



CITY OF ANN ARBOR ENGINEERING

GEDDES AVENUE AND 2190 STATE STREET RETAINING WALLS

RFP NO. 23-11, FILE NOS. 2022-009 & 2023-003

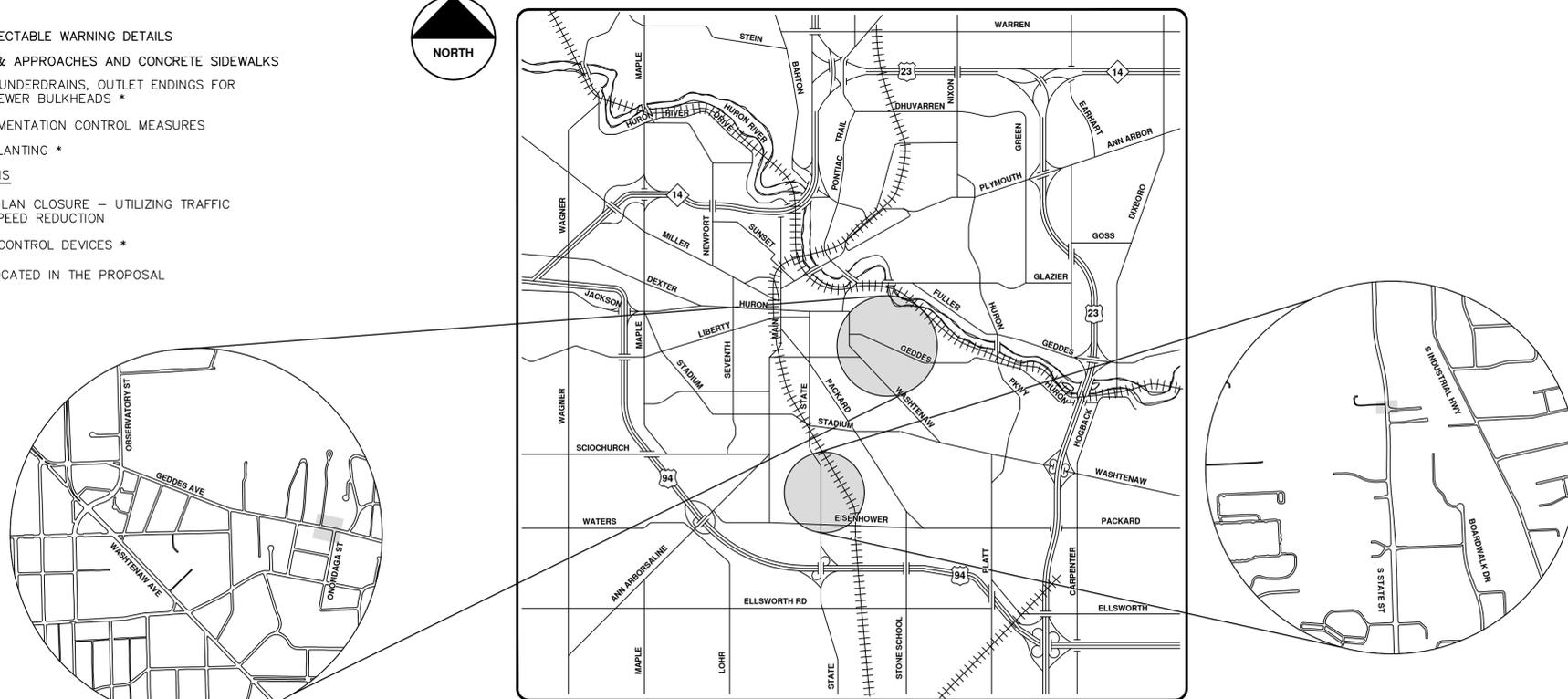
STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MDTOT STANDARD PLANS GIVEN BELOW.

ROAD STANDARD PLANS

- R-28-J CURB RAMP AND DETECTABLE WARNING DETAILS
 - R-29-I DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS
 - R-80-F GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS *
 - R-96-E SOIL EROSION & SEDIMENTATION CONTROL MEASURES
 - R-100-I SEEDING AND TREE PLANTING *
- #### TRAFFIC AND SAFETY STANDARD PLANS
- M0140 2-LANE 2-WAY - 1-LAN CLOSURE - UTILIZING TRAFFIC REGULATORS - NO SPEED REDUCTION
 - WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES *

* = SPECIAL DETAILS LOCATED IN THE PROPOSAL



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 2020 EDITION OF THE MDTOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, ITS DETAILS, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

| SHEET INDEX | |
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| SHEET NUMBER | SHEET TITLE |
| 1 | COVER SHEET |
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| 5 | REMOVAL & CONSTRUCTION PLAN |
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| 8 | CONSTRUCTION PLAN - STATE STREET |
| 9 | DETAILED GRADING PLAN - STATE STREET |
| 10 | DETAIL SHEET - COMPAC_III-STRAIGHT |

PREPARED UNDER THE SUPERVISION OF

JEREMY SCHROT, P.E.
PROJECT MANAGER

03 / 02 / 2023
DATE

SHEET No.
1 OF 10

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

COVER SHEET



CITY OF ANN ARBOR
PUBLIC SERVICES
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EXISTING LEGEND

- FIRE HYDRANT
- GATE VALVE IN BOX
- GATE VALVE IN WELL
- STOP BOX
- WATER VAULT
- WELL
- CATCH BASIN (SQ)
- CATCH BASIN (RD)
- STORM MANHOLE
- NON-CURB CATCH BASIN (SQ)
- END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- POST
- PEDESTRIAN SIGNAL
- SIGN
- HAND HOLE
- ORNAMENTAL LIGHT
- FLOOD LIGHT
- UNKNOWN MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- GAS VALVE
- GAS VENT
- GAS BOX
- ELECTRICAL RISER
- TRANSFORMER
- UTILITY POLE
- LAMP POLE
- GUY ANCHOR
- GUY POLE
- MONITORING WELL
- MAILBOX
- SOIL BORING
- TRAVERSE POINT
- BENCH MARK
- IRON PIPE
- MON BOX

- WATER MAIN
- WATER MAIN ABANDONED
- STORM SEWER
- STORM SEWER ABANDONED
- SANITARY SEWER
- SANITARY SEWER ABANDONED
- GAS MAIN
- GAS MAIN (DEAD)
- ELECTRICAL OVER HEAD
- ELECTRICAL UNDER GROUND
- ELECTRICAL DUCT BANK
- TELEPHONE OVER HEAD
- TELEPHONE UNDER GROUND
- TELEPHONE DUCT BANK
- CABLE TV OVER HEAD
- CABLE TV UNDER GROUND
- FIBER OPTIC
- FIBER OPTIC DUCT BANK
- BOUNDARY
- BUILDING
- CENTERLINE OF DITCH
- CENTERLINE/CROWN OF ROAD
- CONTOUR MAJOR
- CONTOUR MINOR
- EDGE OF WATER
- FLOODPLAIN
- FENCE
- GRAVEL
- GUARDRAIL
- STONE WALL
- R.O.W.
- TREELINE
- WETLAND
- EDGE OF BRUSH
- HEDGE

- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- SHRUB (DECIDUOUS)
- STUMP
- TREE TO REMAIN & PROTECT (DECIDUOUS)
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10
- TREE TO REMAIN & PROTECT (CONIFEROUS)
CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10

PROPOSED LEGEND

- HYDRANT (PLAN)
- WATER GATE WELL
- REDUCER
- WATER GATE VALVE
- WATER STOP BOX
- WATER VAULT
- INLET
- DOUBLE INLET
- INLET JUNCTION CHAMBER
- ROUND CATCH BASIN
- STORM MANHOLE
- DRAIN ARROW
- FLARED END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- BARREL
- SIGN
- PUSH BUTTON
- HAND HOLE
- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- FIBER OPTIC
- ELECTRICAL
- CENTERLINE OF DITCH
- CENTERLINE OF ROAD
- FENCE
- GRAVEL
- SILT FENCE
- PROTECTIVE FENCE
- GUARDRAIL
- LOT/UNIT
- CURB
- TEMPORARY GRADING PERMIT
- CONTOUR MAJOR
- CONTOUR MINOR
- 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

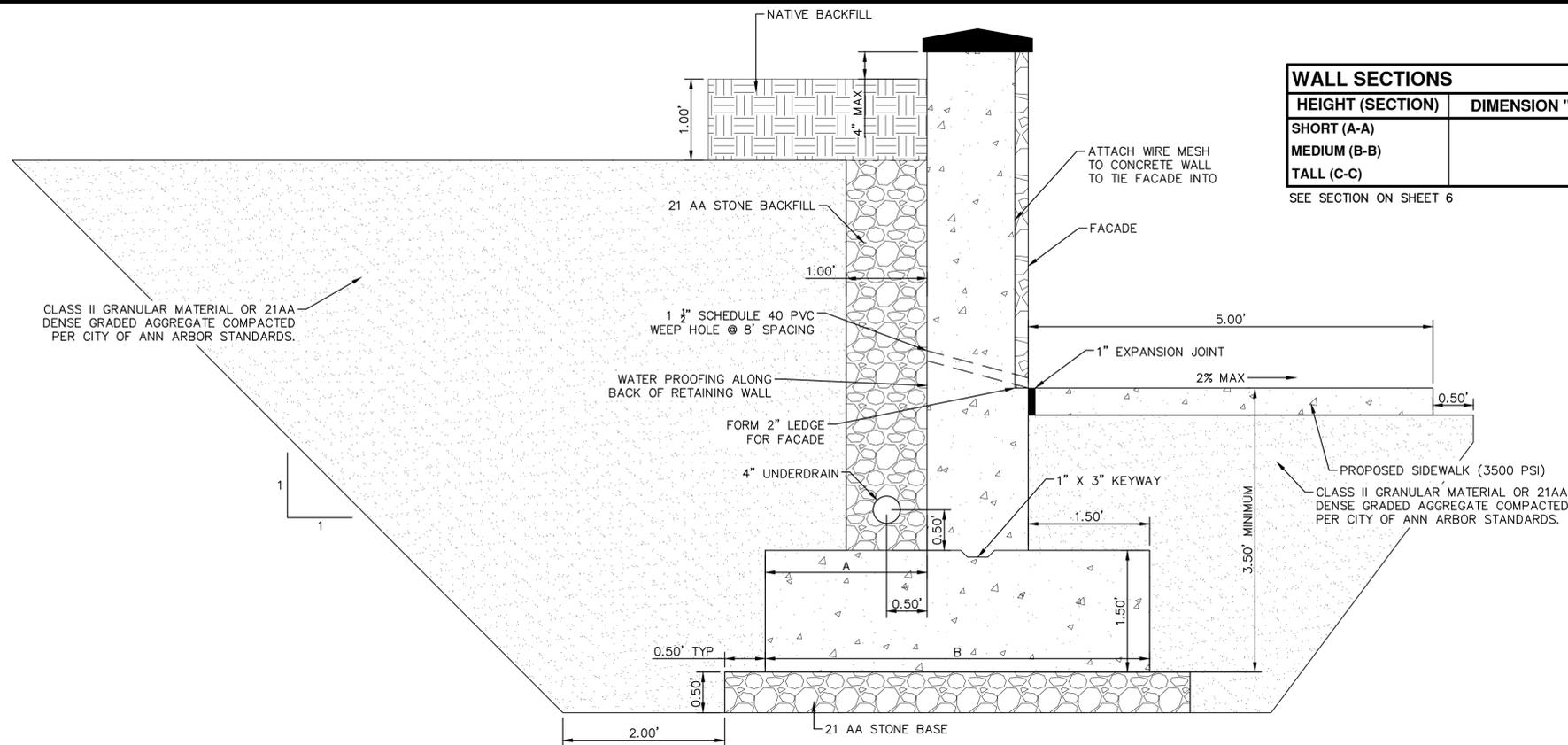
Know what's below. Call before you dig.

| REV. | DATE | DRAWN | CHECKED | DESCRIPTION |
|------|------|-------|---------|-------------|
| | | | | |

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
GEDDES AVENUE RETAINING WALL
RETAINING WALL PLANS
LEGEND

| | | |
|------------|-----------------------------------|-------------------|
| SCALE: NTS | DRAWING No. 2022-009 & 2023-003-3 | SHEET No. 3 OF 10 |
|------------|-----------------------------------|-------------------|

J:\AA\Design\AA22009 - Geddes Avenue Retaining Wall\DWG\AA22009_Det1.dwg Dwg Created: 28-Mar-23 -- _a2_standard.bw.stb -- Plot Date: 30-Mar-23

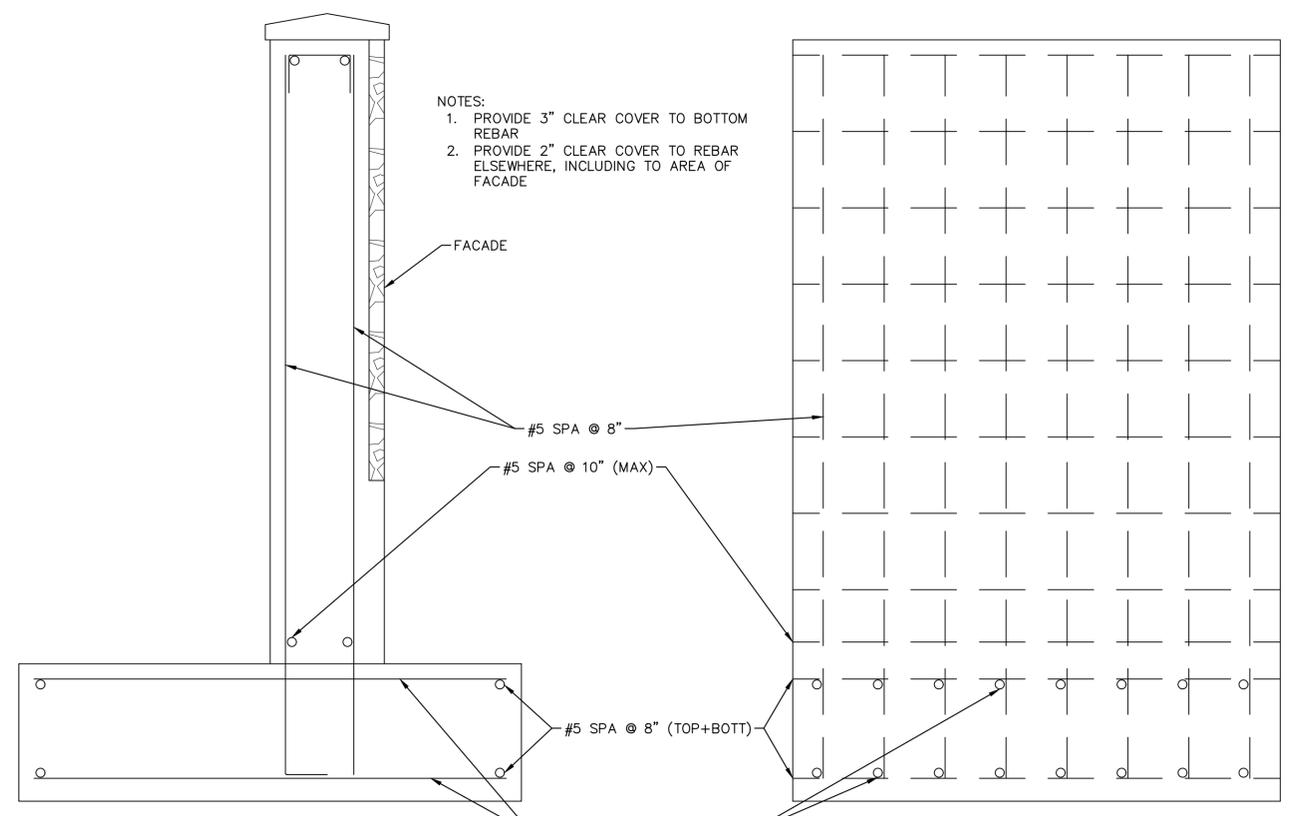


| WALL SECTIONS | | |
|------------------|---------------|---------------|
| HEIGHT (SECTION) | DIMENSION "A" | DIMENSION "B" |
| SHORT (A-A) | 1'-3" | 4'-0" |
| MEDIUM (B-B) | 2'-0" | 4'-9" |
| TALL (C-C) | 2'-9" | 5'-6" |

SEE SECTION ON SHEET 6

WALL SECTION VIEW

- SIDEWALK CONSTRUCTION NOTES:**
1. SIDEWALK SHALL BE A DESIGNED AND CONSTRUCTED TO MEET ALL ADA STANDARDS AND REQUIREMENTS.
 2. CITY OF ANN ARBOR MINIMUM STANDARD WIDTH OF SIDEWALK IS FIVE (5) FEET.
 3. CONCRETE SIDEWALK THICKNESS SHALL BE A MINIMUM OF FOUR (4) INCHES.
 4. BASE THICKNESS SHALL BE A MINIMUM OF FOUR (4) INCHES.
 5. IF EXISTING SUBGRADE MATERIAL IS APPROVED BY THE ENGINEER FOR USE, COMPACT THE EXISTING SUBGRADE TO 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY.
 6. NATIVE MATERIAL MAY BE ACCEPTABLE FOR SIDEWALK CONSTRUCTION, IF THE BASE IS STABLE AND FREE OF ORGANIC OR DELETERIOUS MATERIALS.
 7. SIDEWALK RAMP SHALL BE CONSTRUCTED AT STREET INTERSECTIONS AS DIRECTED AND SHALL COMPLY WITH THE REQUIREMENTS OF MDOT DETAIL R-28-J (LATEST VERSION).
 8. SIDEWALKS MAY MEANDER WITHIN THE RIGHT-OF-WAY TO PROTECT AND PRESERVE NATURAL FEATURES.
 9. EXPANSION AND CONTRACTION JOINTS SHALL BE PROVIDED PER CITY OF ANN ARBOR STANDARD DETAILS AND SPECIFICATIONS.



WALL REINFORCEMENT SECTION

BAR LAYOUT

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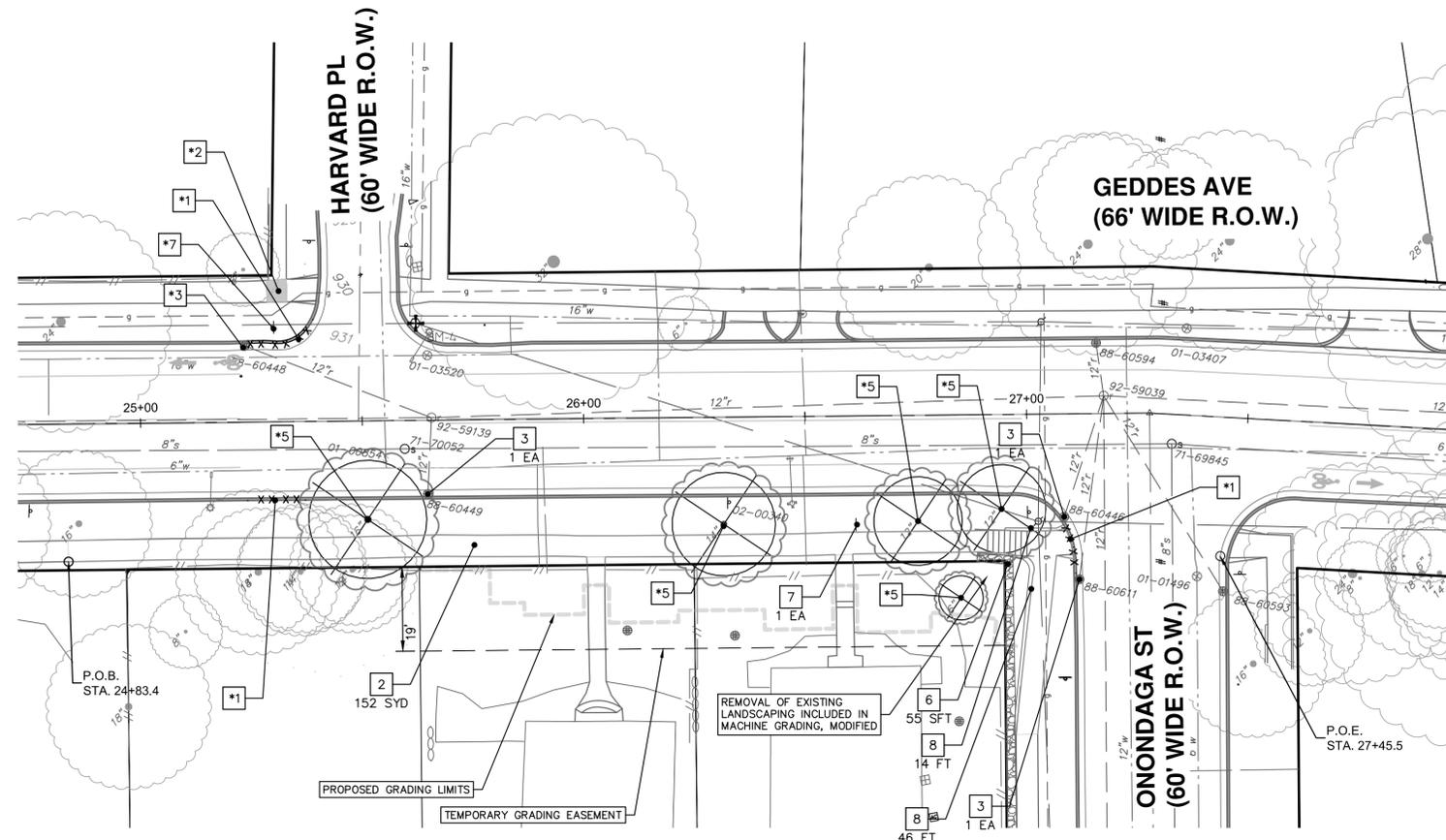
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
GEDDES AVENUE RETAINING WALL
RETAINING WALL PLANS
RETAINING WALL DETAILS

SCALE: NTS

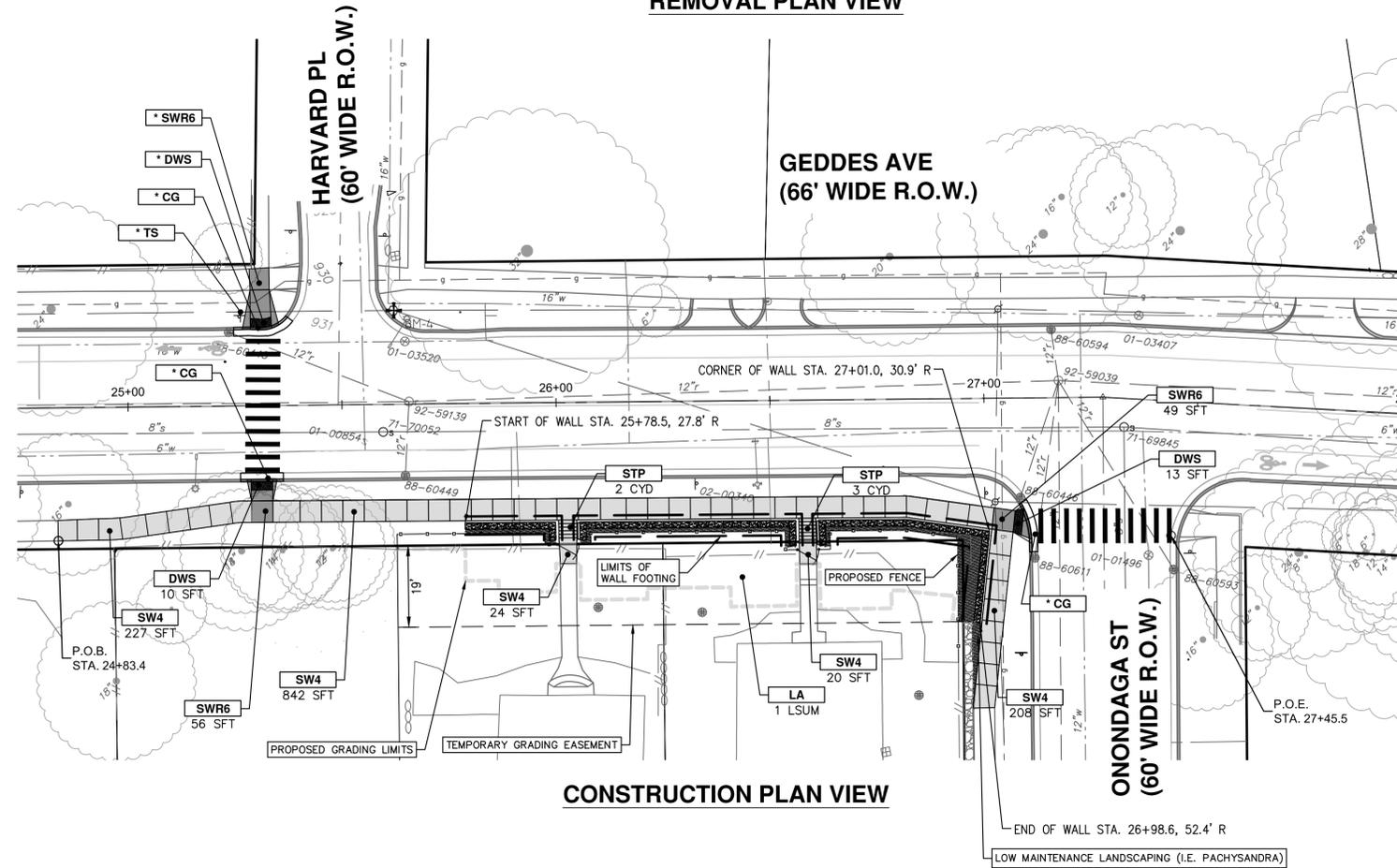
DRAWING No. 2022-009 & 2023-003-4

SHEET No. 4 OF 10

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REMOVAL PLAN VIEW



CONSTRUCTION PLAN VIEW

| REMOVAL KEY | |
|-------------|---|
| KEY | DESCRIPTION |
| 1 | REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE |
| 2 | REMOVE CONCRETE SIDEWALK AND PAVEMENT - ANY THICKNESS |
| 3 | INLET FILTER |
| 4 | PROTECTIVE FENCING |
| 5 | TREE, REM, 6" TO 24" |
| 6 | REMOVE BOULDER WALL |
| 7 | REMOVE SIGN |
| 8 | REMOVE CONCRETE WALL |

* WORK TO BE COMPLETED BY OTHERS AS PART OF ROAD WORK CONTRACT

| CONSTRUCTION KEY | |
|------------------|---|
| KEY | DESCRIPTION |
| CG | CONCRETE CURB OR CURB & GUTTER, ALL TYPES |
| SW4 | 4 INCH CONCRETE SIDEWALK |
| SWR6 | 6 INCH CONCRETE RAMP, DRIVE APPROACH |
| DWS | DETECTABLE WARNING SURFACE, CAST IN PLACE |
| ASC | ADJUST STRUCTURE COVER |
| STP | STEPS, CONCRETE |
| TS | TRAFFIC SIGN |
| LA | LANDSCAPE ALLOWANCE |

* WORK TO BE COMPLETED BY OTHERS AS PART OF ROAD WORK CONTRACT

811
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CITY OF ANN ARBOR
MICHELE

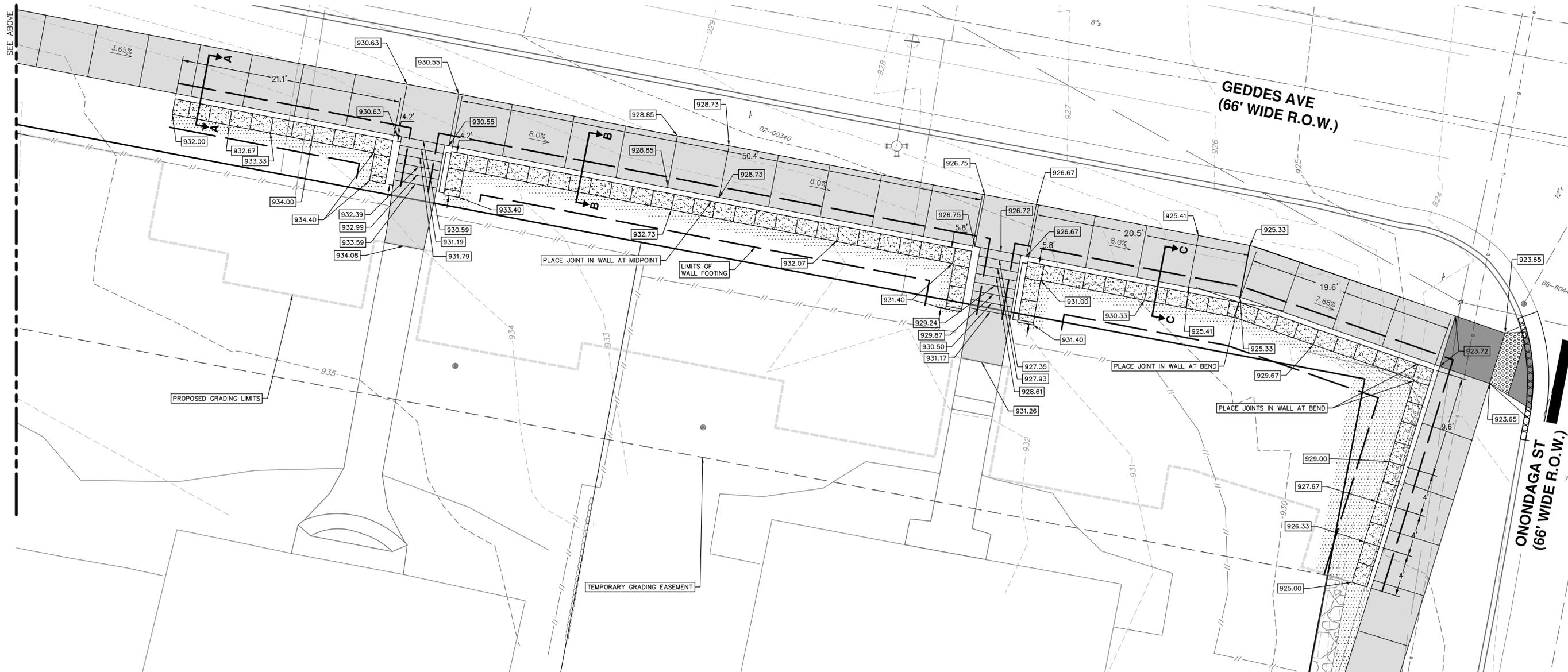
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SCALES PLAN: 1" = 20'

GEDDES AVENUE RETAINING WALL
RETAINING WALL PLANS
REMOVAL & CONSTRUCTION PLAN

DRAWING No. 2022-009 & 2023-003-5

SHEET No. 5 OF 10

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PLAN VIEW

PLAN VIEW

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 SCALE PLAN: 1" = 5'
 DRAWING No. 2022-009 & 2023-003-6
 SHEET No. 6 OF 10

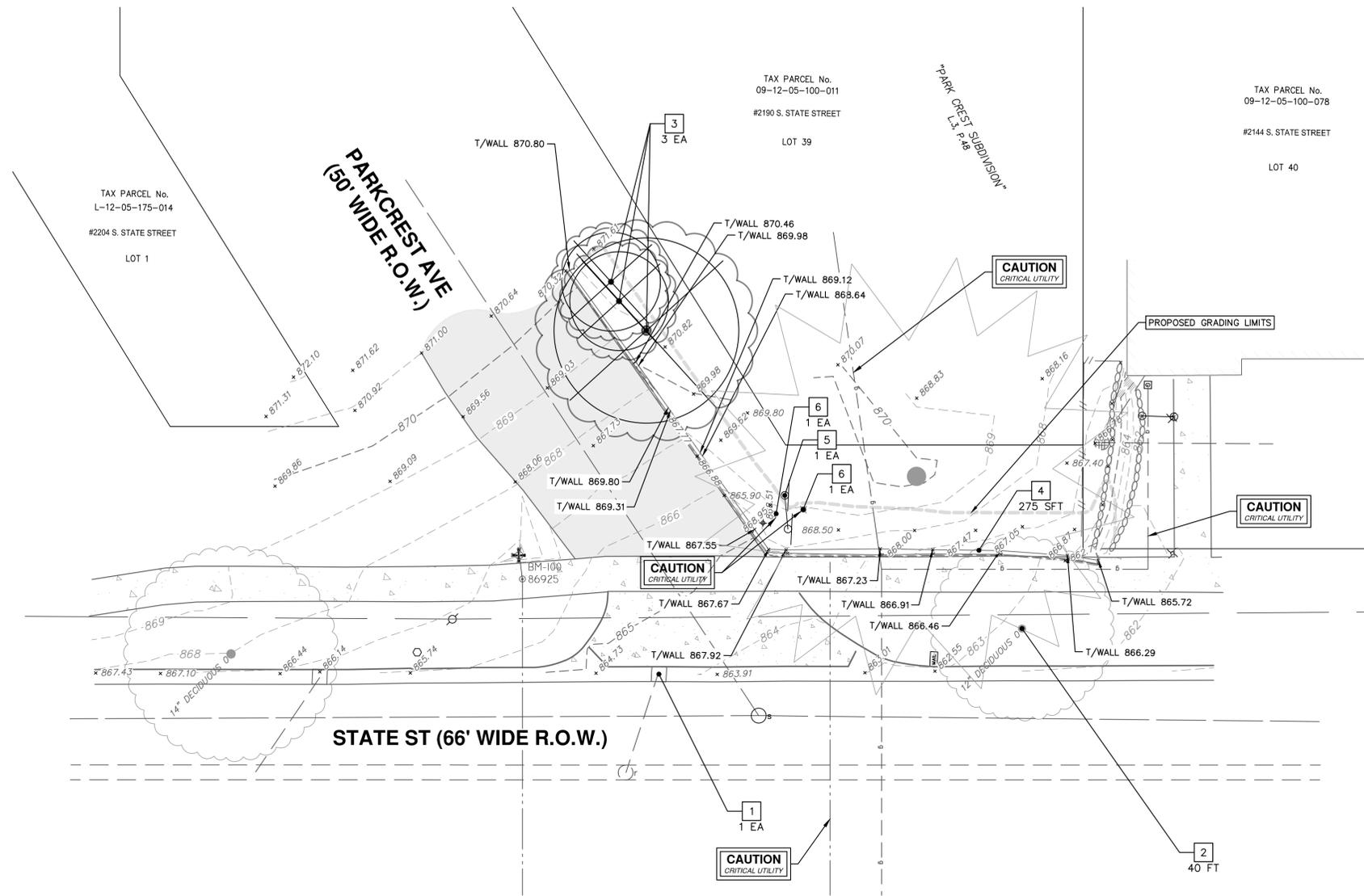
GEDDES AVENUE RETAINING WALL
 RETAINING WALL PLANS
 DETAILED GRADING PLAN

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REMOVAL PLAN VIEW

| REMOVAL KEY | |
|-------------|----------------------------------|
| KEY | DESCRIPTION |
| 1 | INLET FILTER |
| 2 | PROTECTIVE FENCING |
| 3 | TREE, REM, 6" TO 30" |
| 4 | REMOVE WOOD WALL |
| 5 | REMOVE AND SALVAGE BUSINESS SIGN |
| 6 | REMOVE AND SALVAGE LIGHTS |



NOTE:
1. T/WALL CALLOUTS AT TOP OF BACK OF WALL



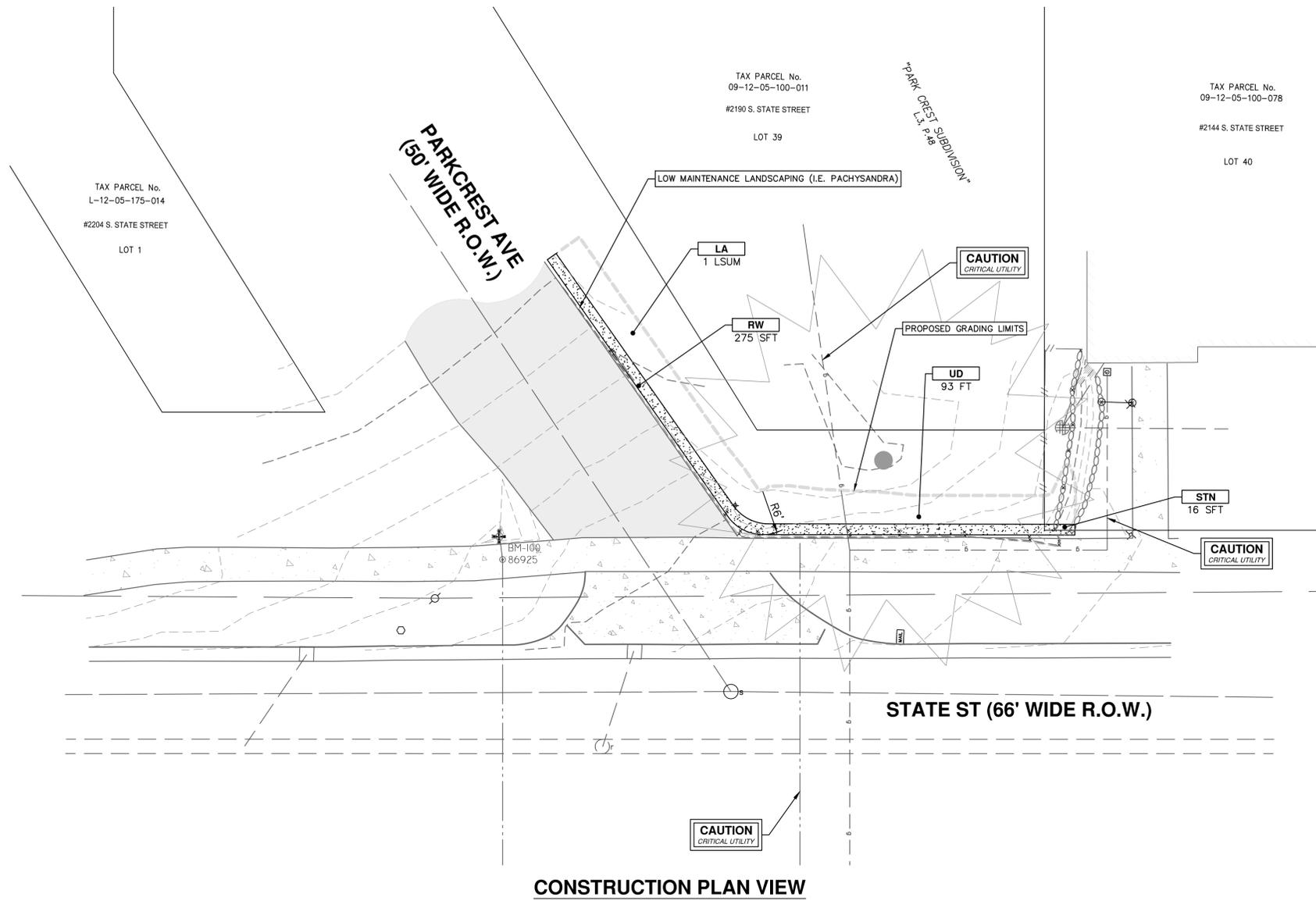
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| 1 | 3/14/2023 | ADENDUM NO. 1 | JAB | DAD |

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GEDDES AVENUE RETAINING WALL
STATE STREET
REMOVAL PLAN - STATE STREET

SCALE: 1" = 10'
DRAWING No. 2022-009 & 2023-003-7

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CONSTRUCTION PLAN VIEW

| CONSTRUCTION KEY | |
|------------------|-------------------------------|
| KEY | DESCRIPTION |
| RW | RETAINING WALL, VERTICAL FACE |
| LA | LANDSCAPE ALLOWANCE |
| UD | UNDERDRAIN, 6 INCH |
| STN | RECONSTRUCT STONE WALL |



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
GEDDES AVENUE RETAINING WALL
 STATE STREET
 CONSTRUCTION PLAN - STATE STREET

SCALE: 1" = 10'
 DRAWING No. 2022-009 & 2023-003-9

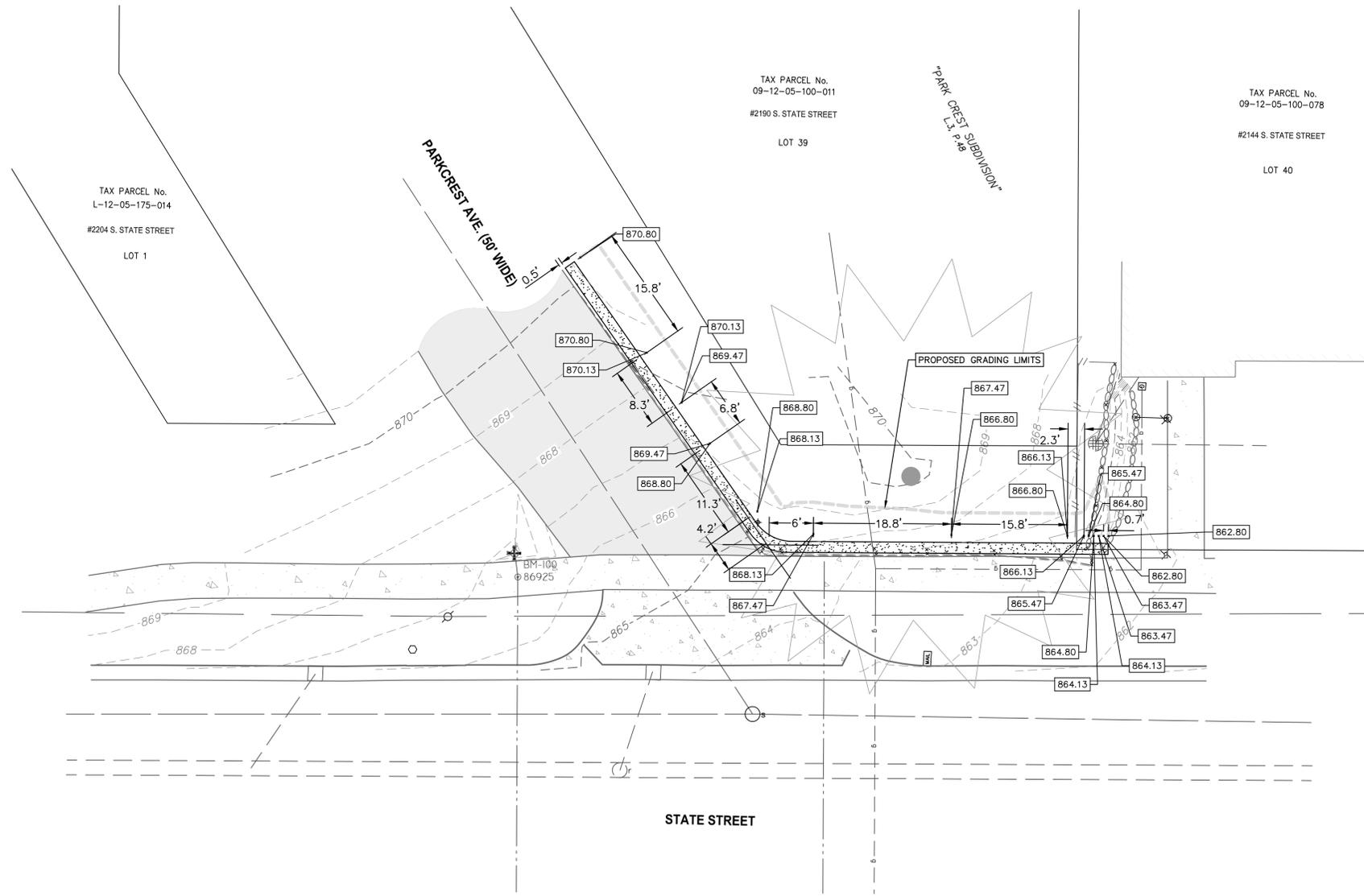
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| 1 | 3/14/2023 | ADDENDUM NO. 1 | JAB | DAD |

SHEET No. **8 OF 10**

J:\AAA\Design\AA22008 - 2190 State Street Retaining Wall\DWG\AA22008_Grp.dwg Dwg Created: 8-Mar-23 - _g2 standard bw.stb - Plot Date: 30-Mar-23



GRADING PLAN VIEW



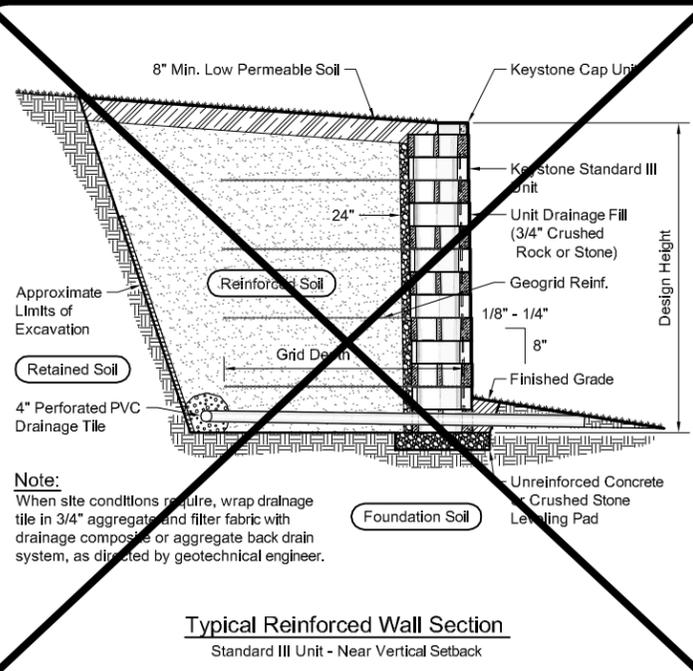
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| 1 | ADDENDUM NO. 1 | 3/14/2023 | JAB | DAD |

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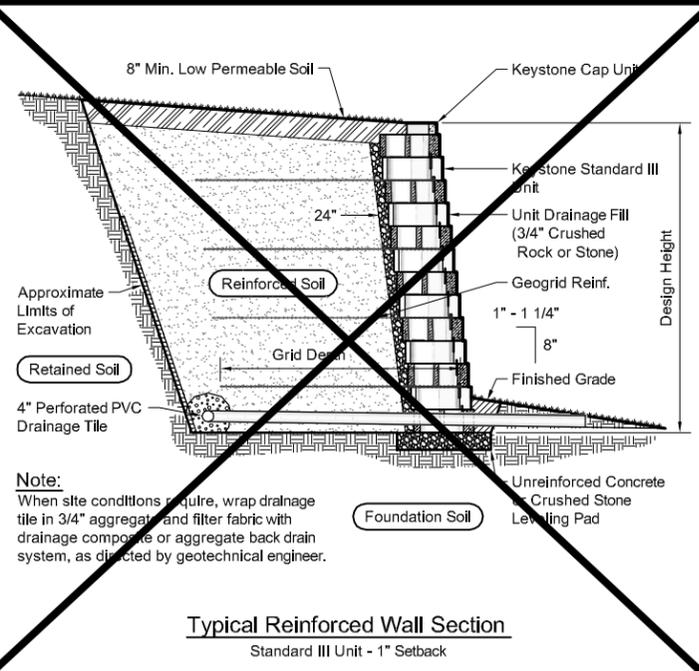


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
GEDDES AVENUE RETAINING WALL
 STATE STREET
 DETAILED GRADING PLAN - STATE STREET

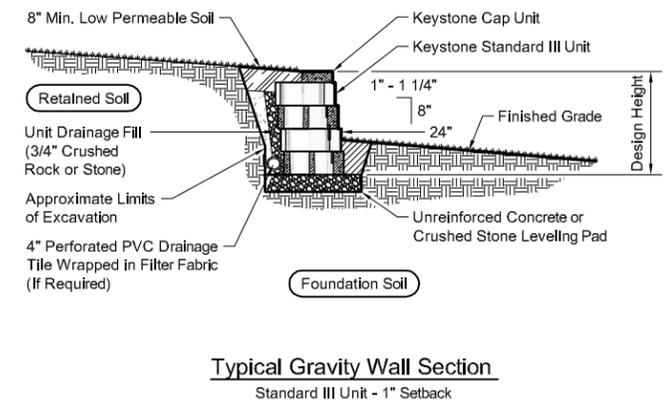
SCALE: 1" = 10'
 DRAWING No. 2022-009 & 2023-003-9



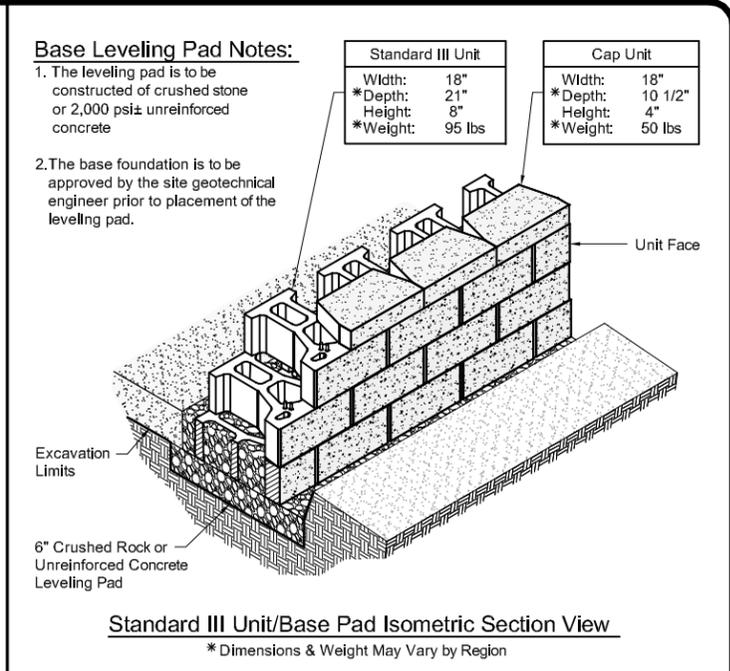
Typical Reinforced Wall Section
Standard III Unit - Near Vertical Setback



Typical Reinforced Wall Section
Standard III Unit - 1\"/>



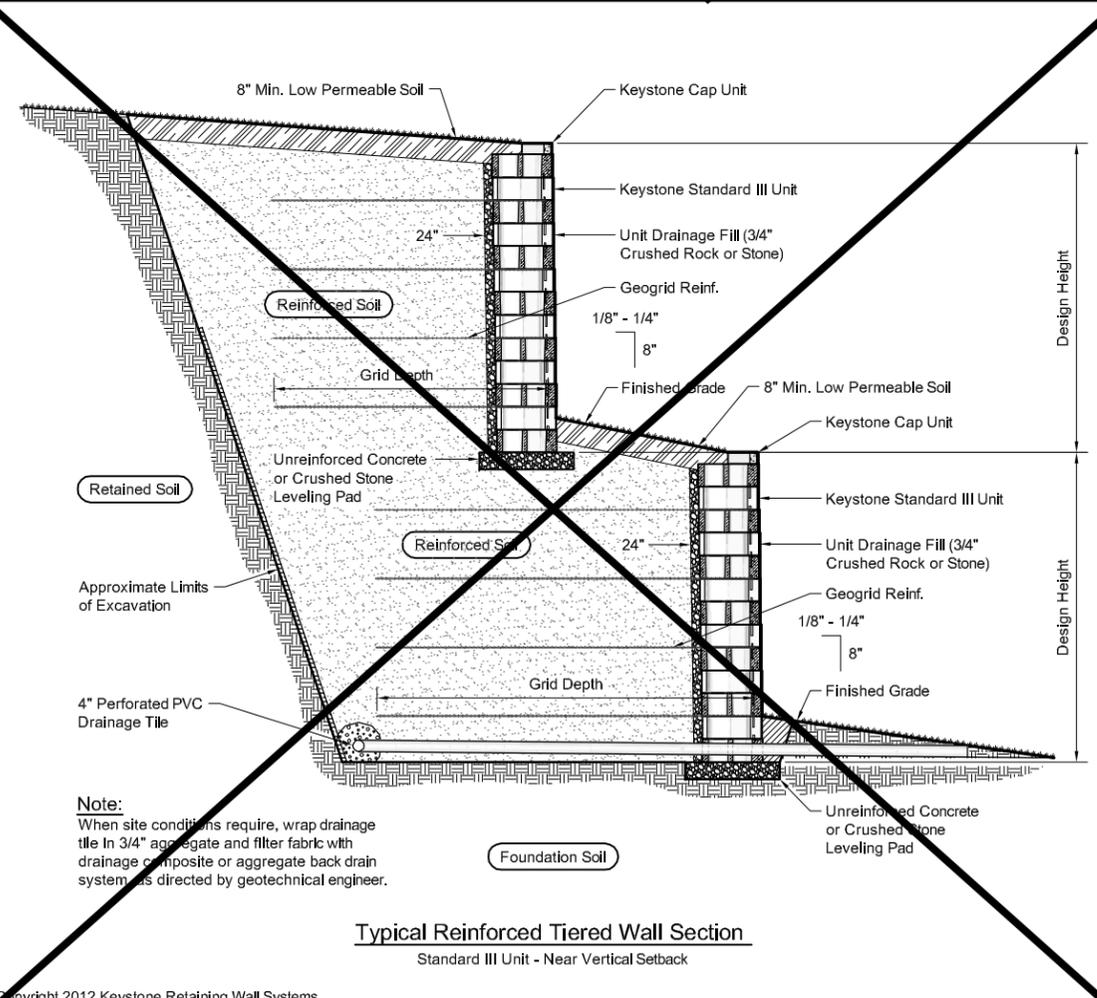
Typical Gravity Wall Section
Standard III Unit - 1\"/>



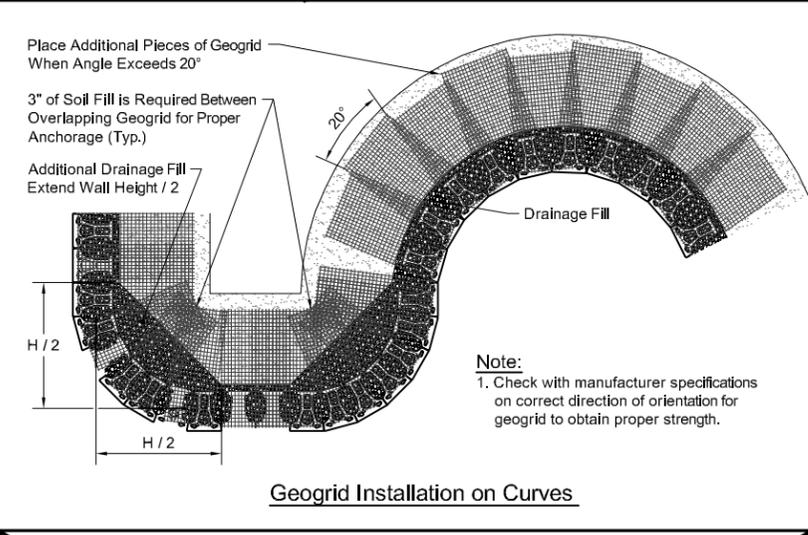
Standard III Unit/Base Pad Isometric Section View
* Dimensions & Weight May Vary by Region

Base Leveling Pad Notes:
1. The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

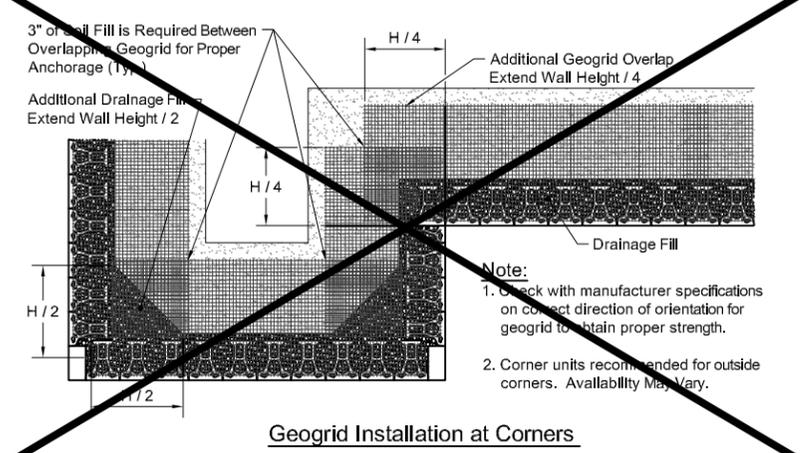
| Standard III Unit | | Cap Unit | |
|-------------------|--------|----------|---------|
| Width: | 18" | Width: | 18" |
| *Depth: | 21" | *Depth: | 10 1/2" |
| Height: | 8" | Height: | 4" |
| *Weight: | 95 lbs | *Weight: | 50 lbs |



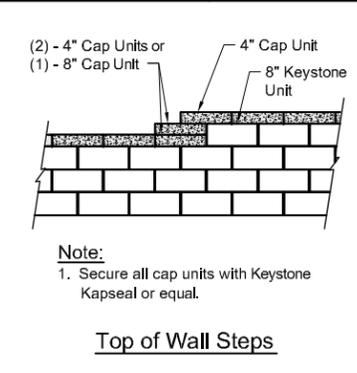
Typical Reinforced Tiered Wall Section
Standard III Unit - Near Vertical Setback



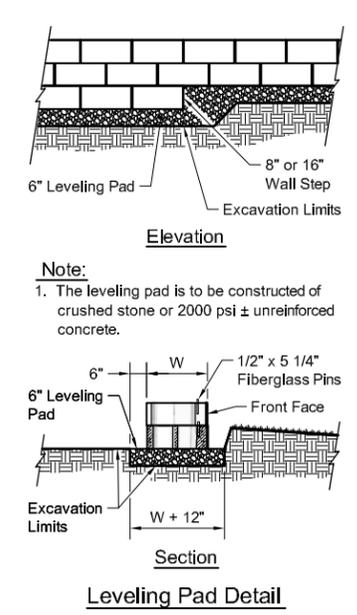
Geogrid Installation on Curves



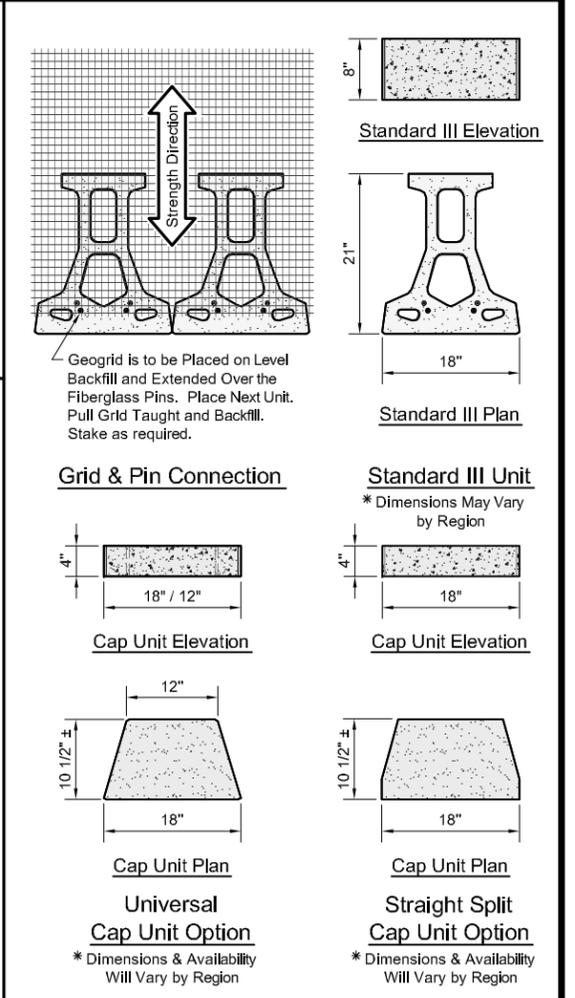
Geogrid Installation at Corners



Top of Wall Steps



Leveling Pad Detail



Copyright 2012 Keystone Retaining Wall Systems
Design is for internal stability of the KEYSTONE wall structure only. External stability, including but not limited to foundation and slope stability is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to KEYSTONE's specification for this project.
This drawing is being furnished for this specific project only. Any party accepting this document does so in confidence and agrees that it shall not be duplicated in whole or in part, nor disclosed to others without the consent of Keystone Retaining Wall Systems, Inc.

| No. | Date | Revision | By |
|-----|------|----------|----|
| | | | |
| | | | |
| | | | |

KEYSTONE
RETAINING WALL SYSTEMS
A CONTECH COMPANY
4444 W 78th Street
Minneapolis, MN 55435
952-897-1040

| | | |
|---------------------|---|-------------|
| Designed By: RKM | Title: Standard III Unit 21 - Straight Face Details | Date: |
| Checked By: CDM | Project: Keystone Retaining Wall Systems Typical Wall Details | Project No: |
| Scale: No Scale | | Drawing No: |