vendor Conflict of Interest Disclosure Form
- City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance

**Bids that fail to provide these completed forms listed above upon bid opening will be rejected as non-responsive and will not be considered for award.**

#### I. CORRECTIONS/ADDITIONS/DELETIONS/CLARIFICATIONS

Changes to the Bid document which are outlined below are referenced to a page or section in which they appear clearly. The Bidder is to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

Item #1: Pre-Bid Conference Summary and Attendance Record/Sign-In Sheet pages Addendum 1-4 thru Addendum 1-5.

Item #2: Instructions to Bidders Forms, page IB-4; Construction Type "Heavy" shall be "Heavy and Highway"

Item #3: Detailed Specification, Project Schedule, additional language added for maintaining soil erosion controls on the site until final seeding and restoration is complete.

Item #4: Detailed Specification, Retaining Wall, removed requirement for PE design, signed and sealed shop drawings.

Item #5: Detailed Specification, Platipus Anchors, changed 6"x6" HDPE plate to Galvanized Steel, Platipus LP2, and removed requirement for PE signed and sealed load testing and report.

Item #6: Contract Plan Set; replace Bid issued plan set (sheet 4) with that issued for this Addendum 1 (sheet 4).

Changes include the following "Typical Wall Section" detail:

6" SQUARE GALVANIZED STEEL PLATE, PLATIPUS LP2 (1/4" THICK MIN.), TO BE INCLUDED IN UNIT PRICE OF THE ITEM "PLATIPUS ANCHOR, COMPLETE" AND WILL NOT BE PAID FOR SEPARATELY.

AFTER WEDGE GRIP IS LOADED AND LOCKED, CREATE LOOP AROUND PIPE WITH EXCESS TENDON AND SECURE WITH THREE (3) 8MM STAINLESS STEEL ROPE GRIPS (TYPICAL).

Bidders are responsible for any conclusions that they may draw from the information contained in the Addendum.

## II. Request for Information:

1. Number of Palettes and corresponding Rosetta Hardscapes palette letter anticipated?
  - *Palette A = 37*
  - *Palette B = 37*
  - *Palette C = 18*
    - *Total of 418 blocks*
2. Engineer's Estimate - *\$295,000*
3. Retaining wall underdrain, okay to cut block for outlets? *Yes.*

# Watershed Drive Retaining Wall (ITB No. 4510)

## Pre-Bid Conference Agenda

August 17, 2017, 2:00 p.m.,  
Larcom Building, Basement, Conference Room A

### I. Introductions

### II. General

#### a. Project Overview

Bid Opening – Friday, August 25, 2017, 10:00AM

The City of Ann Arbor is planning to rehabilitate the existing retaining wall along the westerly side of Watershed Drive Right-of-Way between Narrow Gauge Way and Watershed Court. The existing wooden retaining wall is deteriorating.

As part of this project, the City will be retrofitting a modular block retaining wall in front of the existing wooden retaining wall. The retrofit of the wall is proposing to utilize an anchor tie-back, support system that is driven into the earth behind the wall. The proposed driven earth anchor tie-backs will minimize the need for the removal of vegetation and trees behind the existing wooden wall.

The anchor lengths necessary to provide a stable retaining wall will extend beyond the Watershed Drive Right-of-Way. The City worked with the adjoining property owners to secure permanent easements for the driven earth anchor tie-backs. These easements would allow for the construction of the earth anchors for the purpose of supporting the wall.

#### b. Standard Specifications and Detailed Specifications

##### i. Construction Specifications

##### ii. Project Schedule & Payment

- Starting Date – October 23, 2017
- Completion Date – **The completion date is being extended to May 2018 and into the first growing season. The contractor will maintain the site until final seeding and restoration is complete and accepted by the Engineer.** Project Phasing – There will only be one phase.
- Hours of Work: 7:00 am – 8:00 pm Monday thru Saturday. The City Administrator must approve Sunday work. If the contractor elects to work on Saturday, the Project Engineer must be notified two days before to make sure proper inspection staff is present. )

##### iii. General Conditions

- Street sweeping & dust control shall not be paid for separately and are included in the cost for General Conditions.

Access to driveways - Contractor responsible for maintaining access to driveways during construction, and notifying residents when access will be unavailable.

## Watershed Drive Retaining Wall (ITB No. 4510)

### iv. Project Supervision

#### v. NEW PAY ITEM – Certified Payroll Compliance and Reporting

Contractors will be required to submit weekly certified payrolls, including Tier 1 subcontractors.

Wage rate interviews will be conducted randomly.

Wages must meet the current wage decision, as of ten days before the bid opening.

The pay item for “Certified Payroll Compliance and Reporting,” outlines the contractor’s responsibilities with regard to complying with the prevailing wage requirements and required documentation. This pay item is only for the contractor’s administrative costs; it is not for any difference in wage rates the contractor may have to pay to comply with the prevailing wage requirement.

A certified payroll report template was included in the bid document. Contractors are welcome to use the certified payroll report template provided or a City-approved equivalent prior to project start.

Please remember to list your major subcontractors and applicable references in the bid forms.

### III. Construction

- a. Construction Methods and Sequencing
- b. Maintenance of Traffic
- c. Special Concerns (local traffic access, pedestrians access, tree protection...)

### IV. Addendum Items

- a. Instructions to Bidder Forms Highway Wage Rate Decision is being added. This project covers both Highway and Heavy Work.
- b. Plan sheet Updates.

### V. Other Items

- a. Maintenance of traffic and construction sequencing needs to be completed all at once.
- b. A resident has requested that the Bradford Pear Tree located at the north end of the wall should be protected during construction. Due to this request, an attempt needs to be made at working around this tree. If it is not possible, orders can be issued to replace it.
- c. The initial plans involved a keystone wall. The plate originally shown worked for that type of wall system, which was an HDPE plate. The plate which needs to be used is LP2 (6 by 6 Galvanized steel plate). Modifications will be sent out for the schedule 40 pipe and the excess of the anchor needs to be wrapped around that pipe and fastened with stainless steel rope grips. It will be added in the detail and sent out as addendum.
- d. The grade of road is relatively flat and the retaining wall has a step foundation.

## Watershed Drive Retaining Wall (ITB No. 4510)

### VI. Questions

- a. How many pallets are needed?
  - i. 37 A
  - ii. 37 B
  - iii. 18 C
- b. Will there be a city inspector on site?
  - i. Yes, a city inspector will be present on site.

### Contact Information:

Chris Carson

Project Manager

Phone: (734) 794-6410 ext. 43631

Fax: (734) 994-1744

E-mail: ccarson@a2gov.org

**PRE-BID CONFERENCE SIGN-IN SHEET**

PROJECT: WATERSHED DRIVE RETAINING WALL (ITB No. 4510)

DATE: 08/17/2017

PLEASE PRINT

NAME	REPRESENTING	MAILING ADDRESS	TELEPHONE	EMAIL
Chris Carson Project Manager	City of Ann Arbor - Engineering	Address: 301 E. Huron Street, P.O. Box 8647 City, State: Ann Arbor, MI Zip: 48107-8647	Office: (734) 794-6410, x43631 Mobile: Fax: (734) 994-1744	ccarson@a2gov.org
Civil Engineering Specialist (Project Inspector)	City of Ann Arbor - Engineering	Address: 301 E. Huron Street, P.O. Box 8647 City, State: Ann Arbor, MI Zip: 48107-8647	Office: (734) 794-6410, x43xxx Mobile: Fax: (734) 994-1744	
David Clemons Supervisor - Civil Engineering Specialists	City of Ann Arbor - Engineering	Address: 301 E. Huron Street, P.O. Box 8647 City, State: Ann Arbor, MI Zip: 48107-8647	Office: (734) 794-6410, x43612 Mobile: Fax: (734) 994-1744	dclemons@a2gov.org
JEFF SKINNER	CSE GEOTECHNICAL	Address: 1500 Alloy Parkway City, State: Highland, MI Zip: 48857	Office: ( ) Mobile: ( ) Fax No. ( )	nate.wagonmaker@anlaan.com
Steve Lewis	Anlaan Corp	Address: P.O. Box 599 City, State: Grand Haven Zip: 49417	Office: (616) 846-8442 Mobile: (810) 580-5646 Fax No. (616) 846-6761	
Andrew Rothfild	AR	Address: ' ' City, State: Zip:	Office: ( ) Mobile: ( ) Fax No. ( )	arathfild@a2gov.org
Mike Hoesler	Doughs N. Hoesler	Address: _____ City, State: _____ Zip: _____	Office: ( ) Mobile: ( ) Fax No. ( )	
		Address: _____ City, State: _____ Zip: _____	Office: ( ) Mobile: ( ) Fax No. ( )	

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events and do not cover actual damages that can be shown or quantified nor are they intended to preclude recovery of actual damages in addition to the recovery of liquidated damages.

## Human Rights Information

All contractors proposing to do business with the City shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Section 5, beginning at page GC-3 shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

## Wage Requirements

Section 4, beginning at page GC-1, outlines the requirements for payment of prevailing wages and for payment of a "living wage" to employees providing service to the City under this contract. The successful bidder and its subcontractors must comply with all applicable requirements and provide proof of compliance.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and will be required to provide to the City payroll records sufficient to demonstrate compliance with the prevailing wage requirements. Use of the Prevailing Wage Form provided in the Appendix section or a City-approved equivalent will be required along with wage rate interviews.

For laborers whose wage level are subject to federal, state and/or local prevailing wage law the appropriate Davis-Bacon wage rate classification is identified based upon the work including within this contract. **The wage determination(s) current on the date 10 days before bids are due shall apply to this contract.** The U.S. Department of Labor (DOL) has provided explanations to assist with classification in the following resource link: [www.wdol.gov](http://www.wdol.gov).

For the purposes of this ITB the Construction Type of **Heavy and Highway** will apply.

## Conflict Of Interest Disclosure

The City of Ann Arbor Purchasing Policy requires that prospective Vendors complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected Vendor unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may awarded on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Vendor Conflict of Interest Disclosure Form is attached.

## Major Subcontractors

The Bidder shall identify on Bid Form Section 4 each major subcontractor it expects to engage for this Contract if the work to be subcontracted is 15% or more of the bid sum or over \$50,000, whichever is less. The Bidder also shall identify the work to be subcontracted to each major subcontractor. The Bidder shall not change or replace a subcontractor without approval by the

CITY OF ANN ARBOR  
DETAILED SPECIFICATION  
FOR  
**PROJECT SCHEDULE**

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Complete the entirety of work under this Contract in accordance with, and subject to, the scheduling requirements as outlined below, and all other requirements of the Contract Documents.

By no later than **Pre-Construction Meeting** the Contractor shall submit a detailed schedule of work for the Engineer's review and approval. The proposed schedule must fully comply with the scheduling requirements contained in this Detailed Specification. The Contractor shall update the approved work schedule each week and present it to the Engineer at the weekly progress meeting.

The Contractor will receive two (2) copies of the Contract, for his/her execution, on or before **October 17, 2017**. The Contractor shall properly execute both copies of the Contract and return them, with the required Bonds and Insurance Certificate, to the City **no later than October 23, 2017**.

The Contractor may begin construction on only after receiving the copy of executed contract documents and the Notice to Proceed from the City. Appropriate time extensions shall be granted if the Notice to Proceed is delayed due to the circumstances controlled by the City.

All contract work must be complete and open to traffic by **December 11, 2017** or within **Sixty (60)** calendar days from the date specified in the Notice to Proceed.

The Contractor must anticipate maintaining the on-site soil erosion and sedimentation controls after completion of the retaining wall and until such time as the final landscaping and seeding can be appropriately completed and established. Normal seeding dates for permanent cover are May 1 to October 10.

Any costs associated with down time, demobilizing/remobilizing, temporary paving or restoration, temporary pavement markings, and removal/replacement of traffic control devices required shall be borne solely by the Contractor at no additional cost to the Project.

Failure to complete all work as specified herein within the times specified herein, including time extensions granted thereto as determined by the Engineer, shall entitle the City to deduct from the payments due the Contractor, **\$500** in "Liquidated Damages", and not as a penalty, for each and every calendar day beyond the allowed number of calendar days to complete the above specified work.

The Contractor may propose to adjust the limits or sequencing of construction in order to complete the work more efficiently. Changes to the recommended construction sequence must be approved in writing by the Engineer prior to construction and must assure all required coordination with other projects and time lines.

The Engineer may delay or stop the work due to threatening weather conditions. No compensation shall be due the Contractor for unused materials or downtime due to rain, or the threat of rain. The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties resulting from its decision to work in the rain.



The Contractor shall not work in the dark except as approved by the Engineer and shall provide lighting for night work as detailed elsewhere in this contract. The Engineer may stop the work, or may require the Contractor to defer certain work to another day, if, in the Engineer's opinion, the Contractor cannot be complete the work within the remaining daylight hours, or if inadequate daylight is present to properly perform or inspect the work. No compensation shall be due to the Contractor for unused materials or downtime, when the Engineer directs work stoppage for reasons due to darkness and/or inadequate remaining daylight. The Contractor is solely responsible for repairing all damages to the work and to the site, including road infrastructures, road subgrades, and any adjacent properties, which result from working in the dark.

Assessment of Liquidated Damages will occur until the required work is complete in the current construction season. If, with the Engineer's approval, work extends beyond seasonal limitations, the assessment of Liquidated Damages will discontinue until the work resumes in the following construction season.

If the construction contract is not complete within the specified period(s) including any extensions of time granted thereto, at the sole discretion of the City of Ann Arbor, this Contract may be terminated. Should this occur no additional compensation will be due to the Contractor, and the Contractor may be forbidden to bid on future City of Ann Arbor projects for a period of at least three (3) years. If the Engineer elects to terminate the Contract, payment for contract items with a Lump Sum unit price will be up to a maximum amount equal to the percentage of the contract work that is complete at the time of termination.

Time is of the essence in the performance of the work of this contract. The Contractor is expected to mobilize sufficient personnel and equipment and work throughout all authorized hours to complete the project by the intermediate (location specific) and final completion dates. Should the Contractor demonstrate that they must work on some Sundays in order to maintain the project schedule, they may do so between the hours of 9:00 a.m. and 5:00 p.m. with prior approval from the City. There will be no additional compensation due to the Contractor for work performed on Sundays.

Costs for the Contractor to organize, coordinate, and schedule all of the project work will not be paid for separately, but shall be included in the bid price of the Contract Item "General Conditions, Max \$\_\_\_\_"

CITY OF ANN ARBOR  
 DETAILED SPECIFICATION  
 FOR  
**RETAINING WALL, ROSETTA<sup>®</sup> OUTCROPPING WALL SYSTEM**

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**a. Description** This work shall consist of installing a complete Rosetta Hardscapes Outcropping Wall System, or Engineer approved equal, in accordance with all the manufacturer's specifications and recommendations, and the 2012 Michigan Department of Transportation (MDOT) Standard Specifications for Construction; excavation for leveling pad, providing, placing, and compacting 21AA Aggregate leveling pad; providing, placing, and compacting 6A Aggregate and Class II granular backfill material; furnishing soil reinforcing geogrid, if required by the manufacturer; and constructing the wall true to the lines and grades as shown on the Plans, or as directed by the Engineer.

**b. Materials**

WALL UNITS

- A. Wall units shall be Rosetta Hardscapes Outcropping, Superior Buff color, as produced by a licensed manufacturer.
- B. Wall units shall have Rosetta Hardscapes block specifications and be made from wet cast, Ready-Mixed concrete in accordance with ASTM C-94, latest revision, and per the following chart:

Climate (Weathering Regions per ASTM C33)	Air Content	28 Day Compressive Strength <i>psi (MPa)</i>	Slump* <i>in (cm)</i>	Min. Concrete Temp. at Placement <i>°F (°C)</i>
Negligible	1½%-4½%	4000 (27.6)	3 to 5 (7.6 to 10.2)	50 (10)
Moderate	3%-6%	4000 (27.6)	3 to 5 (7.6 to 10.2)	50 (10)
Severe	4½%-7½%	4000 (27.6)	3 to 5 (7.6 to 10.2)	50 (10)

All Rosetta Hardscapes products shall use frost-free aggregate.

\*Higher slumps are allowed if achieved by use of appropriate admixtures.

Notwithstanding anything stated above, all material used in the wall units must meet applicable ASTM and local requirements for exterior concrete.

- C. Exterior block dimensions, as measured in accordance with ASTM C140, shall be uniform and consistent. Maximum dimensional deviations shall be 0.125 inch (3.2 mm) or 2%, whichever is less, excluding the architectural surface.
- D. Maximum width (face to back) deviation including the architectural surface shall be 1.0 inch (2.5 cm). Exposed faces shall have a textured finish. Other surfaces to be smooth

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form type. Dime-size bug holes on the block face may be patched and/or shake-on color stain can be used to blend into the remainder of the block face.

E. Shear heels shall be intact and free from cracks or other defects.

**c. Submittals** The Contractor shall submit for review and approval by the Engineer, a complete set of shop plans in accordance with Section 104.02 of the 2012 MDOT Standard Specifications for Construction and this Detailed Specification. The shop plans shall include all elevations and dimensions necessary for construction; detail the length, locations, type of connections to the wall system for the geogrid reinforcing to be placed, if required; detail quantities of materials to be provided (retaining wall items only), and detail the sequence and method of installation and construction.

The Contractor should expect that the City will require 21 calendar days for each plan review cycle needed to develop approved plans, and that revisions may be required after each review.

No extension of time or additional compensation will be granted to the Contractor due to delays in preparing the final plans and specifications or securing acceptance from the City.

**d. Construction.** Any modular block wall system supplied shall be capable of being constructed within the available right(s)-of-way as currently established for the project. Any modular block system which cannot be constructed within the existing right(s)-of-way, including all necessary excavation to install the wall system and geogrid, if required, will be considered as a cause for rejection of the proposed wall system.

A MDOT 21AA limestone base, and a sand leveling course if required, shall be placed true to line and grade as shown on the Plans, as directed by the Engineer or as required by the Manufacturer. The limestone base shall be inspected and approved by the Engineer prior to construction of the retaining wall system.

The retaining wall system shall be backfilled in accordance with the Manufacturers requirements. Remaining excavated area shall be backfilled with MDOT Class II Granular material compacted to 95% of its maximum unit weight, or as specified by the Manufacturer. Backfill shall be placed and compacted in 6 inch lifts.

All areas immediately beneath the installation area for the geogrid shall be properly prepared true to the lines and grades as detailed on the plans, specified elsewhere with the specifications, or directed by the Engineer.

In general, the geogrid shall be installed in accordance with the manufacturer's recommendations. The geogrid shall be placed with the layers of the compacted soil as shown on the plans, or as directed by the Engineer.

The geogrid shall be placed in continuous longitudinal strips in the direction of main reinforcement and adjacent strips do not need to be overlapped. However, if the Contractor is unable to complete a required length with a single continuous length of geogrid a joint may be made for the full width of the strip by interlacing over and under the main reinforcing strands using a solid rod or hollow pipe of similar material and strength. No end joints will be allowed in any two adjacent strips or within 10 feet of the face of the embankment or, in the case of a spill through slope, in

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front of the abutment. In the event that the required length of geogrid reinforcement is greater than the roll length, then end joints will be allowed in adjacent strips, but they cannot be with 65 feet of one another as measured along the length of the strip. Every effort should be made to keep the number of end joints to a minimum and widely spaced throughout the placement area.

After a layer of geogrid has been placed, suitable means, such as pins or small piles of soil, shall be used to hold the geogrid in position until the subsequent soil layer can be placed. Under no circumstance shall a track-type vehicle be allowed on the geogrid before at least six inches of soil has been placed on the geogrid.

Only that amount of geogrid required for immediately pending work shall be placed to prevent undue damage to the geogrid. After a layer of geogrid has been placed, the next succeeding layer of soil shall be placed and compacted as appropriate. After the specified soil layer has been placed, the next geogrid layer shall be installed. The process shall be repeated for each subsequent layer of geogrid and soil.

The overlapping of the geogrid shall be permitted as required by the plans, the manufacturer's recommendations, and these specifications.

When the roll width is greater than the width of geogrid required, the geogrid may be cut with a razor, knife, abrasion saw, or similar tool.

The retaining wall systems shall be constructed according to manufacturer's recommendations. In case of conflict between this Detailed Specification and the manufacturer's specifications, the Engineer shall determine which specification shall govern.

**e. Measurement and Payment.** The completed work as described will be paid at the contract unit price for the following contract (pay) items:

<u>Pay Item</u>	<u>Pay Unit</u>
Modular Block Retaining Wall, Rosetta Outcropping	Square Foot

The Contractor will be paid per square foot of wall as installed and will be measured along all split finished faces, including cap stones. In areas where the wall is double-faced, both faces will be measured and paid separately.

This item of work shall include all labor, materials, and equipment necessary to provide a complete installation of the retaining wall(s) as detailed on the plan sheets and the approved shop drawings. It shall also include, but not be limited to; all required excavation necessary to construct the proposed retaining wall; the furnishing, placement, and compaction of the aggregate and sand base; the furnishing and placement of all needed retaining wall materials; the furnishing, placement, and compaction of all backfill materials as indicated on the plan sheets, details, and the approved shop drawings; the furnishing and installation of soil reinforcement geogrid and wrapped underdrain; constructing the wall true to lines and grades as shown on the plans, or as directed by the Engineer; and, the clean-up and removal of all spoils at the completion of the retaining wall installation.

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The quantities presented on the plan sheets and bid forms represent estimated quantities. The actual modular block retaining wall to be constructed may vary in height or length by any amount. If the modular block constructed varies from the approved construction plan(s), it shall not be considered to be a basis of a claim and the terms of Section 103.02 of the 2012 MDOT Standard Specifications for Construction shall not apply to this work. Any change to the actual quantity constructed will not be a basis for changes or adjustments to the contract unit price.

CITY OF ANN ARBOR  
 DETAILED SPECIFICATION  
 FOR  
**PLATIPUS EARTH ANCHORS**

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**a. Description.** This work consists of installation of Platipus Anchors, Inc. percussive driven earth anchors at the locations, elevations and lengths shown on the Contract Drawings. The work shall include, but not be limited to mobilization, surveying, drilling, inserting, stressing, load testing, and lock-off of earth anchors at the appropriate locations. The Contractor shall be responsible for installing earth anchors that will develop the load-carrying capacity indicated on the Contract Drawings.

**b. Materials.** The Platipus Anchors, Inc. (Platipus) anchors shall consist of Cast Iron SG S8 anchors' percussion anchors made of hot dipped galvanized gravity die cast spheroidal graphite iron, 8mm stainless steel tendons, and WG8 stainless steel wedge grip with 6-inch square. 1/4" minimum thickness HDPE plate. All anchor components to be verified by a Platipus representative prior to construction. Anchor assemblies shall be manufactured in accordance with ISO 9001 Standards. Anchors shall be of the type, size, and drive length specified in the Platipus Anchor Schedule as shown on the Contract Drawings.

**PLATIPUS EARTH ANCHOR**

A Platipus S8 cast iron anchor system including 8mm stainless steel tensioned tendon with a stainless steel wedge grip.

**ANCHOR**

S8C Hot Dipped Galvanized Cast Iron Anchor (ASTM - A123)

**LOWER TERMINATION**

Stainless Steel Soft Eye including Copper Ferrule

**WIRE TENDON**

16.4' (5M) of 8mm Diameter Marine Grade 316 Stainless Steel Wire

**TOP TERMINATION**

8mm Stainless Steel Wedge Grip and 6"x6" Galvanized Steel Plate, Platipus LP2 (1/4" Thick minimum)

**c. Submittals.** The Contractor shall submit for review and approval by the Engineer, a complete set of shop plans in accordance with Section 104.02 of the 2012 MDOT Standard Specifications for Construction and this Detailed Specification. The shop plans shall include all elevations and dimensions necessary for construction; detail the length, locations, type of connections to the wall system for the Platipus earth anchors to be placed. Anchor holding capacity must be verified at each location by the Contractor and witnessed by the Engineer.

The Contractor should expect that the City will require 21 calendar days for each plan review cycle needed to develop approved plans, and that revisions may be required after each review.

No extension of time or additional compensation will be granted to the Contractor due to delays in preparing the final plans and specifications or securing acceptance from the City.

No soil borings were available at the specific anchor placement areas. Anchor lengths shown on Contract Drawings are estimated minimum, driven lengths. Anchor holding capacities are estimated values based on estimated soil parameters. Field load testing shall be performed for

each anchor to verify minimum required holding capacity is achieved. Contractor to provide temporary shoring as needed.

**d. Construction.** Field load testing to be performed by Platipus Anchors, Inc. Representative at the start of construction to verify design holding capacity. Platipus anchors will be installed at the locations and elevations shown on the Contract Drawings.

Anchor installation and loadlocking shall be in accordance with Platipus detailed recommendations using the equipment recommended by Platipus. All Platipus anchors to be installed at an angle of 5 degrees from perpendicular to the face of the existing wooden retaining wall as shown on the plan sheets and loadlocked at a minimum holding capacity indicated on the Platipus Anchor Schedule as shown on the Contract Drawings.

**e. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price for the following pay item:

<u>Pay Item</u>	<u>Pay Unit</u>
Platipus Anchors, Complete .....	Each

This item of work shall include all labor, materials, and equipment necessary to provide a complete installation of the Earth Anchors as detailed on the plan sheets and the approved shop drawings. The quantity as determined above will be paid for at the contract price per unit of measurement for the particular pay item listed and shown in the bid schedule, which price and payment will be full compensation for the cost of furnishing all labor, equipment and material required to complete the work described in this section. The quantity of earth anchors to be paid for will be the number of earth anchors installed and accepted. No change in the number of earth anchors to be paid for will be made because of the use by the Contractor of an alternative number of earth anchors.



REV.	DESCRIPTION	DATE	BY	CHECKED
00	ADDENDUM #1	8-22-17		

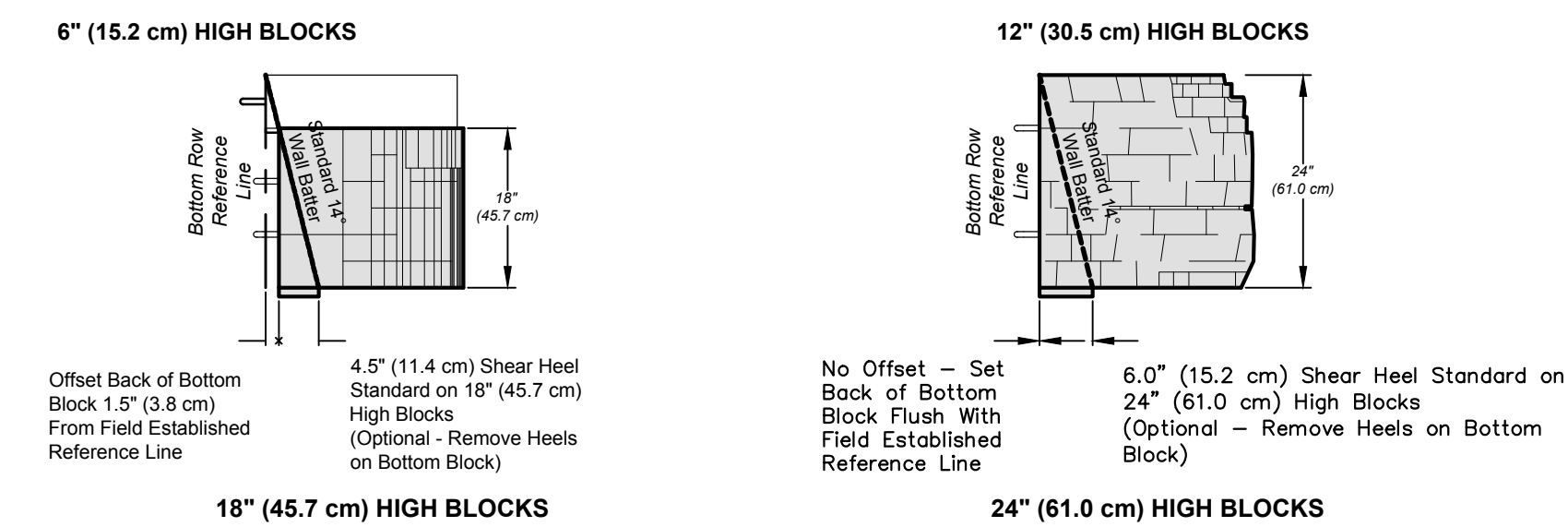
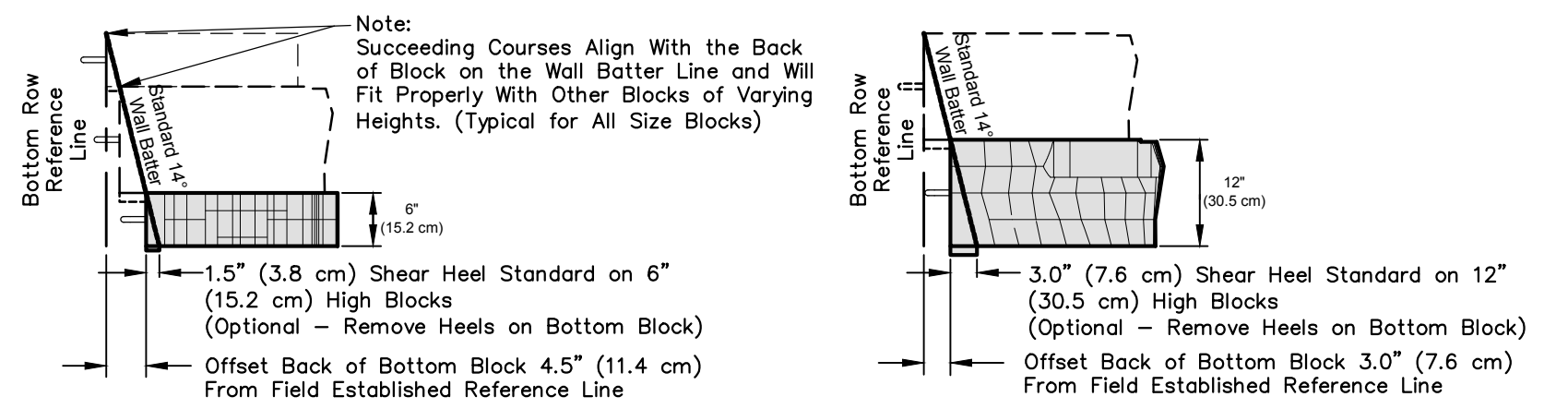
CITY OF ANN ARBOR  
PUBLIC SERVICES  
301 EAST HURON STREET  
PO BOX 86610  
ANN ARBOR MI 48108-8667  
www.aagov.org



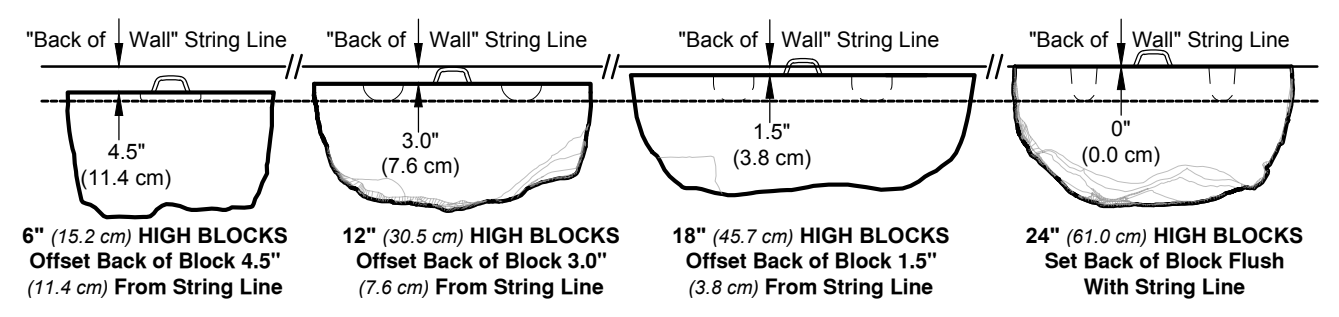
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING  
WATERSHED DRIVE RETAINING WALL  
ROSETTA OUTCROPPING DETAILS

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

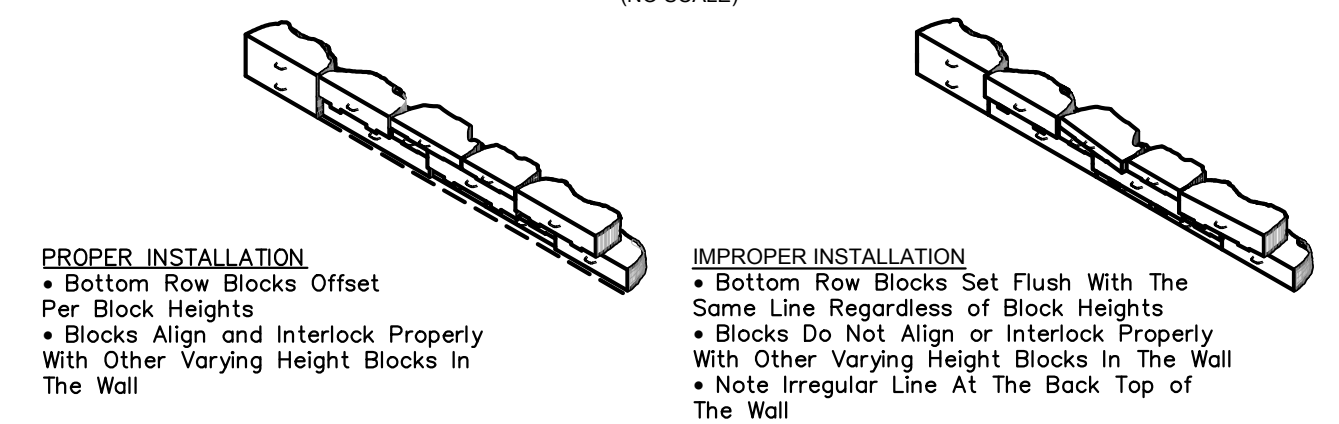
**SIDE VIEWS OF DIFFERENT HEIGHT BLOCKS**  
(NO SCALE)



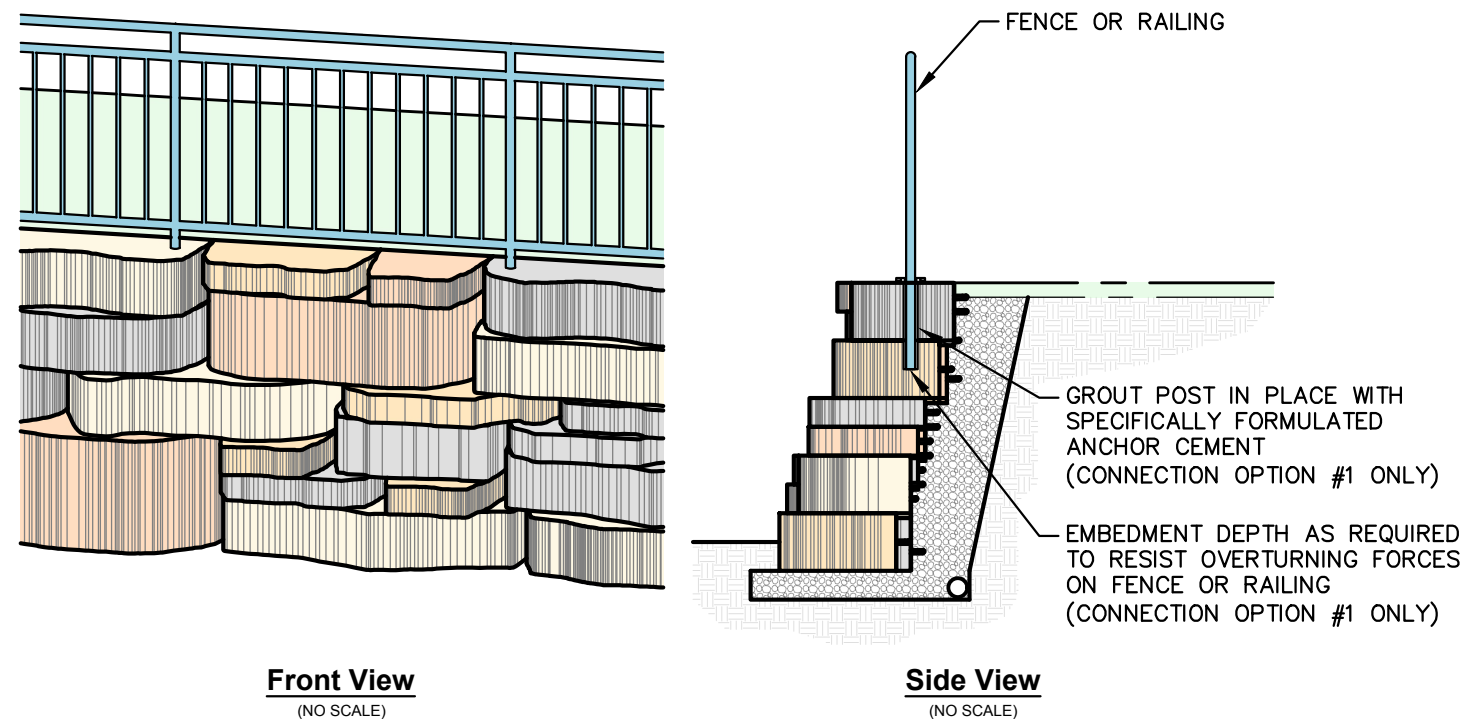
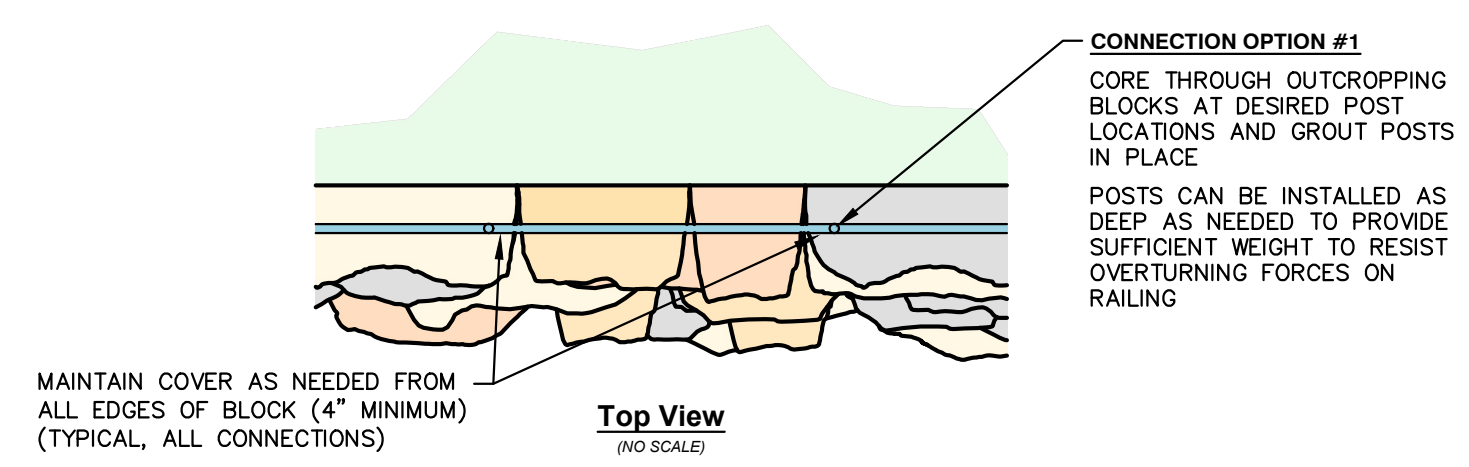
**TOP VIEWS OF DIFFERENT HEIGHT BLOCKS**  
(NO SCALE)



**PROSPECTIVE VIEW OF BACK OF WALL**  
(NO SCALE)

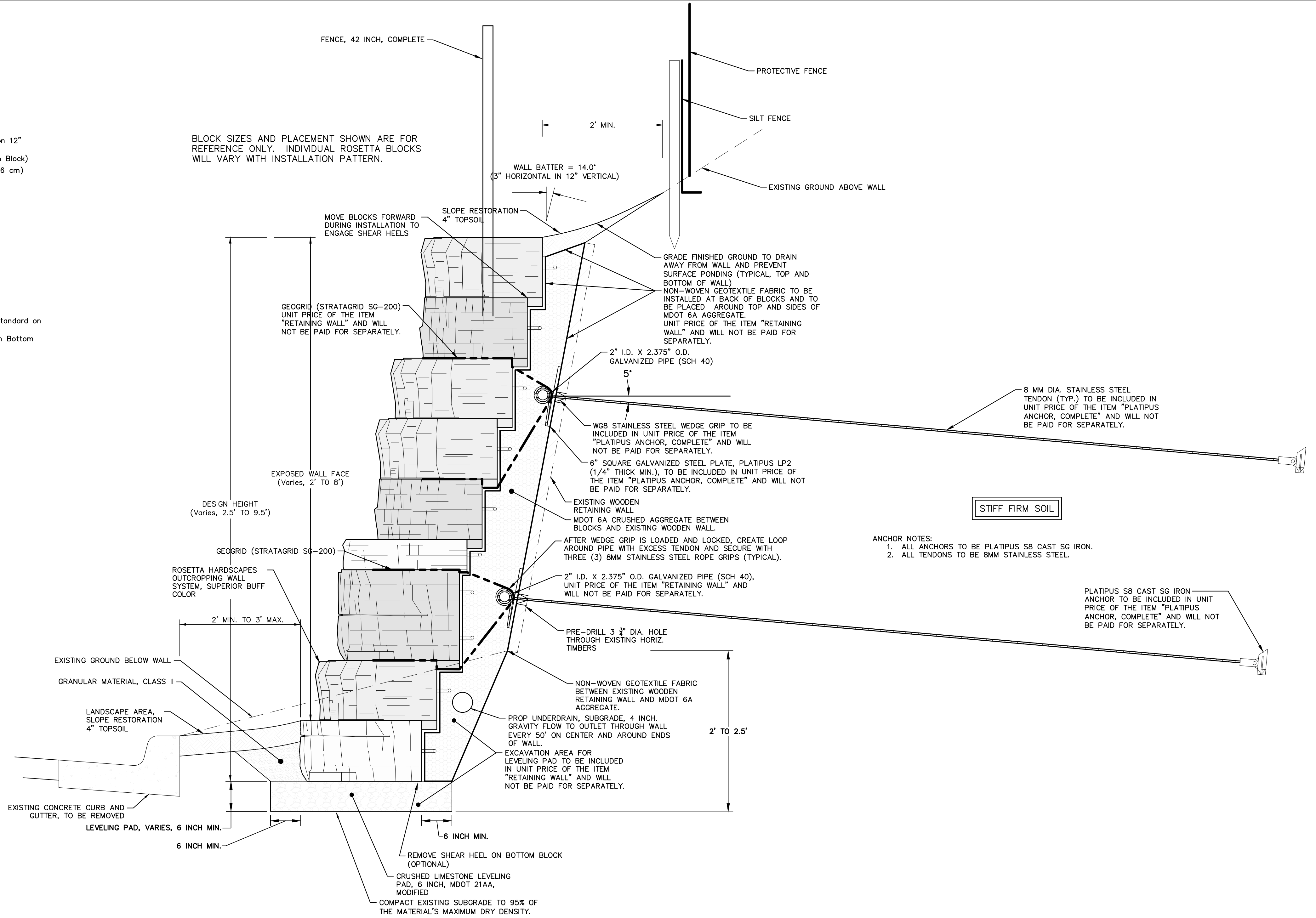


**PROPER BOTTOM ROW INSTALLATION FOR ROSETTA HARDSCAPES BLOCKS**



**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**

R:\2014040 Watershed Dr\Plan Production\Primary\2014040Det.dwg Dwg Created: 22-Aug-17 - \_a2 standard bw.stb - Plot Date: 22-Aug-17