

Infiltration and Filter System Construction Specifications B.4.C Specifications for Micro-Bioretenion, Landscape Infiltration & Infiltration Berms

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for (VC), and 6 in. v. In some instances where permeability is great, these facilities may be used for Qp as well. In most common systems include infiltration trenches, infiltration basins, and filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are found with phosphorus and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide aeration for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

- Design Constraints:**
- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
 - > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see Figure A.5 and Table A.4 for planting material guidance).
 - > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
 - > Test soil conditions to determine if soil amendments are necessary.
 - > Plants shall be located so that access is possible for structure maintenance.
 - > Stabilize heavy flow areas with erosion control mats or soil.
 - > Temporary divert flows from seeded areas until vegetation is established.
 - > See Table A.5 for additional design constraints.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQE), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ET&B), 1993). Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.97/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or weeds from noxious species (e.g., Johnson Grass) and other plants with high seed production or noxious weeds as specified under COMAR 15.08.01.05, should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or troweled by dozer tracks). The specific characteristics are presented in Table A.3.

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	0 to 5%
Silt	30 to 55%
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

The proper selection and installation of plant materials is to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge is the highest elevation and generally supports plants adapted to dryer conditions. For appropriate plant materials for bioretention facilities, refer to MAA Approved Species List. The layout of plant material should be flexible, but should follow the general principles described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ET&B, 1993 or Claffor and Schueler, 1997.

Operation And Maintenance Schedule For Commercial Association Owned & Maintained Bio-Retention Areas (M-6)

- The owner shall maintain the plant material, mulch layer and soil layer annually, maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year, during the inspection, the owner shall remove vegetation considered beyond replacement, replace dead plant material with acceptable replacement plant material, treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.
- The owner shall maintain all observation wells, clean-outs and perforated underdrains.
- Filter material must be replaced when water remains on the surface of the filter bed for more than 24 hours following a 1 or 2 year storm event or more than 48 hours following a 10 year storm event.

STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES MUST BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION.

- Material Specifications**
- Filtering Media or Planting Soil**
- Compaction**
- Plant Material**
- Plant Installation**
- Underdrains**
- Miscellaneous**

The allowable materials to be used in these practices are detailed in Table B.4.1.

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretenion practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled portion. If topsoil is imported, then a textural analysis shall be performed for each location where the topsoil was excavated.

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation holes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary filling operation such as a chisel plow, ripper, or subsolar. These filling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and stone. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with narrow tracks.

Recommended plant material for micro-bioretenion practices can be found in Appendix A, Section A.2.3.

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted as 1.0 ft of the ball in above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

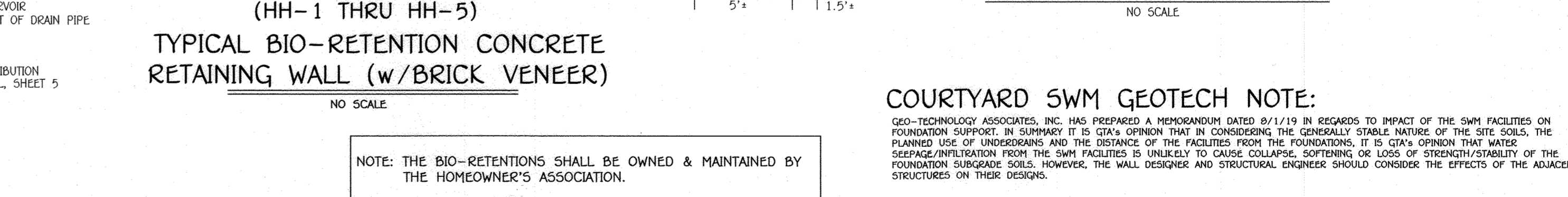
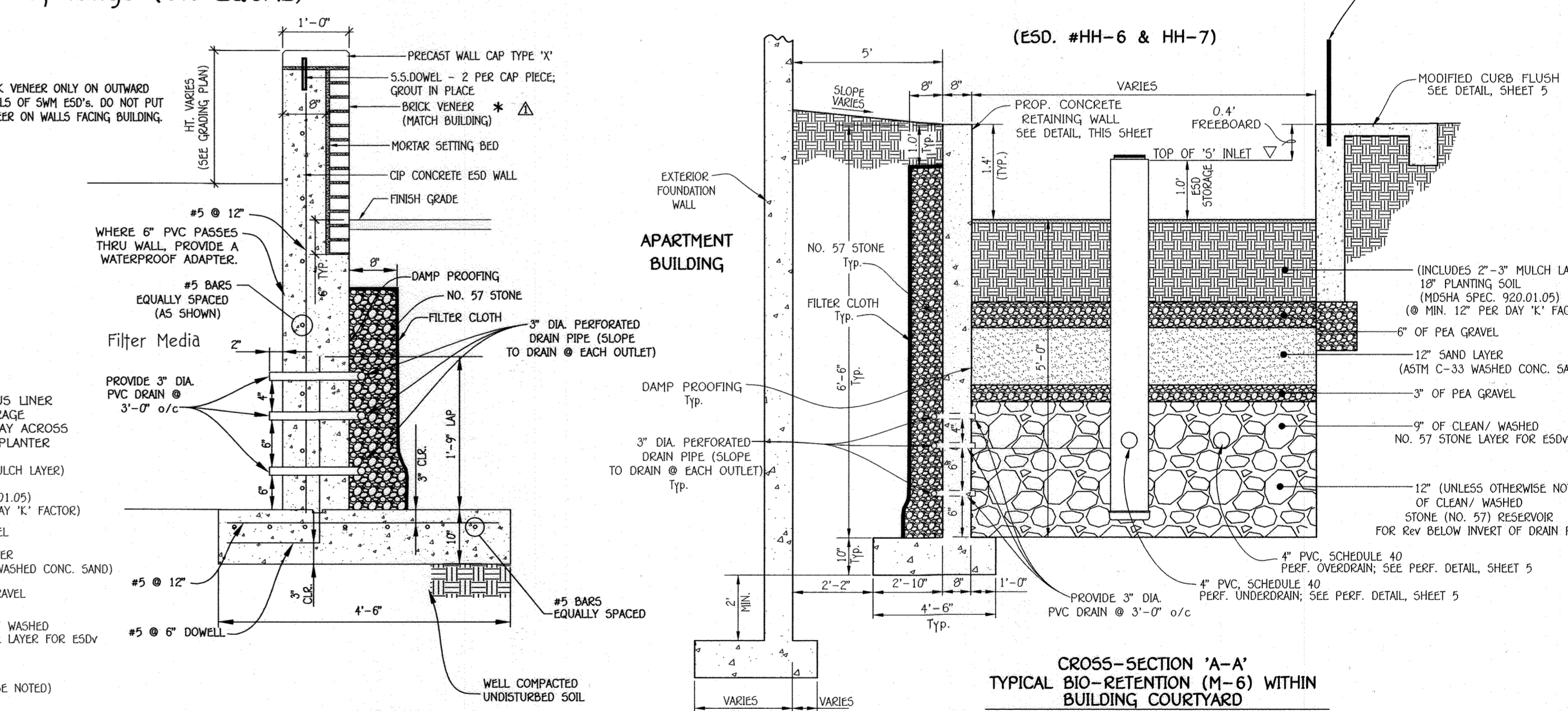
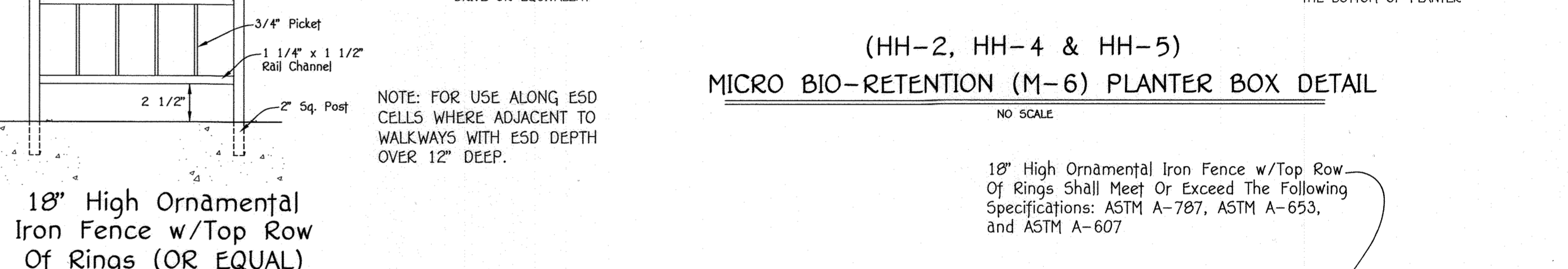
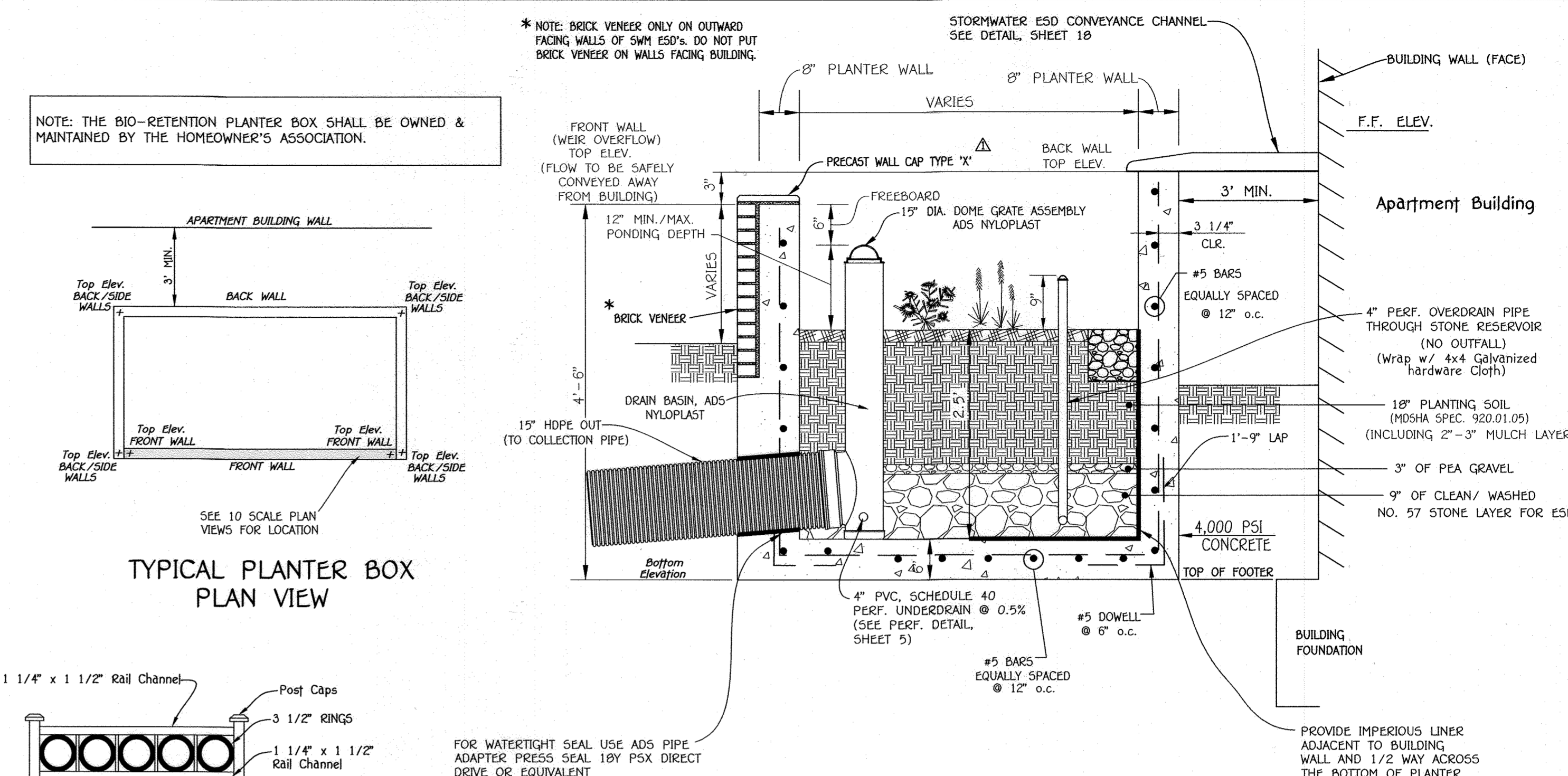
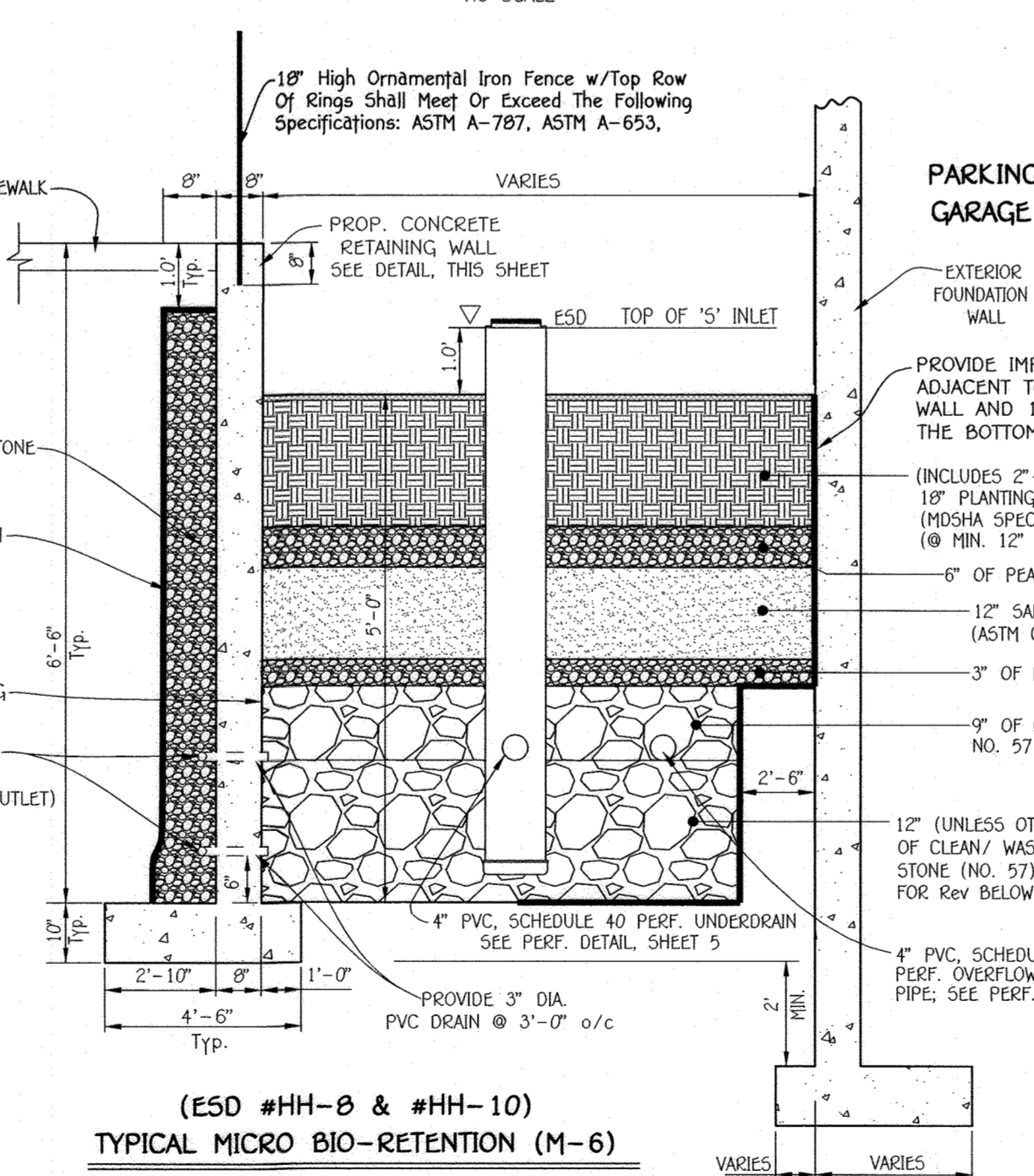
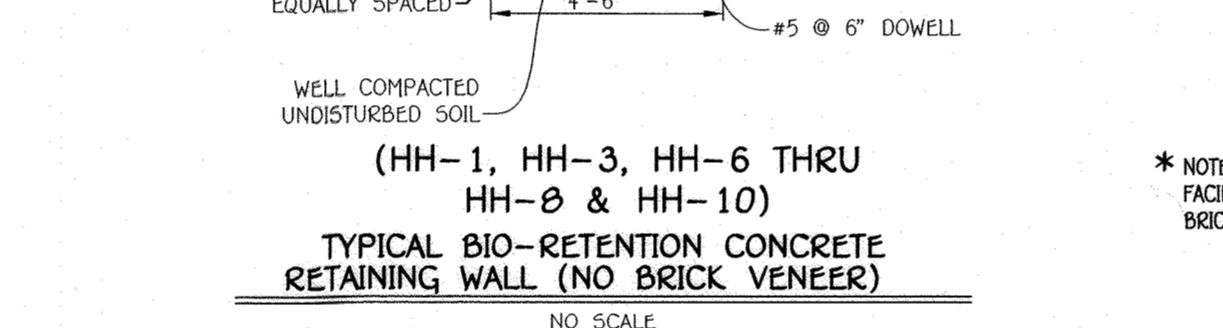
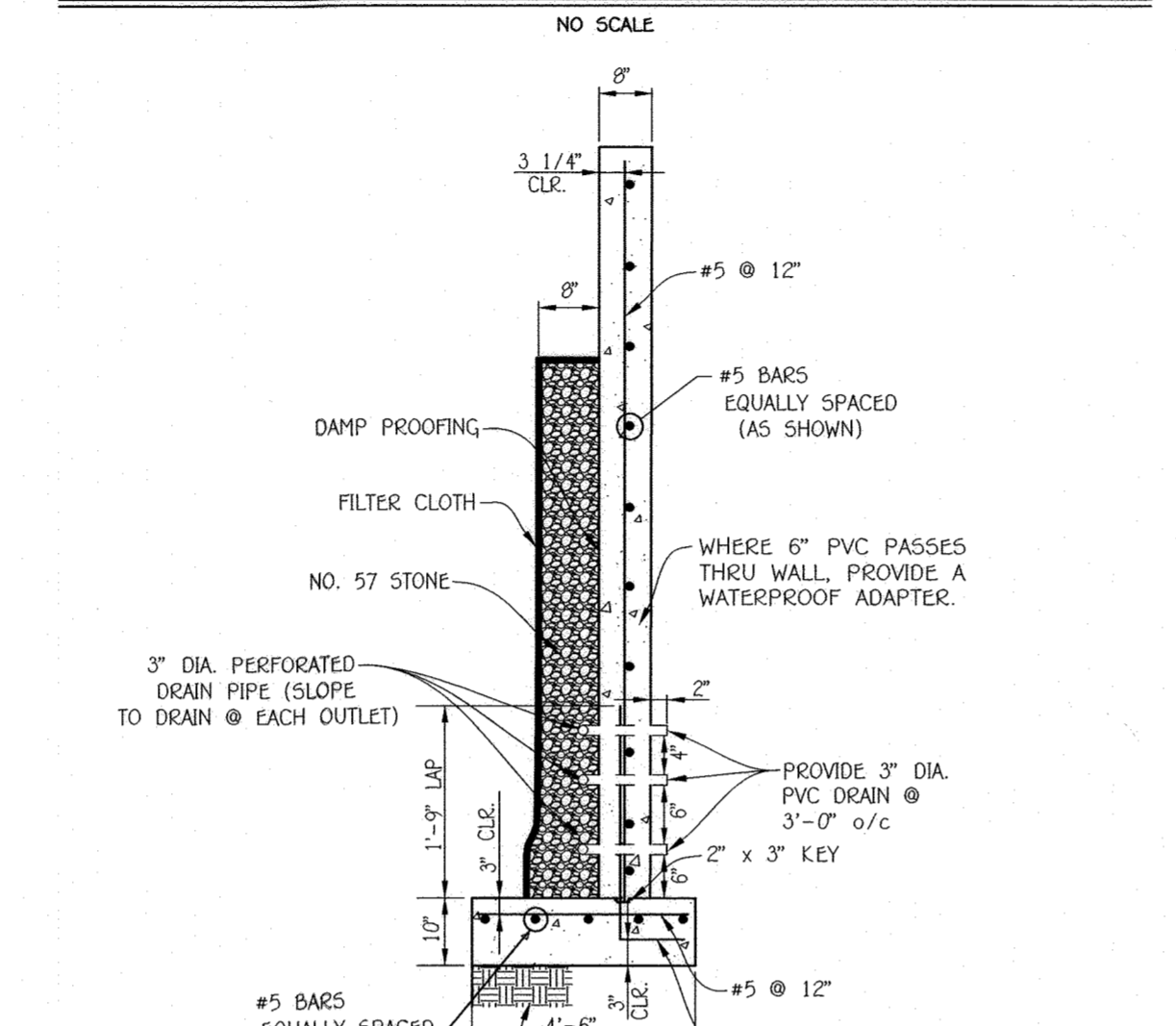
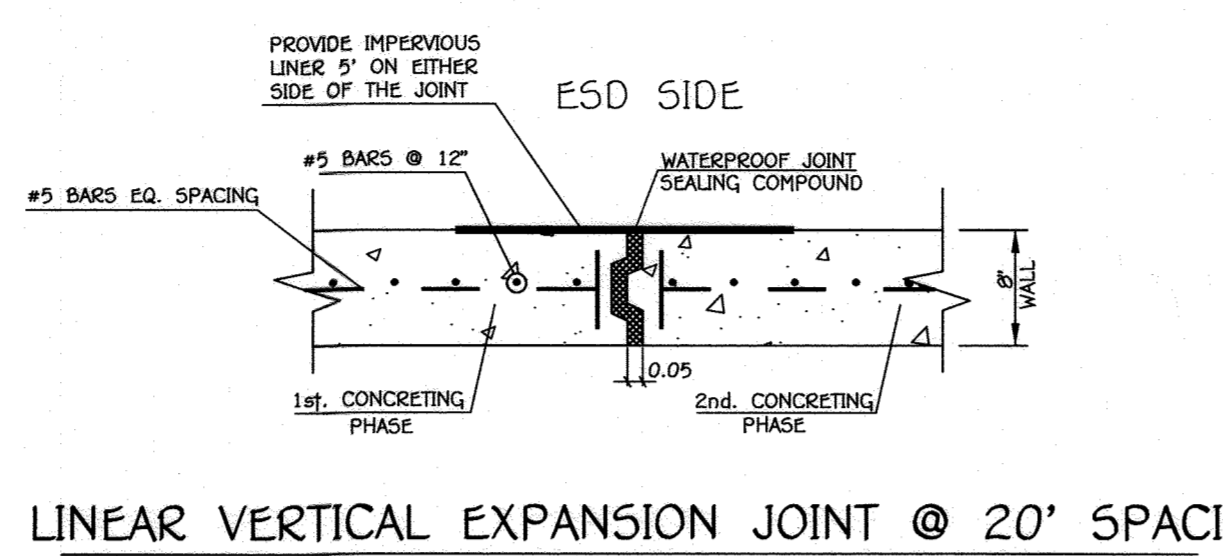
Grasses and legume seeds should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers, dolomite, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.2% (observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

These practices may not be constructed until all contributing drainage area has been established.

#SD No.	Top Elev. FRONT WALL	Top Elev. BACK/SIDE WALLS	4" Dome Top	4" Invert (Perforated)	Box Bottom Elevation
HH-1	117.75	118.00	117.00	113.75	113.25
HH-2	118.00	118.25	117.25	112.50	111.50
HH-3	117.75	118.00	117.00	113.75	113.25
HH-4	116.00	116.25	115.25	112.50	111.50
HH-5	115.75	116.00	115.00	112.25	111.25



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] Chief, Division of Land Development Date: 11/21/20

[Signature] Chief, Development Engineering Division Date: 11/22/20

[Signature] Director - Department of Planning and Zoning Date: 11-30-20

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

12300/09/01/14/MS/STDP - Parcel - UNTS/15/09/15 Sheet 4 of 9 main details.dwg - C:\41_SDP_18\055_11

Owner: Kellogg-CCP, LLC c/o David P. Scheffenacker, Jr., Managing Member 100 West Road, Suite 304 Towson, Maryland 21204 Phone 410-296-3800

Developer: Preston - Scheffenacker Properties 100 West Road, Suite 304 Towson, Maryland 21204 Phone 410-296-3800

SCALE: 1" = 5'

NO.	REVISION	DATE
Δ	REVISED SWM WALL DETAILS	9/8/20

SUBDIVISION	SECTION/AREA	PARCEL No.
OXFORD SQUARE	---	"H-H"

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st.	601101

REVISED STORMWATER MANAGEMENT NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Parcel "H-H"

"Bristol Court" - A Green Building

Zone: TOD

First Election District: Howard County, Maryland

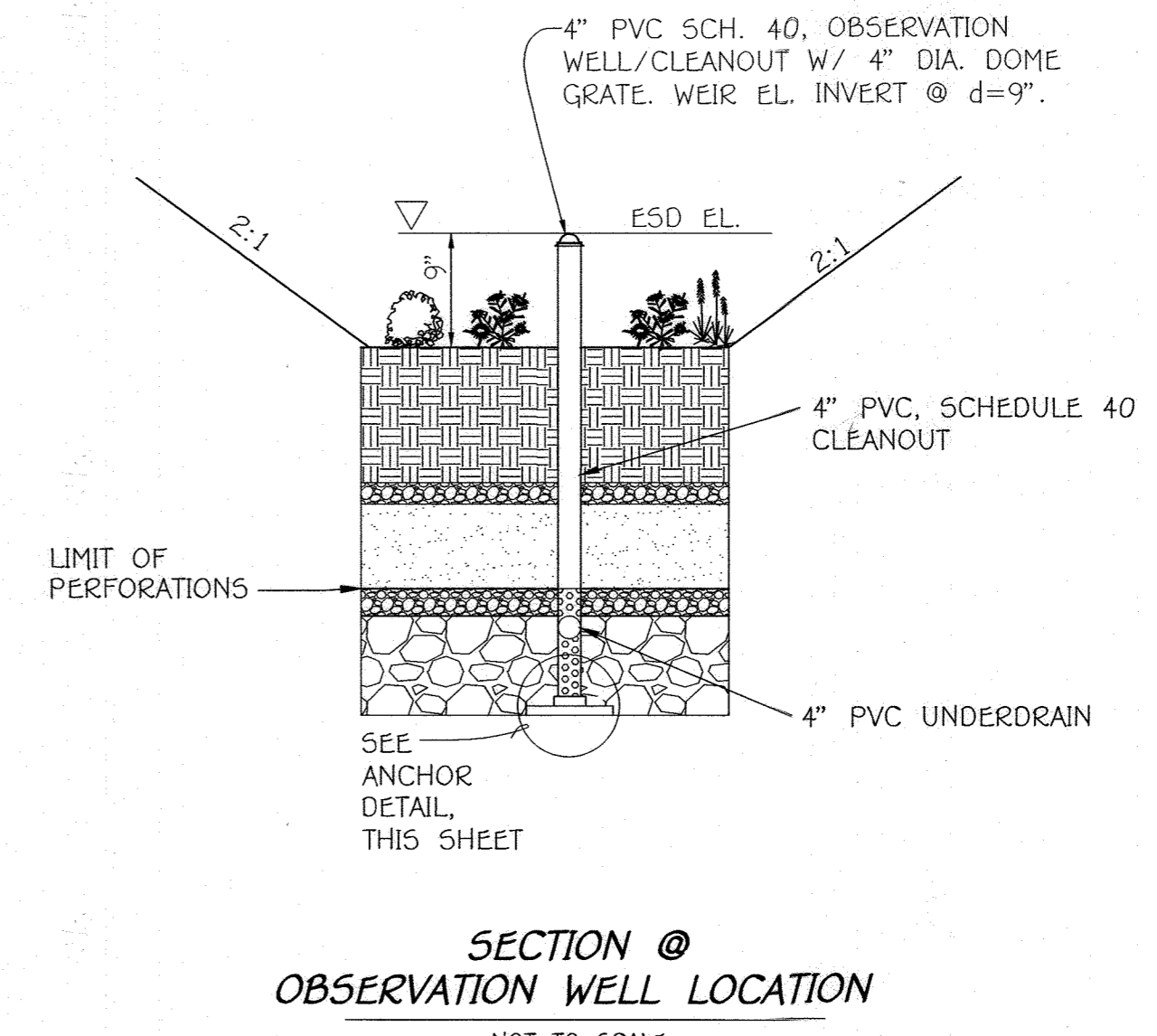
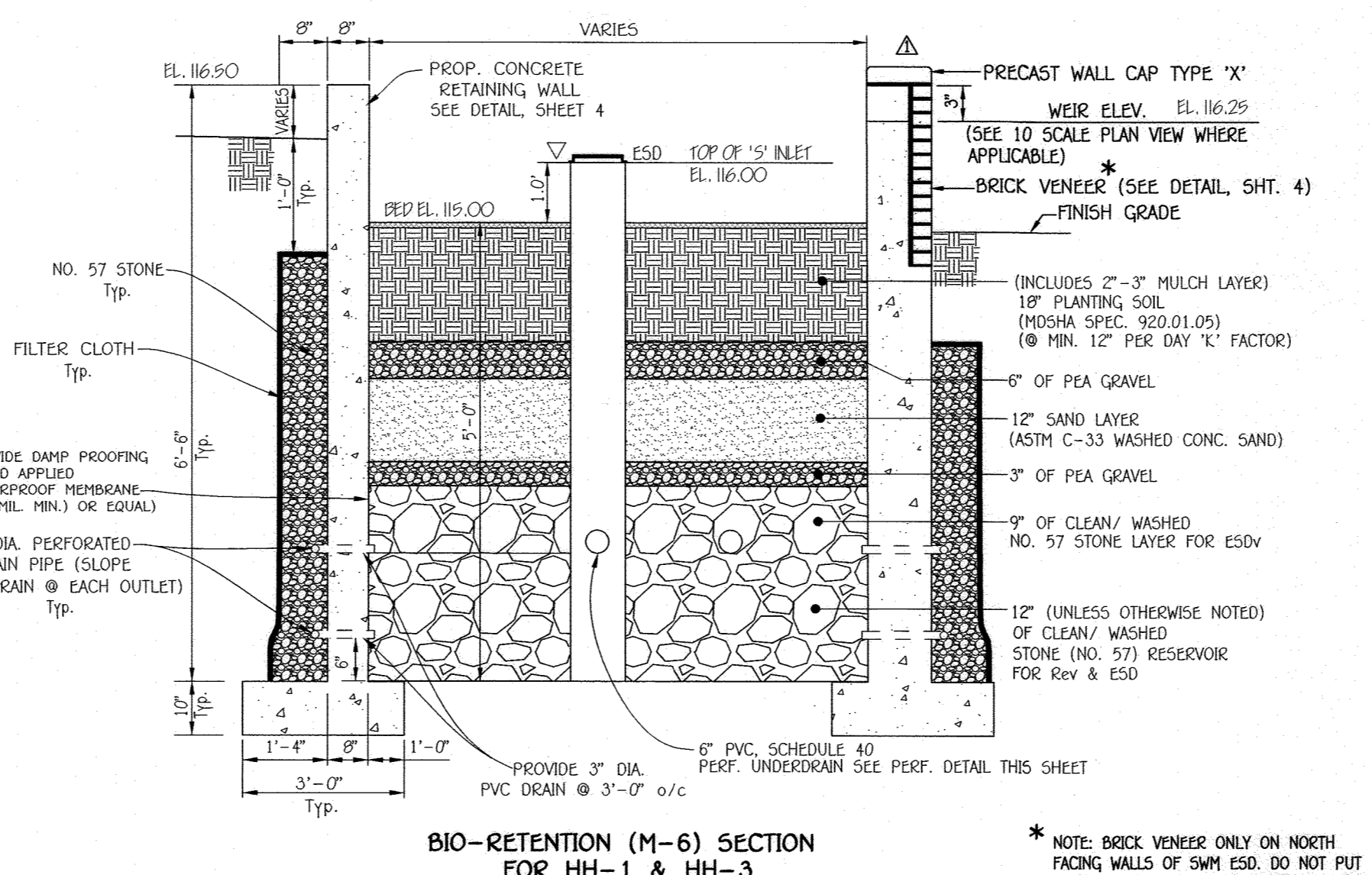
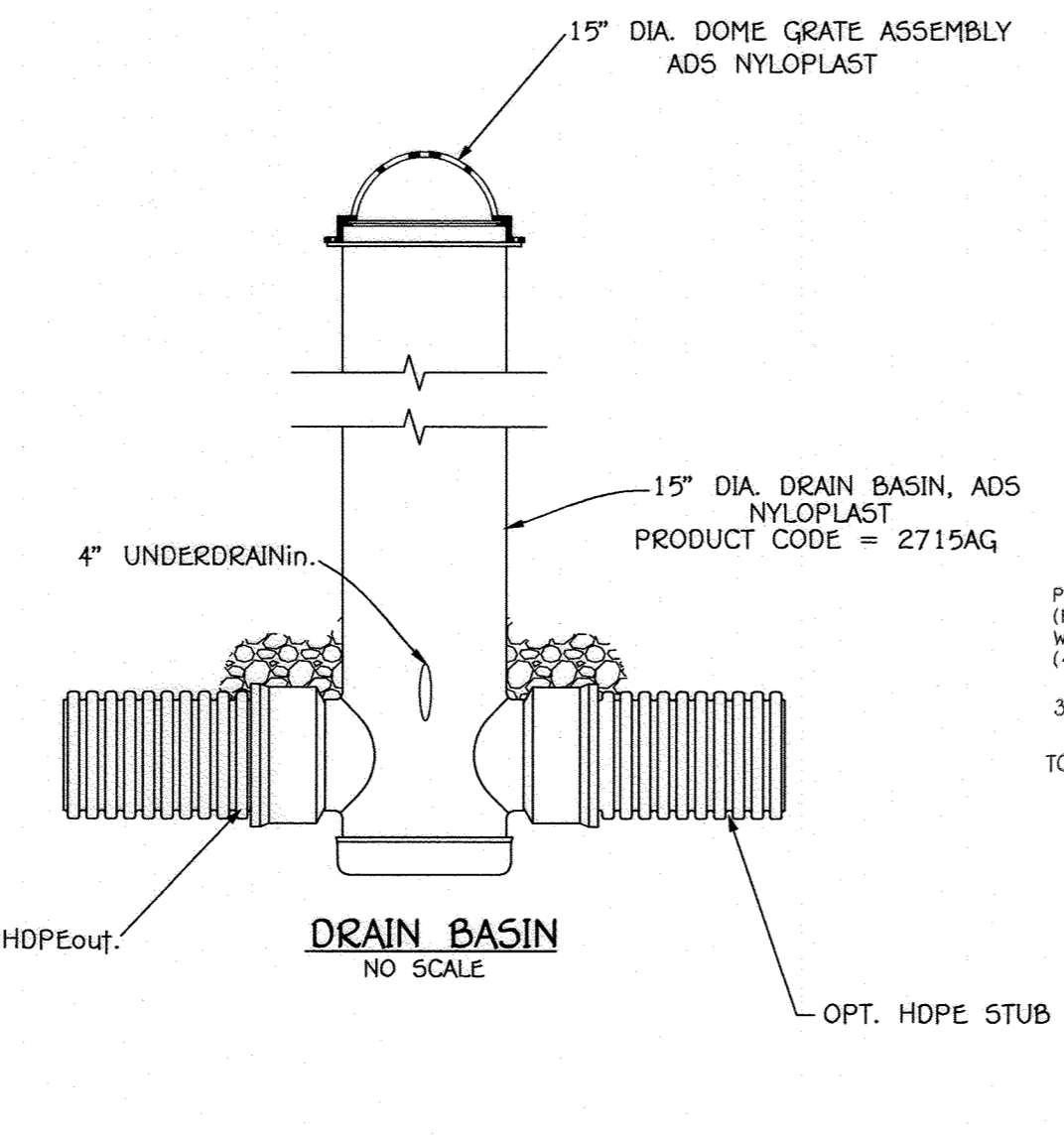
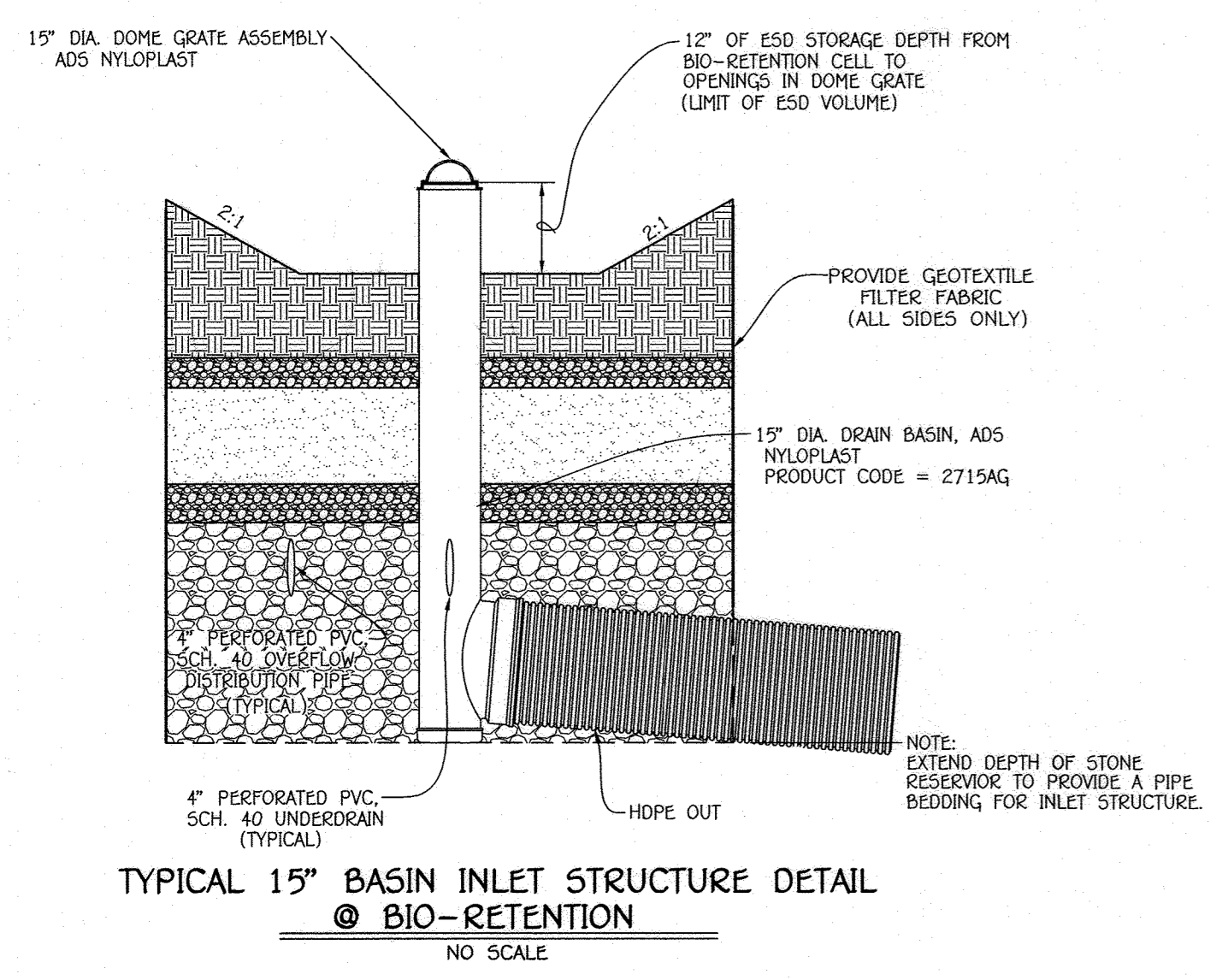
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Date: November 22, 2019

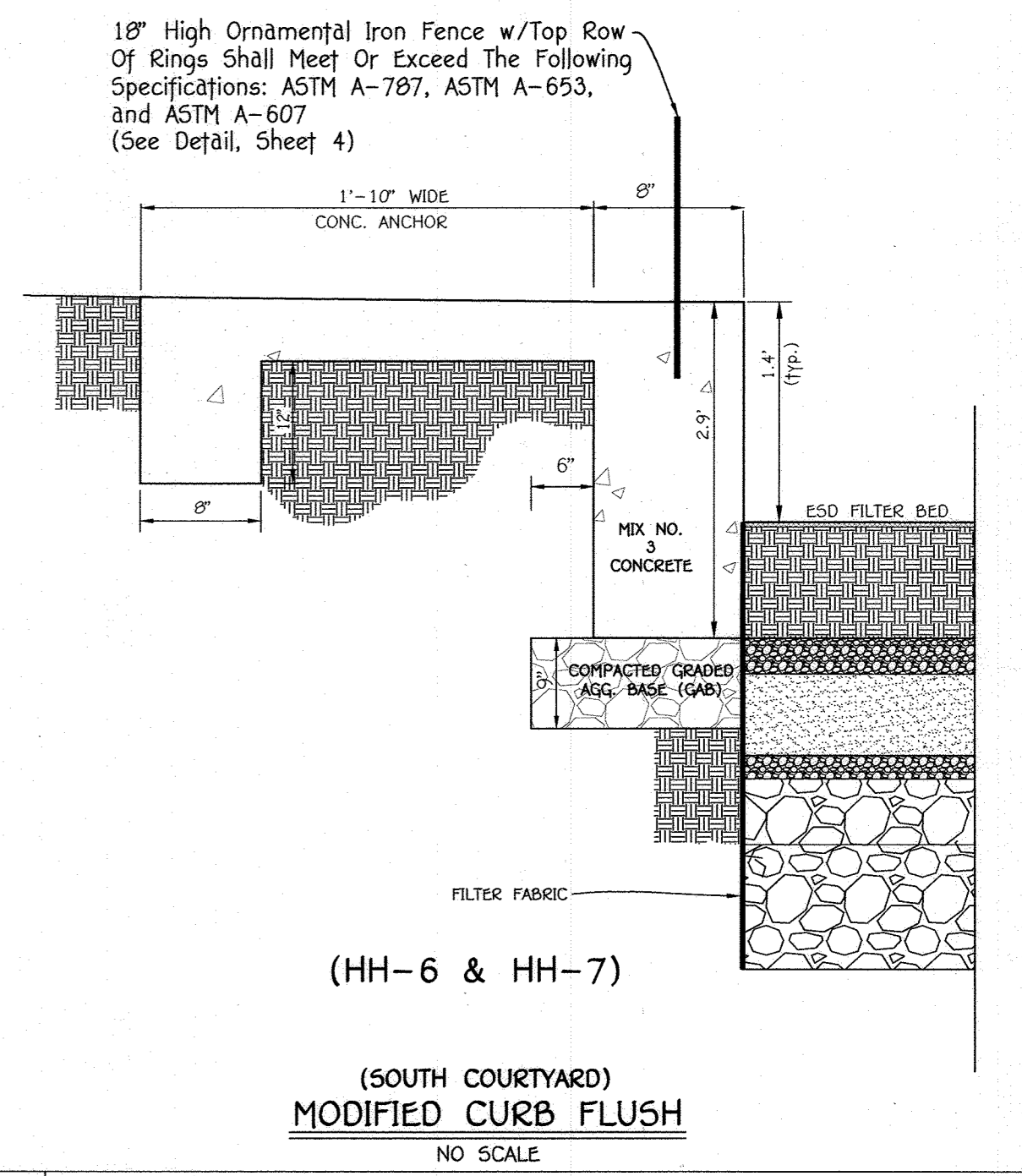
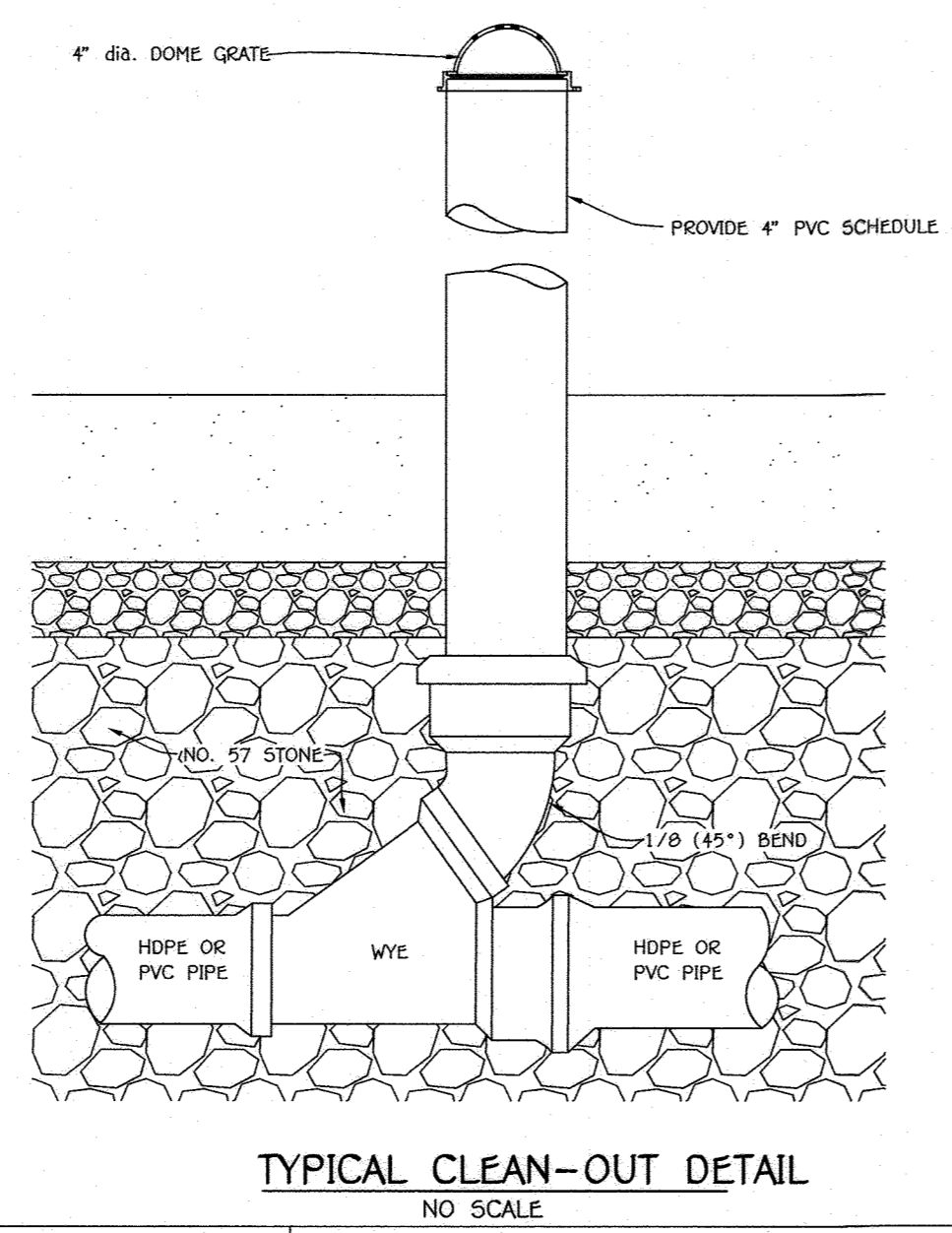
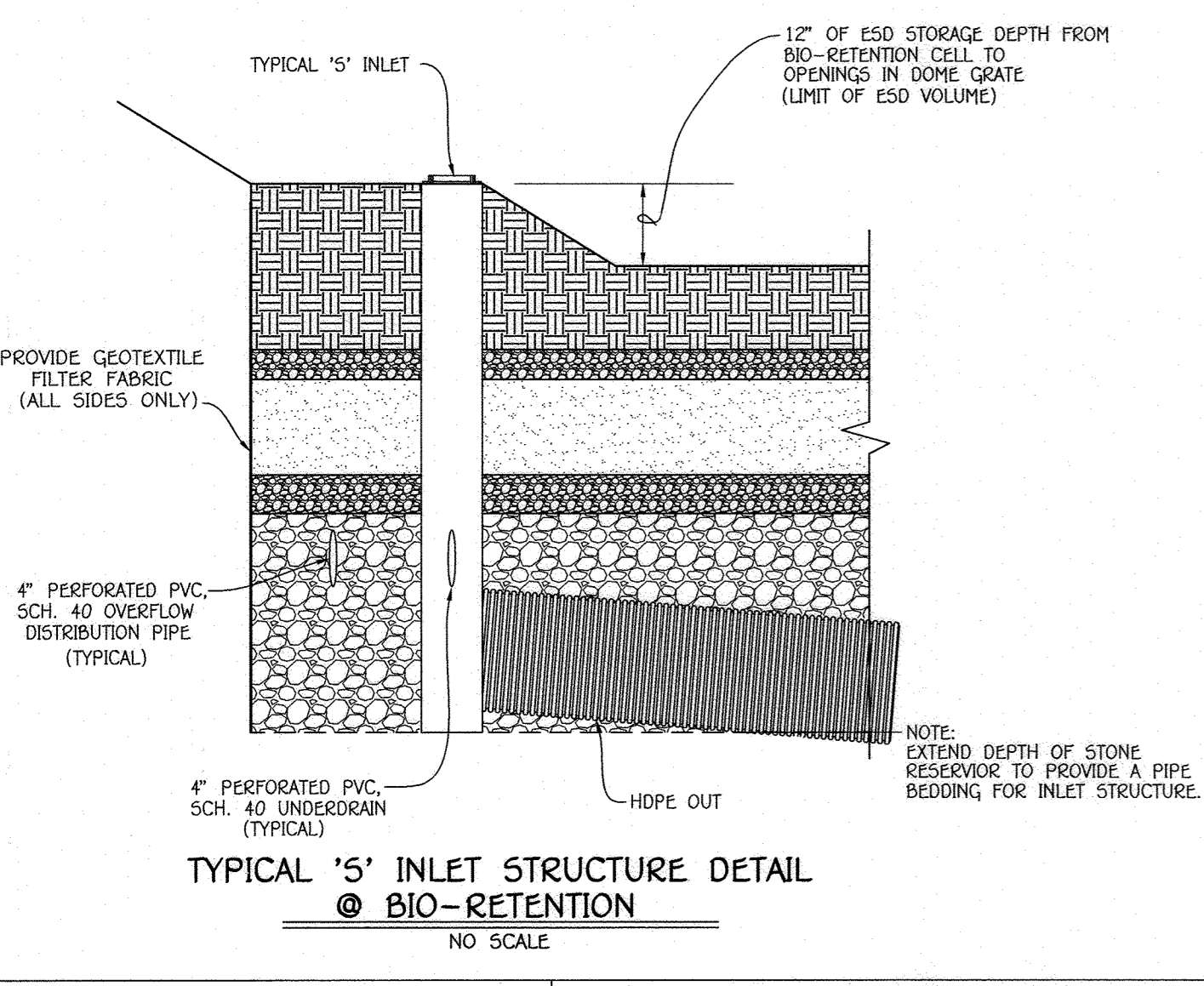
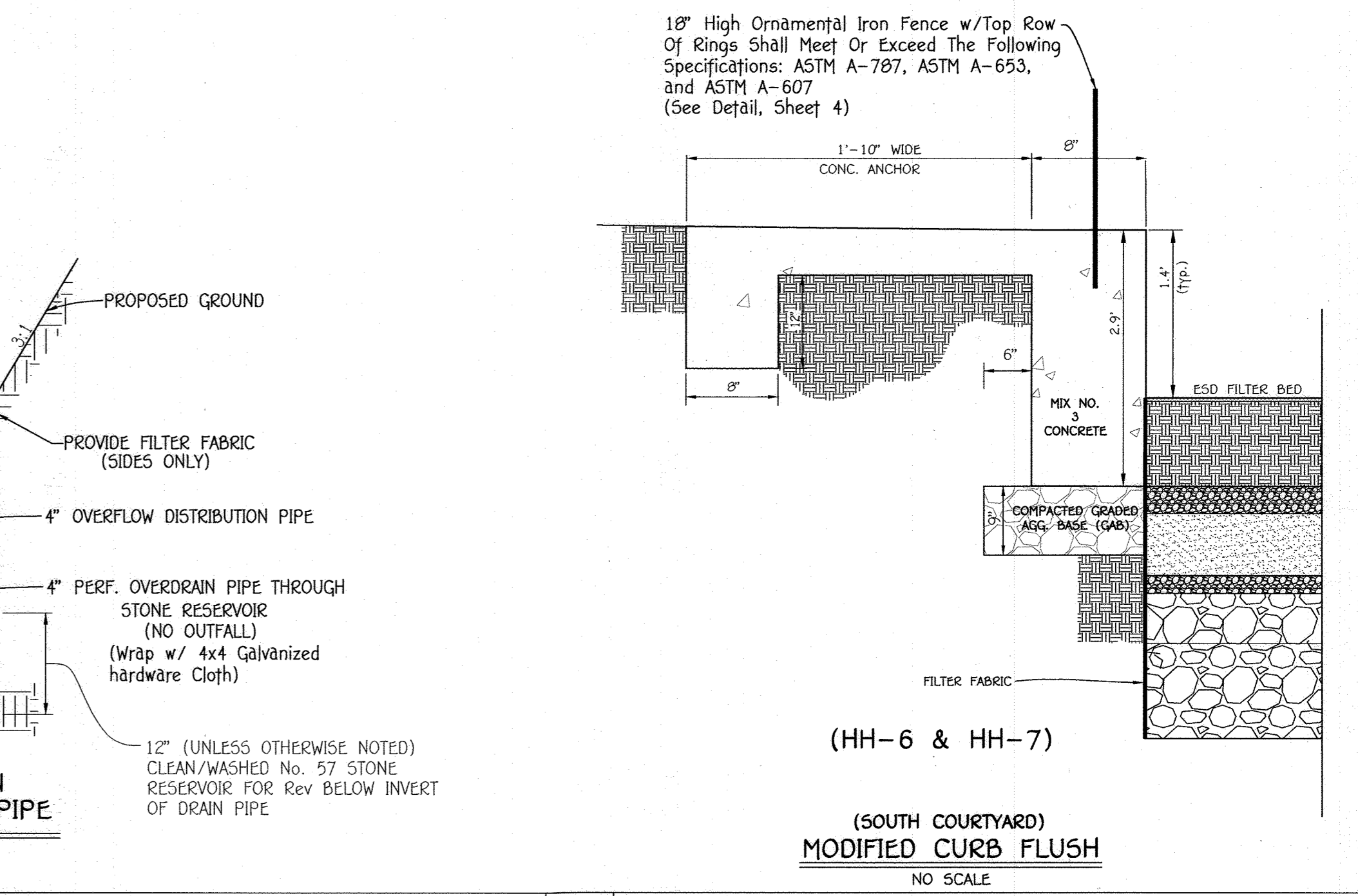
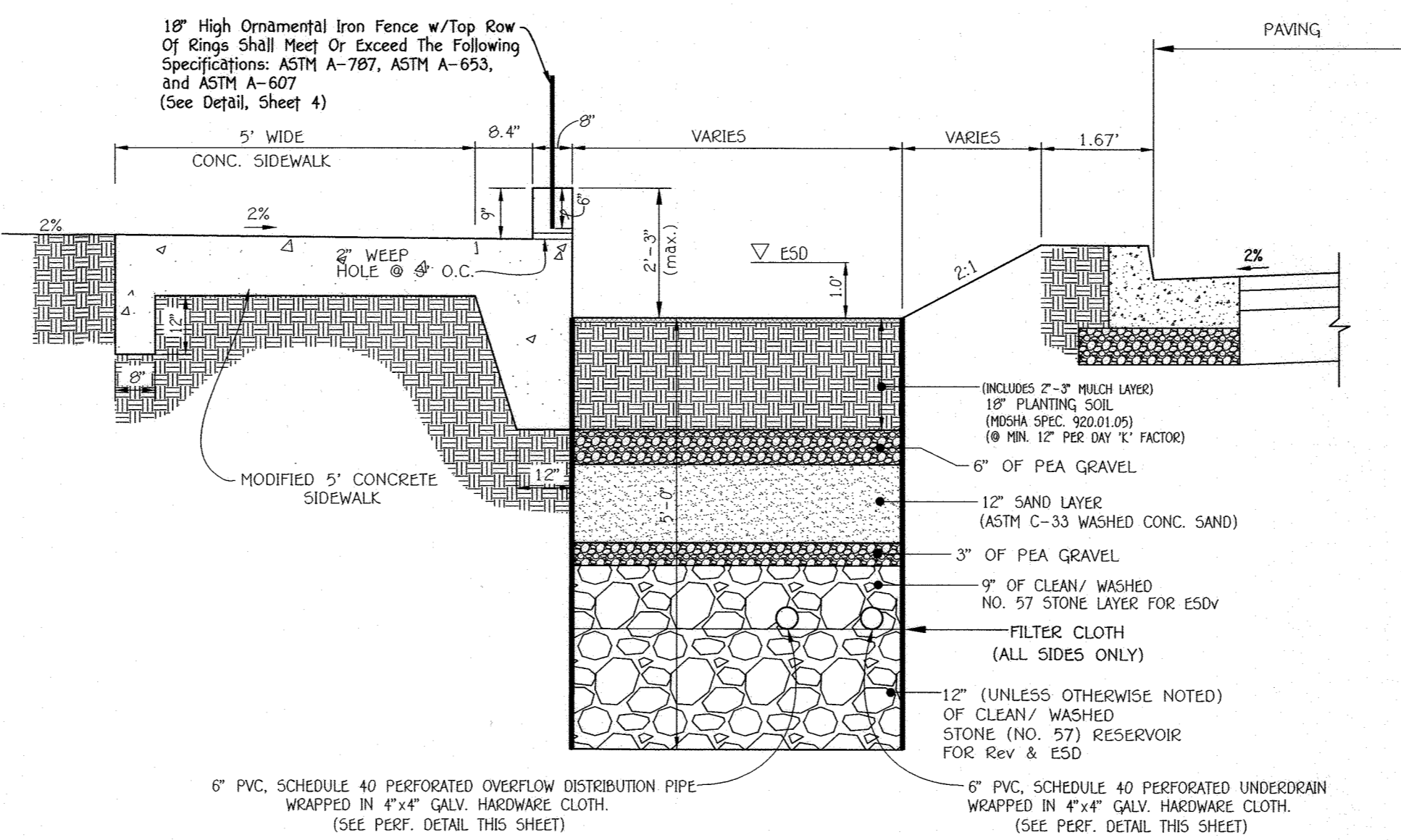
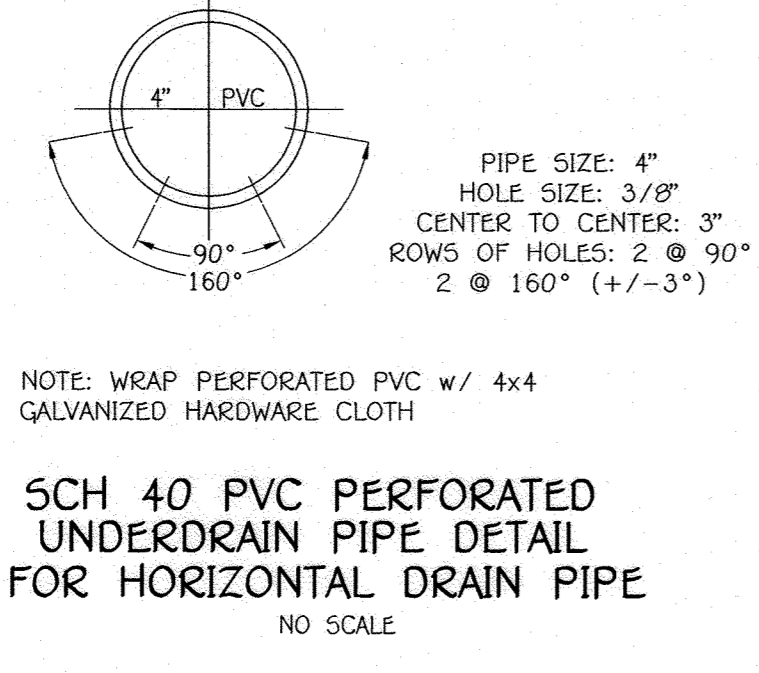
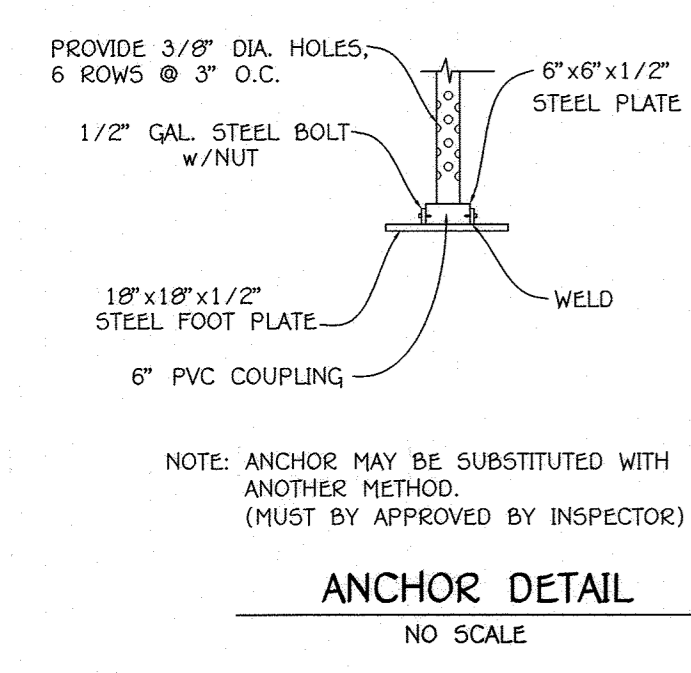
Revised Date: September 8, 2020

Sheet 4 of 25

5DP-18-055



NOTES:
 UNDERDRAIN PIPE SHALL BE 4" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 759, TYPE PS 28 OR ASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (E.G., PVC OR HDPE).
 PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.
 GRAVEL LAYER SHALL BE (NO. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
 THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
 A RIGID, NON PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
 A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] Chief, Division of Land Development 11/13/20 Date

[Signature] Chief, Development Engineering Division 11/2/20 Date

[Signature] Director - Department of Planning and Zoning 11/30/20 Date



Owner
 Kellogg-COP, LLC
 c/o David P. Scheffnacker, Jr.,
 Managing Member
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph# 410-296-3800

Developer
 Preston - Scheffnacker Properties
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph# 410-296-3800

NO.	REVISION	DATE
Δ	REVISED SWM WALL DETAILS	9/8/20

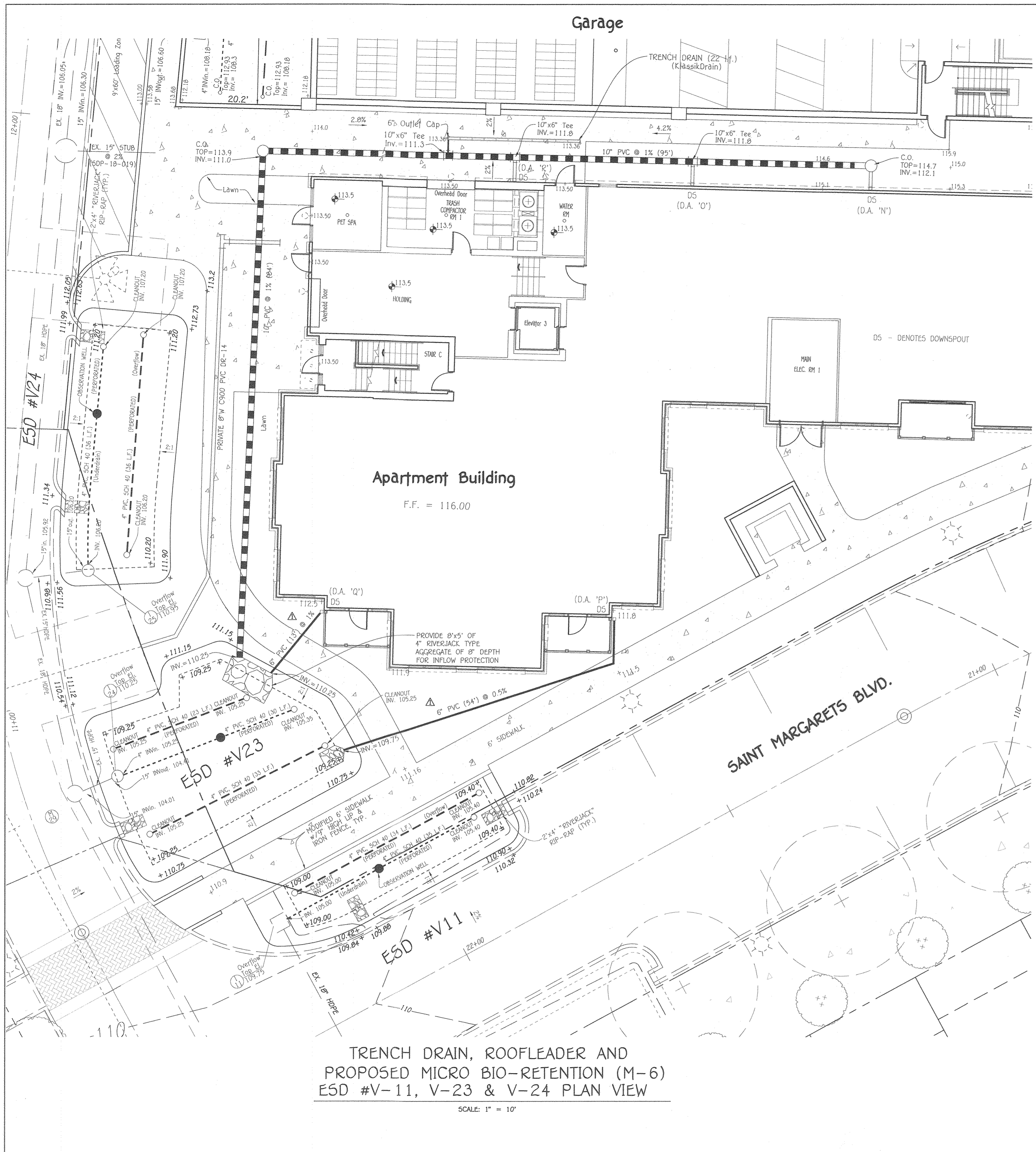
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OXFORD SQUARE	----	"H-H"

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOO	3B	1st	601101

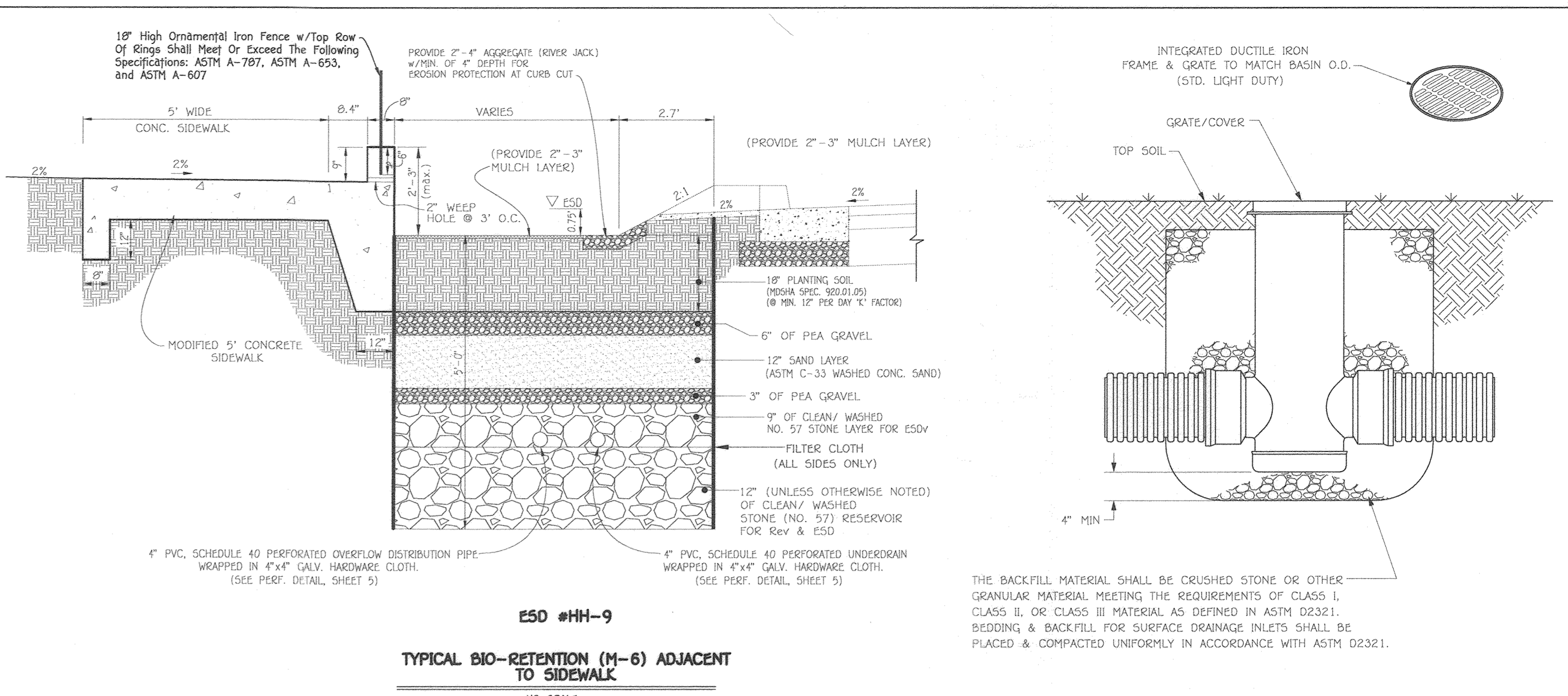
REVISED STORMWATER MANAGEMENT NOTES & DETAILS

OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel "H-H"
 "Bristol Court" - A Green Building
 Zoned: TOO
 Tax Map No.: 3B Grid No.: 20 Parcel No.: 1003
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
 Revised Date: September 8, 2020
 Sheet 5 of 25

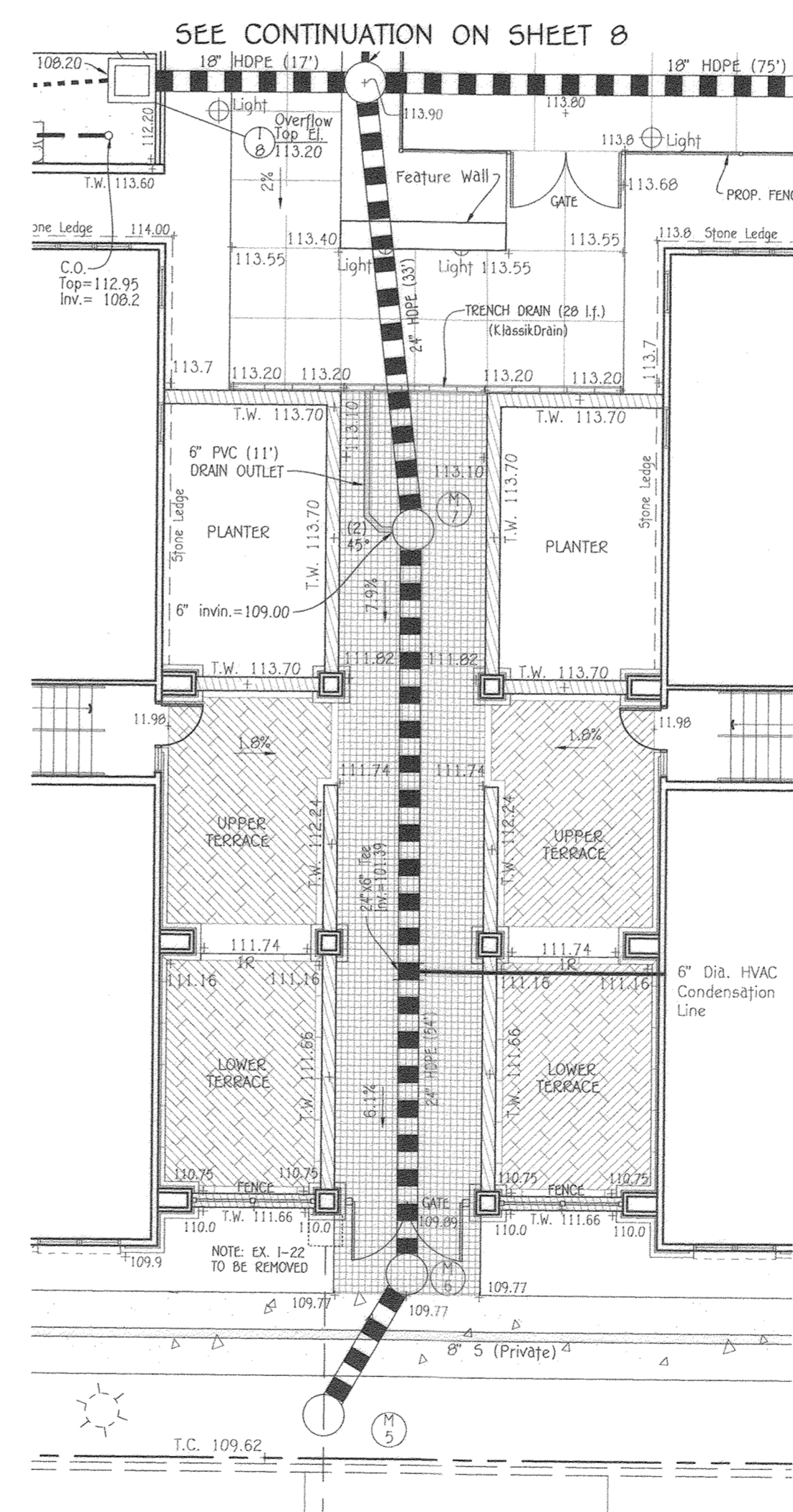
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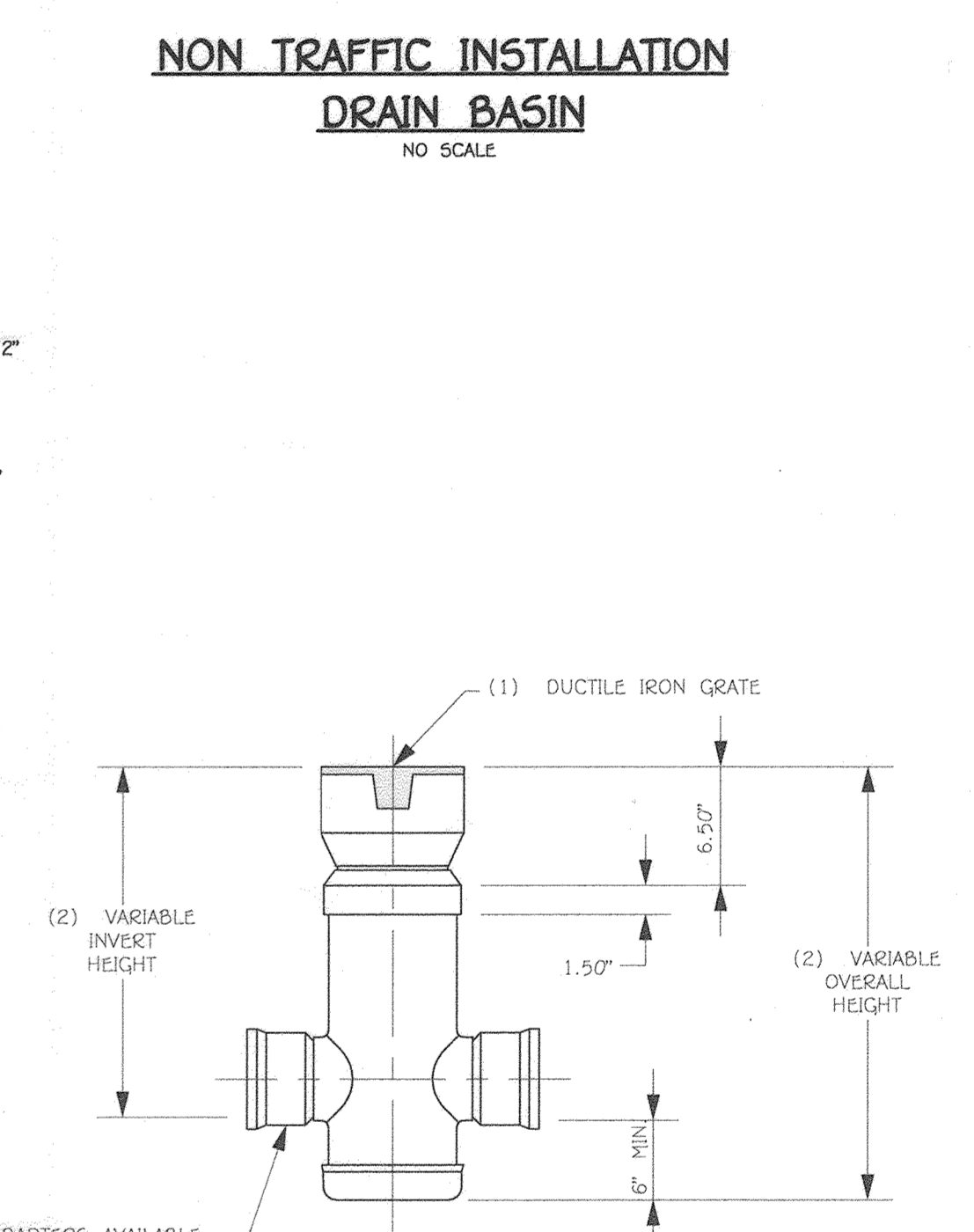
TRENCH DRAIN, ROOFLEADER AND PROPOSED MICRO BIO-RETENTION (M-6) ESD #V-11, V-23 & V-24 PLAN VIEW
SCALE: 1" = 10'



ESD #HH-9
TYPICAL BIO-RETENTION (M-6) ADJACENT TO SIDEWALK
NO SCALE



COURTYARD ENTRANCE DETAIL
SCALE: 1" = 10'



NON TRAFFIC INSTALLATION DRAIN BASIN
NO SCALE

10" CUSTOM DRAIN BASIN
NO SCALE

- GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
- CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 64" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HOPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
- DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
STANDARD	LIGHT DUTY	1098CGS	7001-110-198
SOLID COVER	LIGHT DUTY	1098CGC	7001-110-199
BRONZE	N/A	1098CGB	7001-110-200
DOME	N/A	1098CGD	7001-110-201
DROP IN GRATE	LIGHT DUTY	1001DI	7001-110-020

PURPOSE NOTE: THE PURPOSE OF THIS REVISED SOP IS TO ADD ESD W-1 THRU W-6 FROM SDP-15-053 AND ESD V-11, V-15, V-17, V-19 & V-23 THRU V-25 FROM SDP-18-019 AS PROPOSED TO THIS SDP PLAN.

1:2009/09/14/eng/SDP - Parcel G-C Eriand/SDP - 300 - UNITS/REBLINE OCT 2021 ADDING ESD/09/14/Sheet 4-9 swm details.dwg 2/8/2022 10:26:53 AM, Downstairs T1500 (temporary).ps, 11

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
Chief, Division of Land Development

[Signature]
Chief, Development Engineering Division

[Signature]
Director, Department of Planning and Zoning

[Signature]
Date: 6/1/22

STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION.

Owner
Kelloog-CCP, LLC
c/o David P. Scheffnacker, Jr., Managing Member
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

Developer
Preston + Scheffnacker Properties
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

NO.	REVISION	DATE
1	ADDED PERIMETER BIO-RETENTION FACILITIES (W-1 THRU W-6, V-11, V-15, V-17, V-19 & V-23 THRU V-25)	2/8/22
2	REVISED SWM LAYOUT & COURTYARD AMENITIES	9/8/20

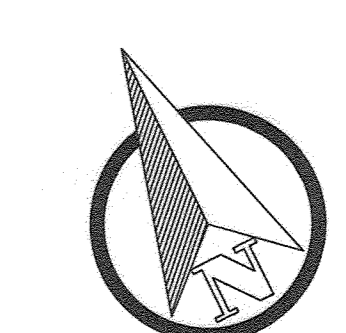
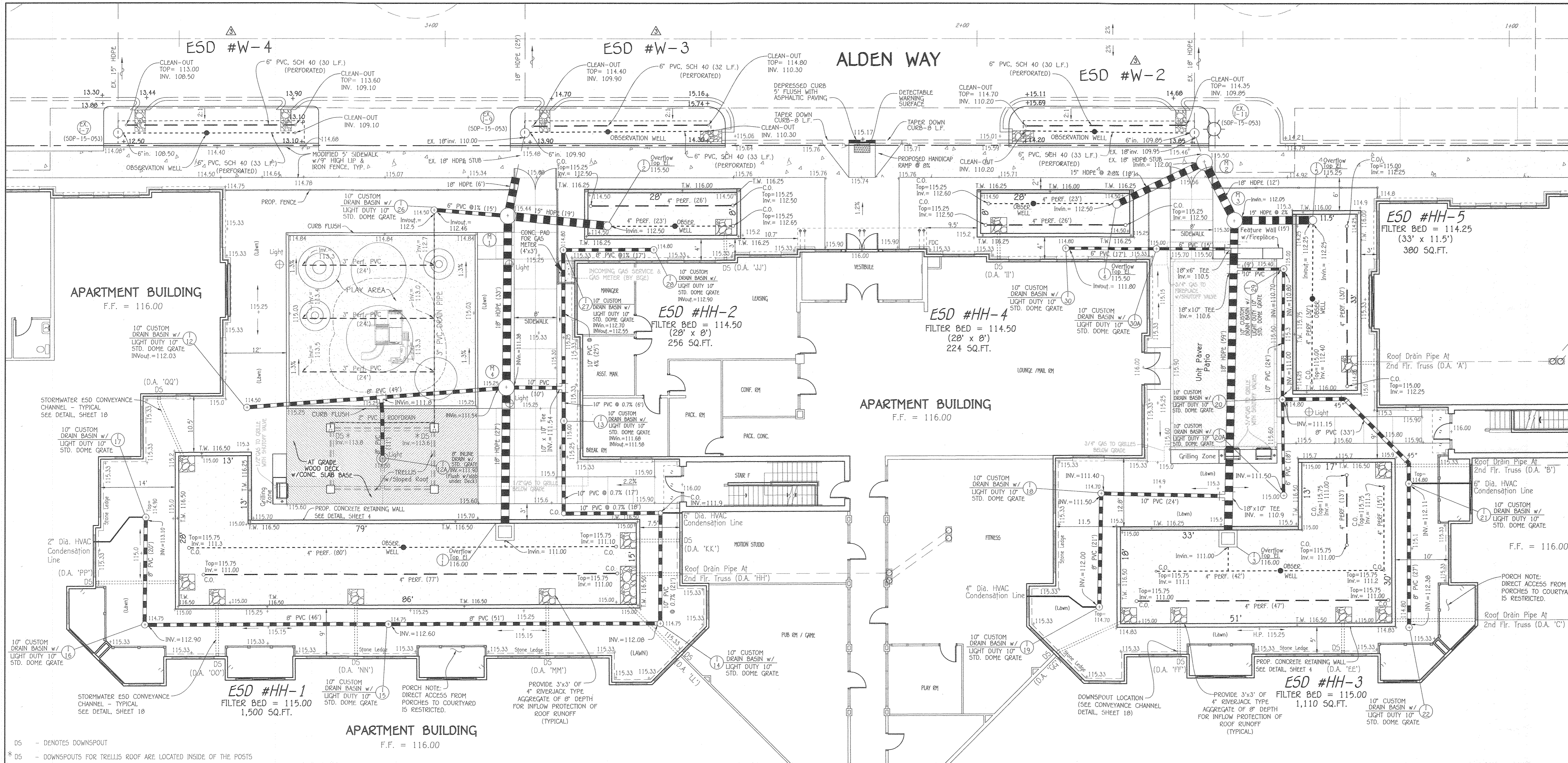
SUBDIVISION	SECTION/AREA	PARCEL No.
OXFORD SQUARE		'H-H'

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050		TOD	3B	1st.	601101

REVISED STORMWATER MANAGEMENT DETAILS

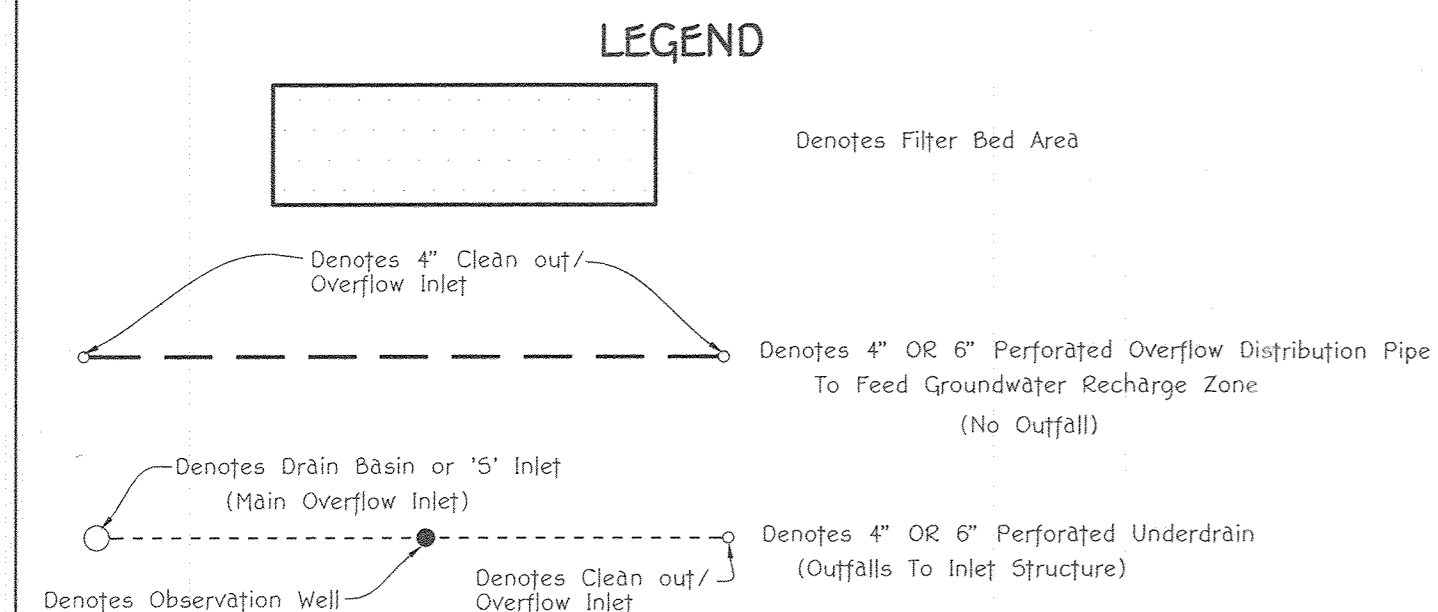
OXFORD SQUARE
"A Howard County Green Neighborhood"
Parcel 'H-H'
"Bristol Court" - A Green Building

Zone: TOD
Grid No.: 20
Parcel No.: 1003
First Election District: Howard County, Maryland
Scale: As Shown
Date: November 22, 2019
Revised Date: September 8, 2020
Revised Date: February 8, 2022
Sheet 6 of 25

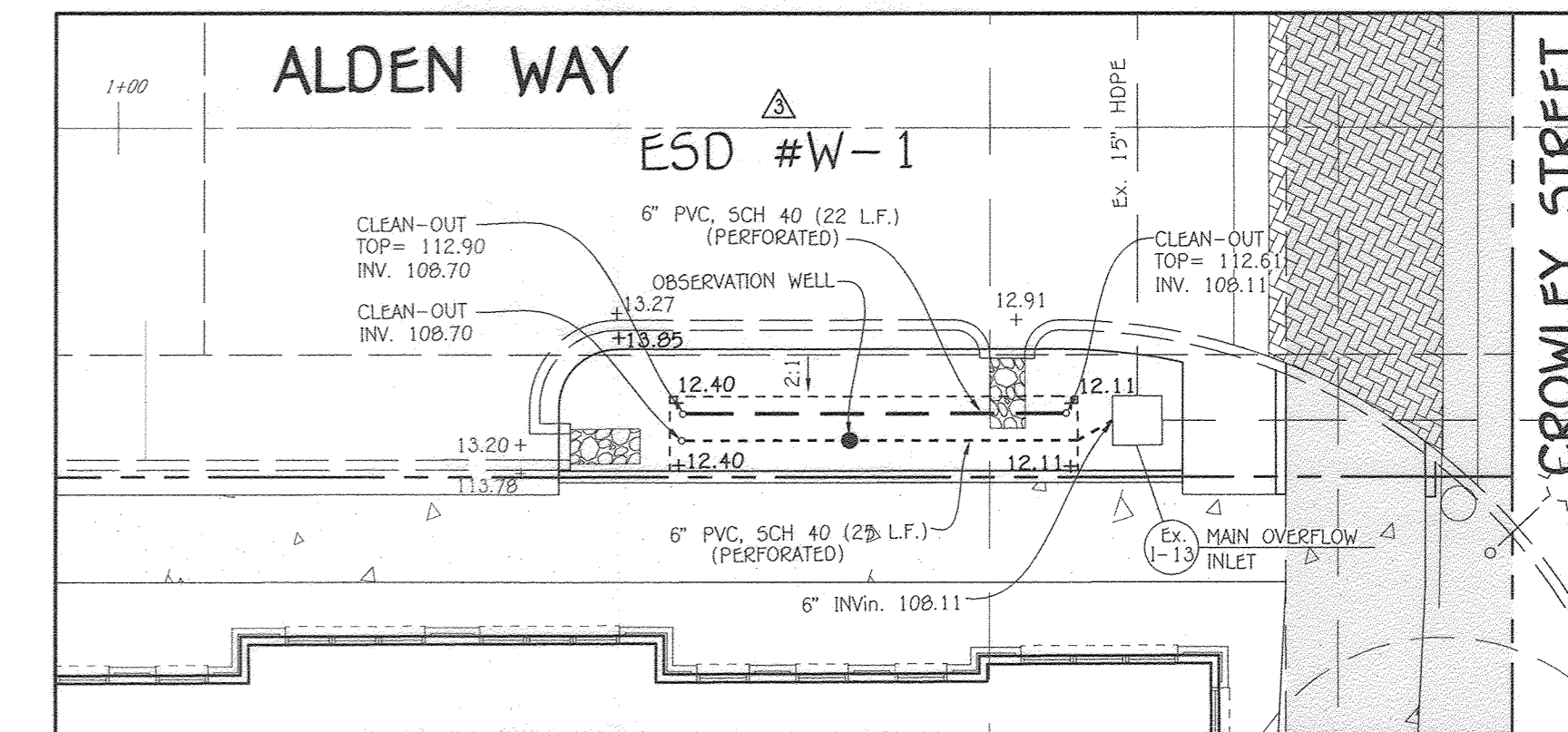


PROPOSED MICRO BIO-RETENTION (M-6)
 ESD #HH-1 THRU #HH-5, #V-11, V-23,
 V-24 & W-2 THRU W-4 PLAN VIEW

SCALE: 1" = 10'



PURPOSE NOTE: Δ
 THE PURPOSE OF THIS REVISED SDP IS TO ADD ESD W-1 THRU W-6 FROM SDP-15-053 AND ESD V-11, V-15, V-17, V-19 & V-23 THRU V-25 FROM SDP-18-019 AS PROPOSED TO THIS SDP PLAN.



PROPOSED MICRO BIO-RETENTION (M-6)
 ESD W-1 PLAN VIEW

SCALE: 1" = 10'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
 Chief, Division of Land Development
 Date: 5/10/22

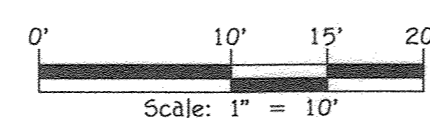
[Signature]
 Chief, Development Engineering Division
 Date: 6/1/22

[Signature]
 Director - Department of Planning and Zoning
 Date: 6/1/22



STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION.



Owner

Kellogg-COP, LLC
 c/o David P. Scheffnacker, Jr.
 Managing Member
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph: 410-296-3800

Developer

Preston - Scheffnacker Properties
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph: 410-296-3800

NO.	REVISION	DATE
1	ADDED PERIMETER BIO-RETENTION FACILITIES (W-1 THRU W-6, V-11, V-15, V-17, V-19 & V-23 THRU V-25)	2/8/22
2	ADDED PERIMETER BIO-RETENTION FACILITIES	10/7/21
3	REVISED SWM LAYOUT & COURTYARD AMENITIES	9/8/20

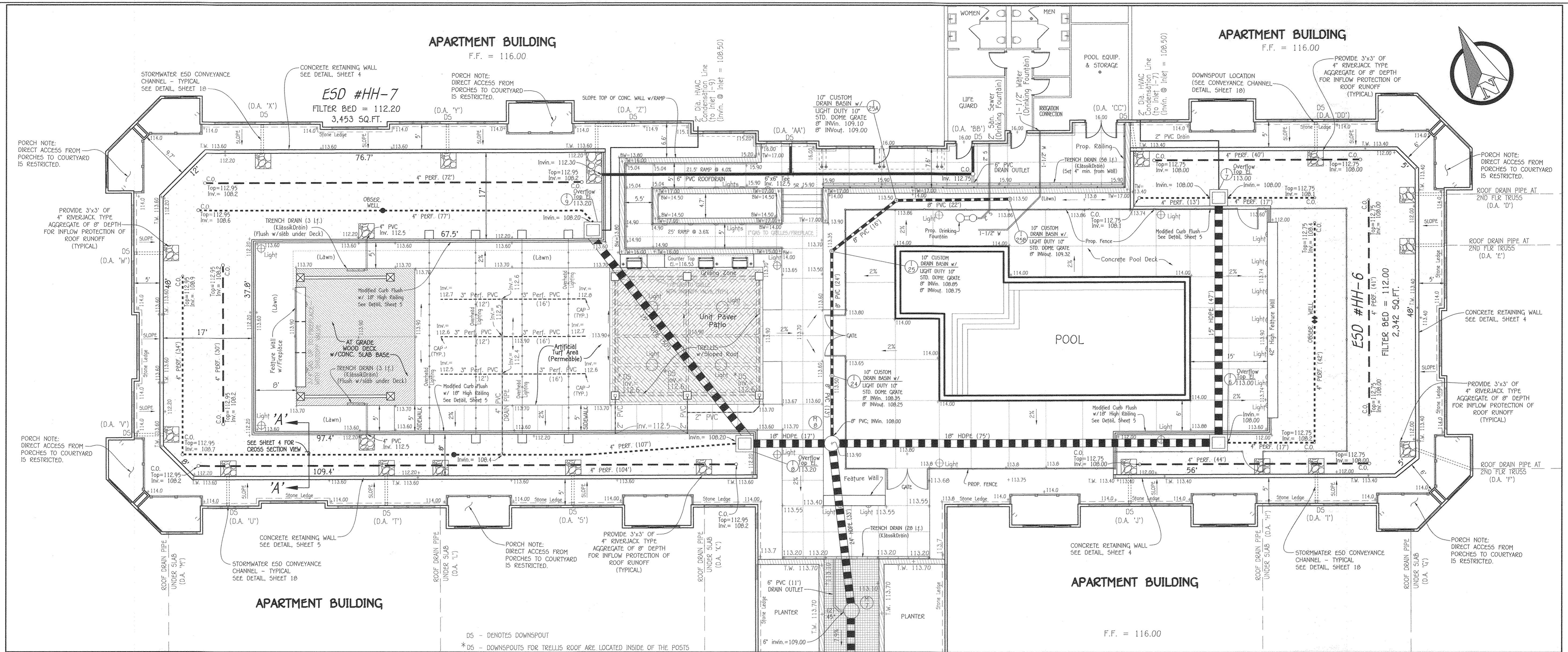
SUBDIVISION	SECTION/AREA	PARCEL No.
OXFORD SQUARE		'H-H'

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050		TOD	38	1st	601101

REVISED STORMWATER MANAGEMENT PLAN VIEWS

OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel 'H-H'
 "Bristol Court" - A Green Building

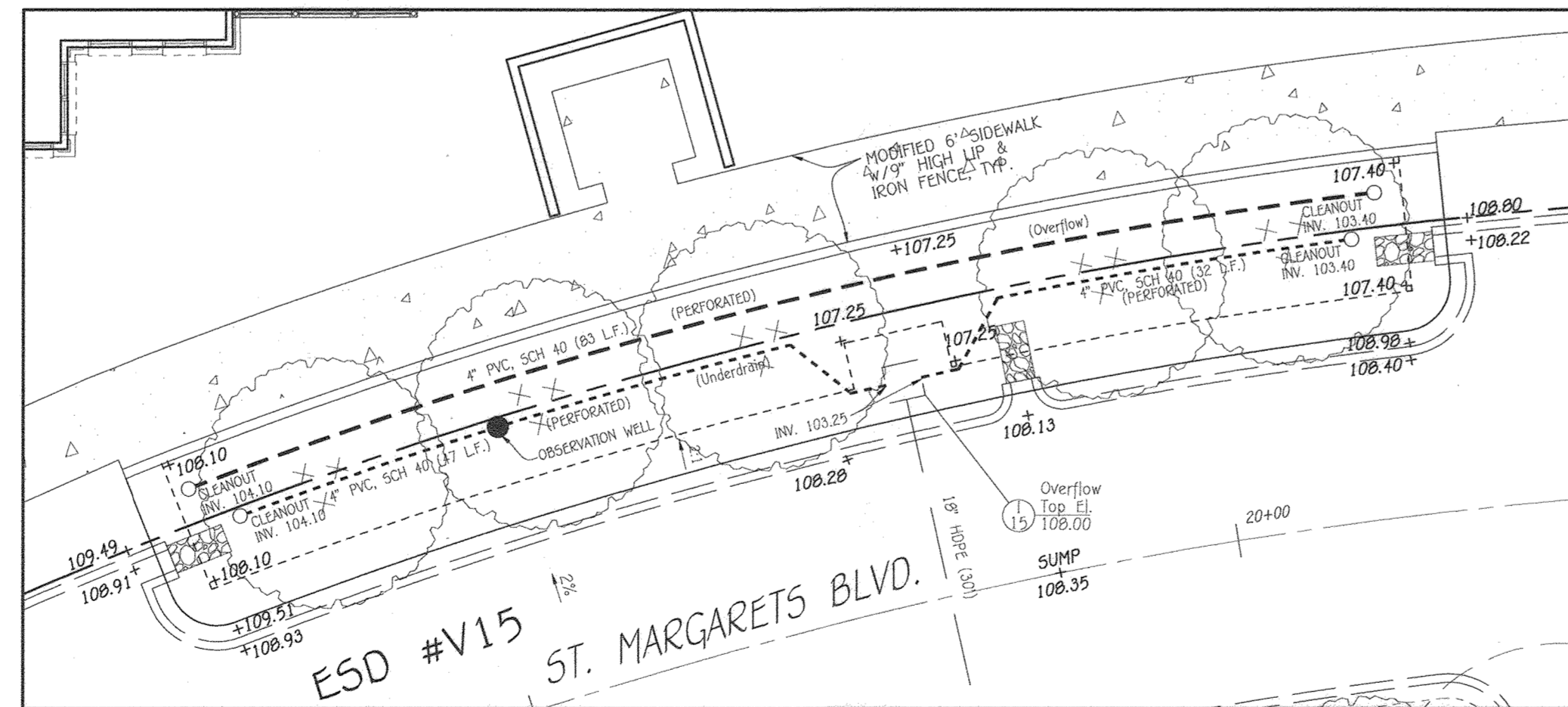
Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
 Revised Date: September 8, 2020
 Sheet 7 Of 25



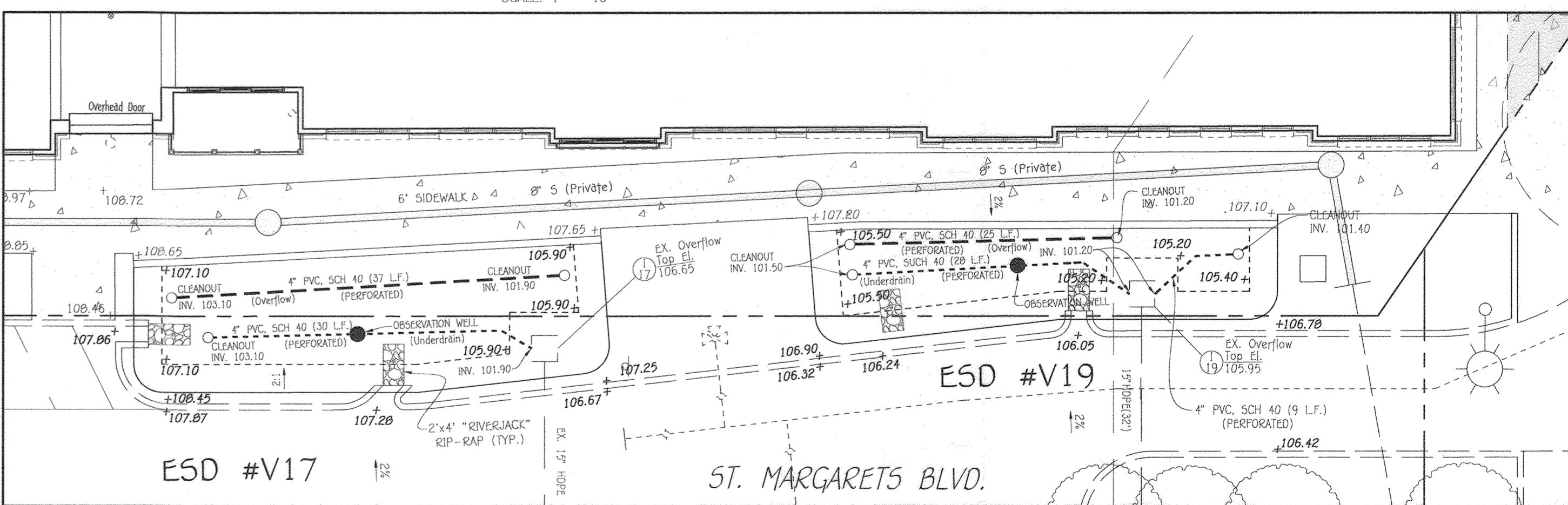
LEGEND

- Denotes Filter Bed Area
- Denotes 4" Clean out/Overflow Inlet
- Denotes 4" OR 6" Perforated Overflow Distribution Pipe To Feed Groundwater Recharge Zone (No Outfall)
- Denotes Drain Basin or 5" Inlet (Main Overflow Inlet)
- Denotes 4" OR 6" Perforated Underdrain (Outfalls to Inlet Structure)
- Denotes Observation Well
- Denotes Clean out/Overflow Inlet
- Denotes Decorative Stone

PURPOSE NOTE: THE PURPOSE OF THIS REVISED SDP IS TO ADD ESD W-1 THRU W-6 FROM SDP-15-053 AND ESD V-11, V-15, V-17, V-19 & V-23 THRU V-25 FROM SDP-18-019 AS PROPOSED TO THIS SDP PLAN.



PROPOSED MICRO BIO-RETENTION (M-6) ESD #V-15 PLAN VIEW
SCALE: 1" = 10'



PROPOSED MICRO BIO-RETENTION (M-6) ESD #V-17 & #V-19 PLAN VIEW
SCALE: 1" = 10'

SEE CONTINUATION ON SHEET 6

PROPOSED MICRO BIO-RETENTION (M-6) ESD #HH-6 THRU ESD #HH-7 PLAN VIEW

SCALE: 1" = 10'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development
 Chief, Development Engineering Division
 Director - Department of Planning and Zoning

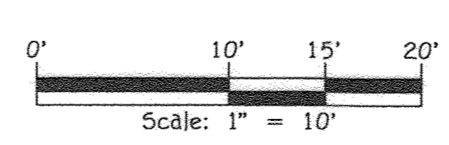


STORMWATER MANAGEMENT MAINTENANCE NOTE

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 c/o David P. Scheffnacker, Jr., Managing Member
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 Phe 410-296-3800

Developer
 Preston + Scheffnacker Properties
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 Phe 410-296-3800



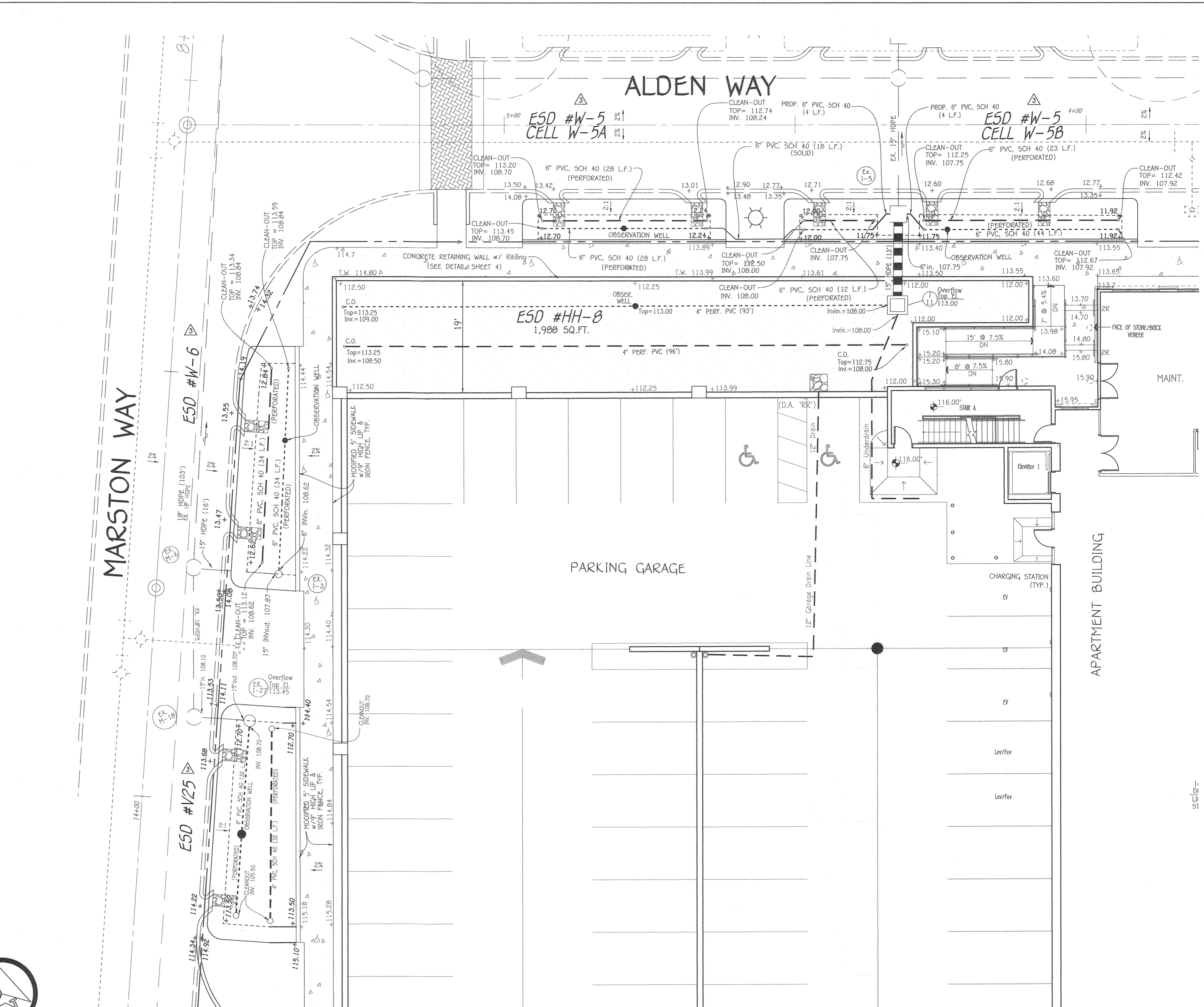
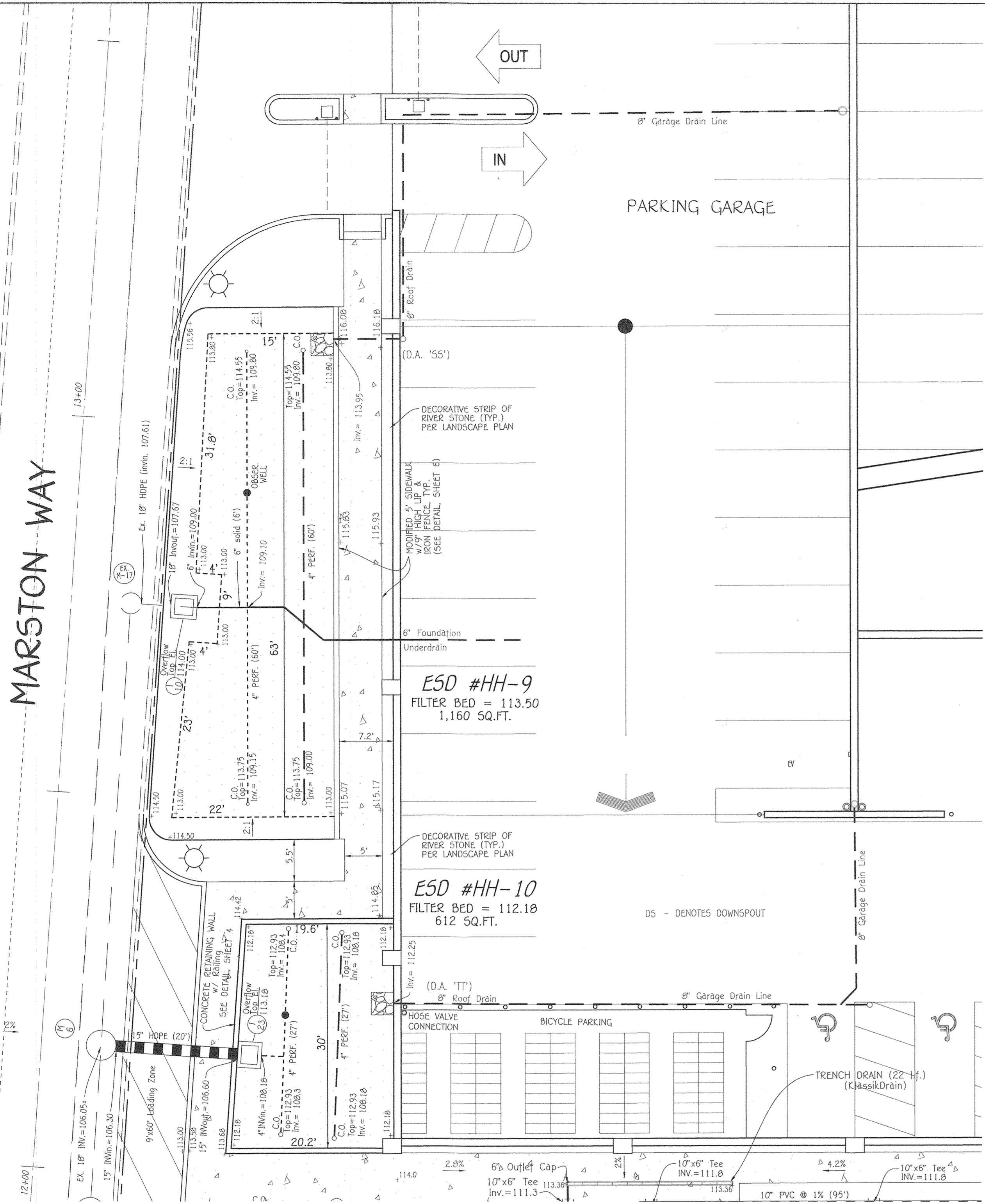
REVISED STORMWATER MANAGEMENT PLAN VIEWS

OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel "H-H"
 "Bristol Court" - A Green Building
 Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
 First Election District Howard County, Maryland
 Zoned: TOD
 Date: November 22, 2019
 Revised Date: September 8, 2020
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 Sheet 8 Of 25

NO.	REVISION	DATE
1	ADDED PERIMETER BIO-RETENTION FACILITIES (W-1 THRU W-6, V-11, V-15, V-17, V-19 & V-23 THRU V-25)	2/8/22
2	ADDED PERIMETER BIO-RETENTION FACILITIES	10/7/21
3	REVISED SWM LAYOUT & COURTYARD APERTURES	9/8/20

SUBDIVISION	SECTION/AREA	PARCEL No.
OXFORD SQUARE		H-H'

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050		TOD	38	1st	601101



LEGEND FOR ESD UNDERDRAINS

- Denotes Filter Bed Area
- Denotes 4" Clean out/Overflow Inlet
- Denotes 4" OR 6" Perforated Overflow Distribution Pipe To Feed Groundwater Recharge Zone (No Outfall)
- Denotes Drain Basin or "S" Inlet (Main Overflow Inlet)
- Denotes 4" OR 6" Perforated Underdrain (Outfalls to Inlet Structure)
- Denotes Observation Well
- Denotes Clean out/Overflow Inlet
- Denotes Decorative Stone

**PROPOSED MICRO BIO-RETENTION (M-6)
ESD #HH-9 & #HH-10**

SCALE: 1" = 10'

PURPOSE NOTE: THE PURPOSE OF THIS REVISED SDP IS TO ADD ESD W-1 THRU W-6 FROM SDP-15-053 AND ESD V-11, V-15, V-17, V-19 & V-23 THRU V-25 FROM SDP-10-019 AS PROPOSED TO THIS SDP PLAN.

**PROPOSED MICRO BIO-RETENTION (M-6)
ESD #HH-8, #V-25, #W-5 & #W-6 PLAN VIEW**

SCALE: 1" = 10'

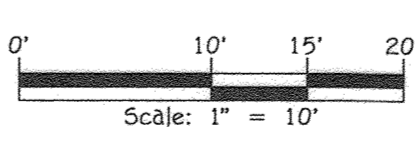
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development *ES* Date *2/8/22*
 Chief, Development Engineering Division *ST/22* Date *2/11/22*
 Director - Department of Planning and Zoning *Stacy Corra* Date *2/11/22*



STORMWATER MANAGEMENT MAINTENANCE NOTE

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3	REVISED SWM LAYOUT & COURTYARD AMENITIES	9/8/20

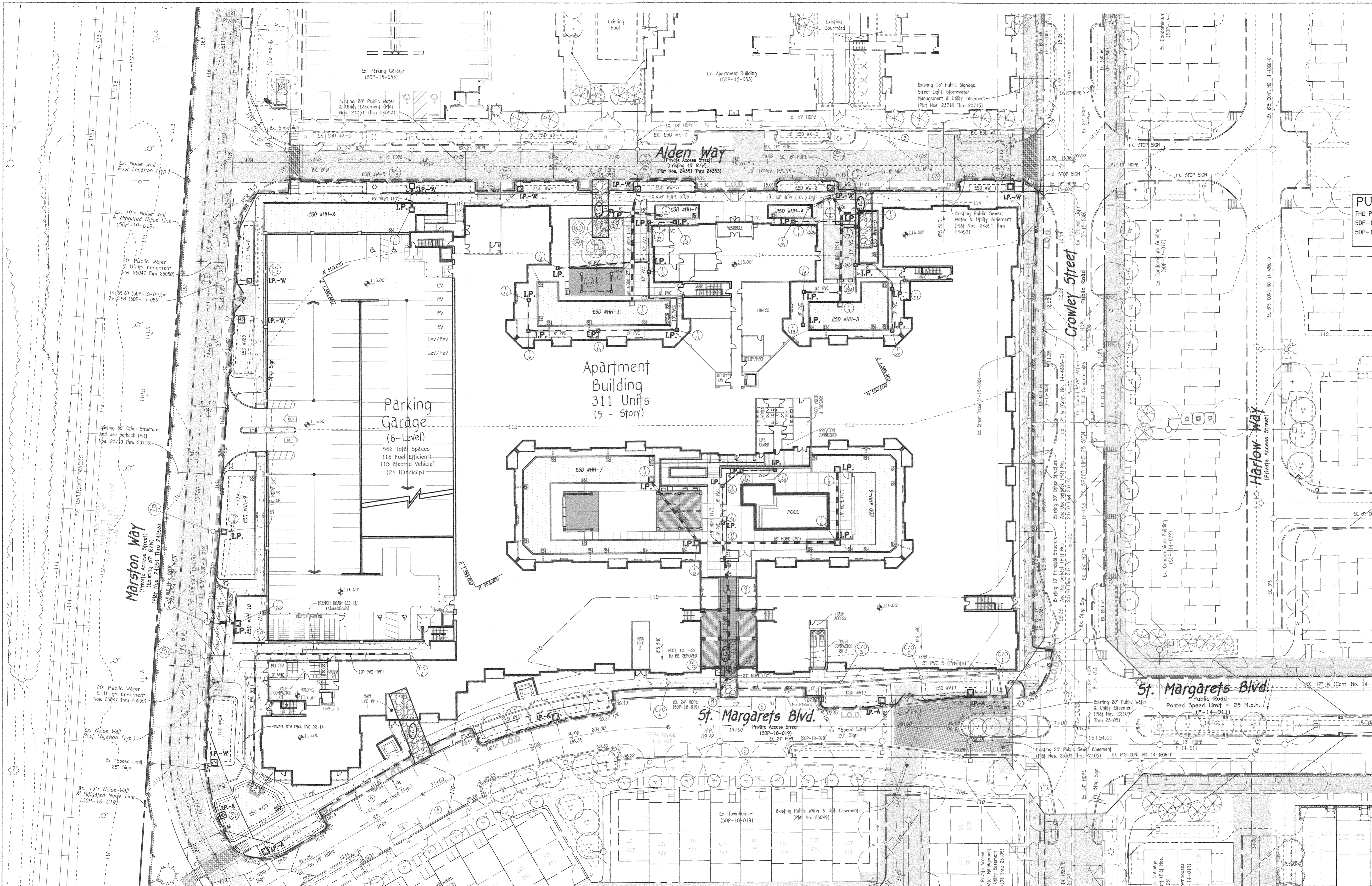
SUBDIVISION	SECTION/AREA	PARCEL NO.
OXFORD SQUARE	---	"H-H"

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st	601101

REVISED STORMWATER MANAGEMENT PLAN VIEWS

OXFORD SQUARE

"A Howard County Green Neighborhood"
 Parcel "H-H"
 "Bristol Court" - A Green Building
 Zoned: TOD
 Tax Map No.: 3B Grid No.: 20 Parcel No.: 1003
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
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 Sheet 9 of 25



NOTE: BANBURY DRIVE AND CROWLEY STREET ARE PUBLIC ACCESS STREETS DESIGNED AS MAJOR COLLECTORS

PURPOSE NOTE: Δ
 THE PURPOSE OF THIS REVISED SOP IS TO ADD ESO W-1 THRU W-6 FROM SOP-15-053 AND ESO V-11, V-15, V-17, V-19 & V-23 THRU V-25 FROM SOP-18-019 AS PROPOSED TO THIS SOP PLAN.

SEDIMENT CONTROL LEGEND

- 55F — 55F — 55F — SUPER-SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- I.P. STANDARD INLET PROTECTION ALL INLETS (TYPE 'A')
- L.O.D. LIMIT OF DISTURBANCE

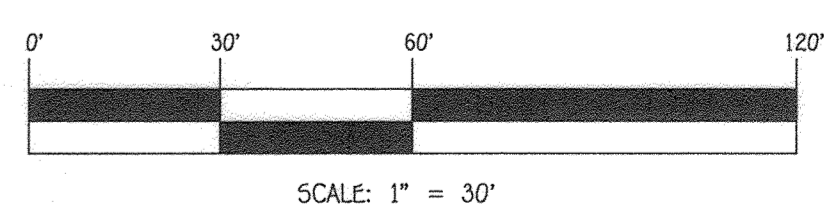
NOTE: THERE WILL BE NO STOCKPILE ON-SITE.

CONTRACTOR NOTE:

ALTHOUGH THERE ARE NO TRAPS/BASINS, THE CONTRACTOR IS RESPONSIBLE FOR PUMPING ALL STANDING WATER THROUGH A FILTERING DEVICE TO A CLEAR WATER OUTFALL WITHIN 24 HOURS OF A STORM EVENT

LEGEND	
SYMBOL	DESCRIPTION
--- 102 ---	EXISTING CONTOUR 2' INTERVAL
--- 100 ---	EXISTING CONTOUR 10' INTERVAL
--- 102 ---	PROPOSED CONTOUR 2' INTERVAL
--- 100 ---	PROPOSED CONTOUR 10' INTERVAL
— 55F — 55F —	SUPER-SILT FENCE
	DRAINAGE LIMITS
L.O.D.	LIMIT OF DISTURBANCE
	EXISTING TREE LINE
	STORMWATER MANAGEMENT DEVICE
	STORM DRAIN
	STREET LIGHT (proposed)
	STREET LIGHT (existing)
	STREET TREE (proposed)
	STREET TREE (existing)
	PROPOSED GARDEN BENCH
	PROPOSED POOL FENCE
B-12A	BORING LOCATION

PURPOSE NOTE: Δ
 THE PURPOSE OF THIS REVISED SOP IS TO REVISE THE PROPOSED APARTMENT BUILDING FOOTPRINT, COURTYARDS AND ALL ASSOCIATED STORMWATER MANAGEMENT FACILITIES.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
 Chief, Division of Land Development
 Date: 5/12/22

[Signature]
 Chief, Development Engineering Division
 Date: 5/12/22

[Signature]
 Director - Department of Planning and Zoning
 Date: 6/1/22



ENGINEER'S CERTIFICATE
 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
 Signature of Engineer (print name below signature)
 Date: 4/26/22

DEVELOPER'S CERTIFICATE
 I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

[Signature]
 Signature of Developer (print name below signature)
 Date: 4/26/22

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
 Signature of Howard SCD
 Date: 05/12/22

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffnacker, Jr.,
 Managing Member
 100 West Road, Suite 304
 Towson, Maryland 21284
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Developer
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ADDED PERIMETER BIO-RETENTION FACILITIES (W-1 THRU W-6, V-11, V-15, V-17, V-19 & V-23 THRU V-25)	2/8/22	
REVISED BUILDING, SWM LAYOUT, COURTYARD AMENITIES & S.C.E.	9/8/20	
NO. REVISION	DATE	
SUBDIVISION	SECTION/AREA	PARCEL No.
OXFORD SQUARE		"H"-H'
PLAT NO.	BLOCK NO.	ZONE
25047-25050		TOD
		TAX/ZONE
		3B
		ELEC. DIST.
		1st
		CENSUS TR.
		601101

REVISED SEDIMENT & EROSION CONTROL PLAN

OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel "H-H"
 "Bristol Court" - A Green Building

Zoned: TOD
 Tax Map No: 3B Grid No.: 20 Parcel No.: 1003
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
 Revised Date: September 8, 2020
 Revised Date: February 8, 2022
 Sheet 10 of 25

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

- A. Soil Preparation**
1. Temporary Stabilization
 2. Permanent Stabilization

1. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found in Table B.2. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
2. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
 - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, net sedge, poison ivy, thistle, or others as specified.
 - c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
 - a. Erosion and sediment control practices must be maintained when applying topsoil.
 - b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that seeding or seeding and mulch is applied with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and identity of the producer.
3. Lime materials must be ground limestone (hydrated or burnt) lime may be substituted except when hydroseeding which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #200 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

TEMPORARY SEEDING NOTES (B-4-4)

- Definition
- To stabilize disturbed soils with vegetation for up to 6 months.
- Purpose
- To use fast growing vegetation that provides cover on disturbed soils.
- Conditions Where Practice Applies
- Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.
- Criteria
1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
 2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3A.1.b and maintain until the next seeding season.

Temporary Seeding Summary				
Hardness Zone (from Figure B.3):	_____ B _____		Fertilizer Rate (10-20-20)	Lime Rate
Seed Mixture (from Table B.1):	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	
BARLEY	96	3/1 - 5/15	1"	436 lb/acre (10 lb/1000 sf)
OATS	72	3/1 - 5/15	1"	1000 sf)
RYE	112	3/1 - 5/15	1"	

PERMANENT SEEDING NOTES (B-4-5)

- A. Seed Mixtures**
1. General Use
1. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found in Table B.2. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 2. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures
 - a. Areas where turfgrasses may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixtures, application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

- i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management, irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
- ii. Kentucky Bluegrass/Perennial Oryzopsis: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Oryzopsis Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
- iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
- iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:

Selected turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

- c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardness Zones: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardness Zones: 7a, 7b)

- d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
- e. If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

PERMANENT SEEDING SUMMARY

Hardness Zone (from Figure B.3):	_____ B _____		Fertilizer Rate (10-20-20)	Lime Rate
Seed Mixture (from Table B.3):	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	
ø TALL FESCUE	100	Mar. 1 - May 15 Aug. 1 - Oct. 15	1/4" - 1/2" in.	45 lbs. per acre (1.0 lb/1000 sf)

No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	N	P ₂ O ₅	K ₂ O	Lime Rate
ø	TALL FESCUE	100	Mar. 1 - May 15 Aug. 1 - Oct. 15	1/4" - 1/2" in.	45 lbs. per acre (1.0 lb/1000 sf)	90 lb/acre (2.0 lb/1000 sf)	90 lb/acre (2.0 lb/1000 sf)	2 tons/acre (1000 sf)

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DICES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
- b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA (B-4-8)

- Definition
- The mound or pile of soil protected by appropriately designed erosion and sediment control measures.
- Purpose
- To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.
- Conditions Where Practice Applies
- Stockpile areas are utilized when it is necessary to salvage and store soil for later use.
- Criteria
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
 3. Runoff from the stockpile area must drain to a suitable sediment control practice.
 4. Access the stockpile area from the upgrade side.
 5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth ditch, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
 6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
 7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING (B-4-3)

- Definition
- The application of seed and mulch to establish vegetative cover.
- Purpose
- To protect disturbed soils from erosion during and at the end of construction.
- Conditions Where Practice Applies
- To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.
- Criteria

- A. Seeding**
1. Specifications
 - a. All seed must meet the requirement of the Maryland Seed Law. All seed must have been tested within 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
 - b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 2. Application
 - a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
 - b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 - ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P 0 (phosphorus), 200 pounds per acre; K 0 (potassium), 200 pounds per acre.
 - ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - iii. Mix seeds and fertilizer on site and seed immediately and without interruption.
 - iv. When hydroseeding do not incorporate seed into the soil.

- B. Mulching**
1. Mulch Materials (in order of preference)
 - a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, coated, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical slats.
 - i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
 - iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a batter-like ground cover on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - iv. WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
 - v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 50 percent minimum.

2. Application
 - a. Apply mulch to all seeded areas immediately after seeding.
 - b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
 - c. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to obtain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring
 - a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on steep slopes, this practice should follow the contour.
 - ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - iii. Synthetic binders such as Acrylic DLR (Ago-Tack), DCA-70, Petrosel, Terra Tex II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
 - iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMITS. (2 WEEKS)
2. NOTIFY "BESS UTILITY" AT LEAST 48 HOURS BEFORE ANY WORK AT 1-800-297-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24-HOURS BEFORE STARTING ANY WORK.
3. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE, PERIMETER SURGE-SILT PUNCH AS SHOWN ON THE PLANS. CLEAR AND GRUB SITE. (3 DAYS)
4. ONCE THE COUNTY SEDIMENT CONTROL INSPECTOR APPROVES THE SCE AND SURGE-SILT FENCING, THE CONTRACTOR CAN START ON THE BUILDING-GARAGE FOUNDATIONS AND SUBSEQUENT VERTICAL CONSTRUCTION. (2 WEEKS)
5. CONCURRENT WITH VERTICAL CONSTRUCTION, THE CONTRACTOR CAN INSTALL ALL THE UTILITIES. (2 MONTHS)
6. AS FOR THE SUN BIO-RETENTION CELLS, THE CONSTRUCTION OF THE COMPLETE SOIL PROFILE OF FILTER MEDIA, STONE LAYERS, UNDERDRAIN AND PLANTING FOR EACH BIO-RETENTION CELL CAN BE DELAYED UNTIL THE CONTRIBUTING DRAINAGE AREA FOR EACH FACILITY IS PERMANENTLY STABILIZED. INITIAL INLET PROTECTION AS SHOWN ON THE PLAN OR AS ANOTHER OPTION, BUILD THE SSD AND WMP IN SSF'S (2 WEEKS)
7. STABILIZE ALL EXPOSING AREAS DISTURBED AREAS ON SITE WITH PERMANENT SEEDING OR OPTIONAL SOODING OR PROTECT BIO-RETENTION AREAS WITH SILT FENCING THE FINAL CONSTRUCTION OF THE BIO-RETENTION FACILITIES CAN BE COMPLETED WITH THE FILTER MEDIA AND PLANTING.
8. STRONGEM NOTE: THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 50-ACRES OF "OPEN" GRADED SHALL BE DISTURBED AT ANY GIVEN TIME, IF REQUIRED. THIS PARCEL "H-H" AND ASSOCIATED L.O.D. IS LESS THAN 20-ACRES IN SIZE.
9. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.
10. GREEN NEIGHBORHOOD NOTE: ALL CONSTRUCTION WASTE MUST BE MANAGED IN ACCORDANCE WITH THE APPROVED GREEN NEIGHBORHOOD WASTE MANAGEMENT PLAN.

NOTE: ALL CONSTRUCTION WASTE MUST BE MANAGED IN ACCORDANCE WITH THE CONSTRUCTION WASTE MANAGEMENT PLAN PER GREEN NEIGHBORHOOD CREDIT H-3.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LDO and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance.
 - b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
 - c. Prior to the start of another phase of construction or opening of another grading unit. d. Prior to the removal or modification of sediment control practices.
- Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >10' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).
5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis

Total Area of Site:	4.247	Acres (PARCEL "H-H")
Area Disturbed:	4.1	Acres
Area to be roofed or paved:	3.4	Acres
Area to be vegetatively stabilized:	0.7	Acres
Total Cut:	4.400	Cu. Yds.
Total Fill:	6.700	Cu. Yds.

waste/borrow area location: ON-SITE OF OXFORD PROJECT

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each rain event. A written report by the contractor, made available upon request, is a part of every inspection and should include:
 - Inspection date
 - Inspection time (routine, pre-storm event, during rain event)
 - Name and title of inspector
 - Weather information (current conditions as well as time and amount of last recorded precipitation)
 - Brief description of project status (e.g., percent complete) and/or current activities
 - Evidence of sediment discharges
 - Identification of plan deficiencies
 - Identification of sediment controls that require maintenance
 - Identification of missing or improperly installed sediment controls
 - Compliance status regarding the sequence of construction and stabilization requirements
 - Photographs
 - Monitoring/sampling
 - Maintenance and/or corrective action performed
 - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDC).
9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.
10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.
11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.
12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbedded at 2' minimum intervals, with lower ends curled uphill by 2' in elevation.
15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
 - Use I and II: March 1 - June 15
 - Use III and IV: March 1 - April 30
 - Use IV: March 1 - May 31
16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

OXFORD SQUARE

"A Howard County Green Neighborhood"

Parcel "H-H"

"Bristol Court" - A Green Building

NO.		REVISION		DATE
SUBDIVISION		SECTION/AREA		PARCEL NO.
OXFORD SQUARE		---		"H-H"
PLAT NO.		BLOCK NO.	ZONE	TAX/ZONE
25047-25050		---	TOD	3B
ELEC. DIST.		CENSUS TR.		
1st		601101		

Tax Map No.: 3B Grid No.: 20 Parcel No.: 1003

First Election District: Howard County, Maryland

Scale: As Shown

Date: November 22, 2019

Sheet 11 of 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John J. Mania 12/21/19
Chief, Department of Planning and Zoning

[Signature] 12/23/19
Chief, Development Engineering Division

[Signature] 1-2-20
Director, Department of Planning and Zoning

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2995

ENGINEER'S CERTIFICATE

"I certify that the sediment and erosion control represents a practical and workable plan based on the site conditions and that it was prepared in accordance with the standards and specifications of the Howard Soil Conservation District."

[Signature] 1/23/19
Signature of Engineer (Print Name below signature)

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project."

[Signature] 1/23/19
Signature of Developer (Print Name below signature)

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT

[Signature] 12/15/19
Howard SCD

Owner

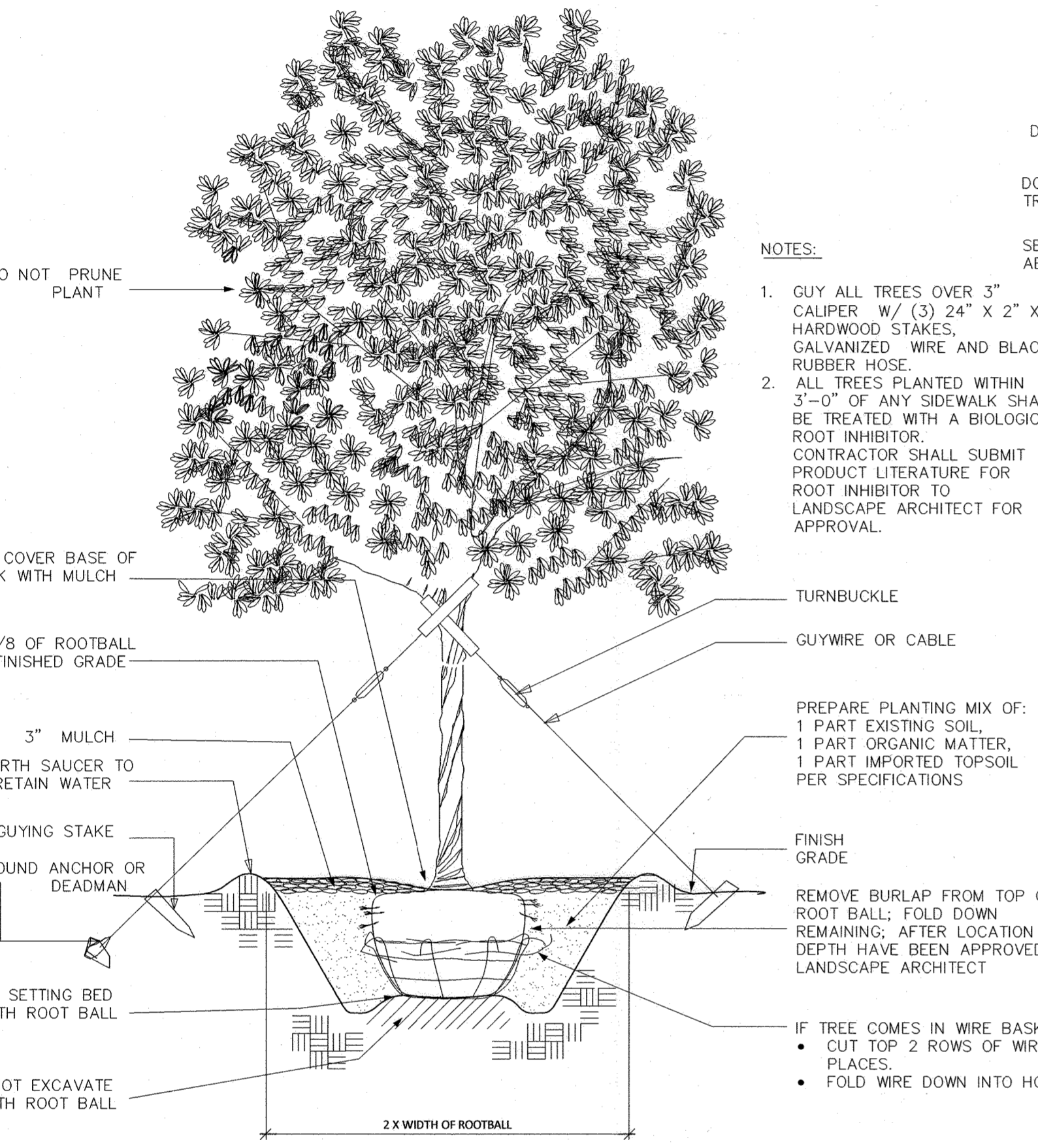
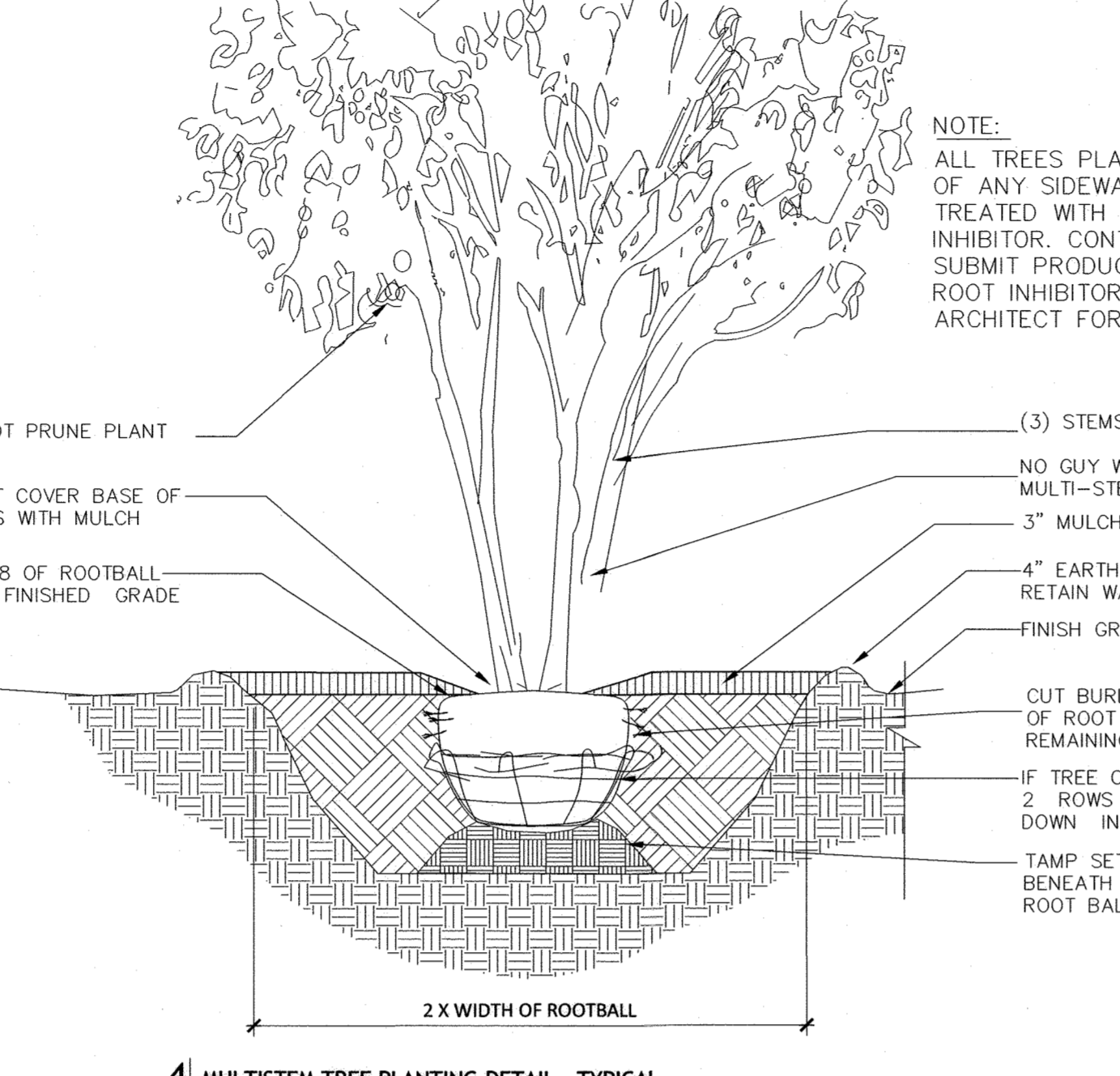
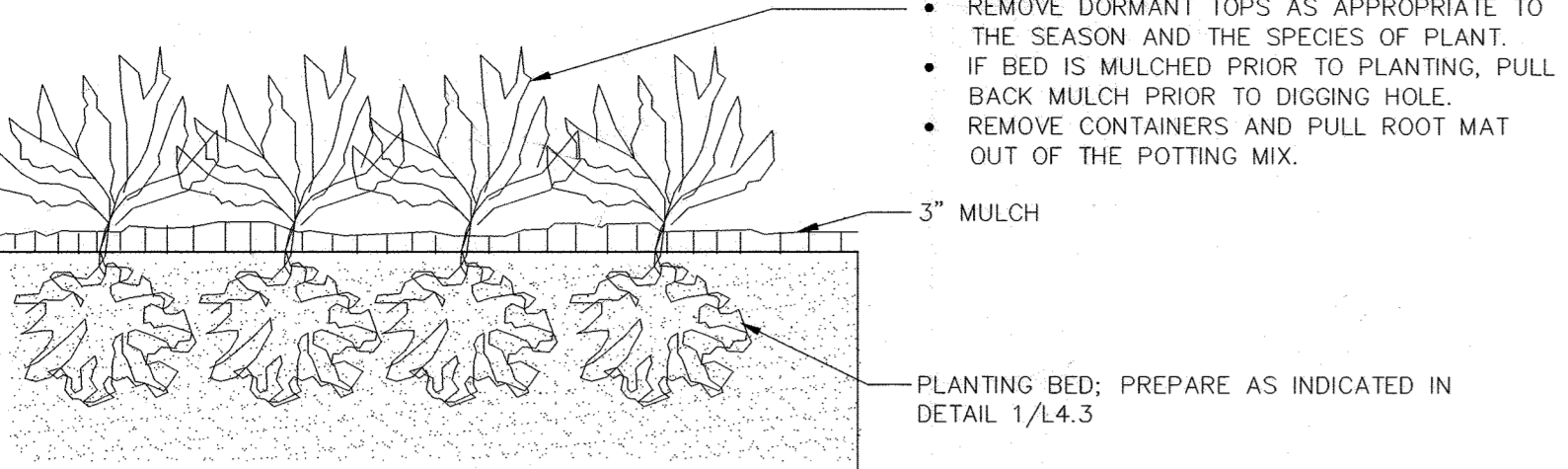
Kellogg-CCP, LLC
c/o David P. Scheffnacker, Jr.,
Managing Member
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

Developer

Preston - Scheffnacker Properties
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

STORMWATER MANAGEMENT PLANT LIST CONTINUED: A

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
768	lmb	Liriope muscari 'Big Blue' Big Blue Lilyturf	4" pot	Cont.	15" o.c.
482	lmv	Liriope muscari 'Variegata' Variegated Lilyturf	4" pot	Cont.	15" o.c.
37	pvh	Panicum virgatum 'Heavy Metal' Heavy Metal Switchgrass	#2	Cont.	36" o.c.
50	pvs	Panicum virgatum Switchgrass	#1	Cont.	36" o.c.



STREET TREE PLANT LIST

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
TREES - DECIDUOUS SHADE (49)					
2	#AFA	Acer x freemanii 'Autumn Blaze' Freeman Maple	2-1/2" cal. min.	B & B	Seedless
8	#BNH	Betula nigra 'Heritage' Heritage River Birch	8-10" ht. min.	B & B	Multistem/3 cones min.
17	#GTS	Gleditsia triacanthos var. inermis 'Shademaster' Thornless Honey Locust	2-1/2" cal. min.	B & B	
2	#TCO	Tilia cordata 'Greenspire' Littleleaf Linden	2-1/2" cal. min.	B & B	
11	#JAV	Ulmus americana 'Valley Forge' American Elm	2-1/2" cal. min.	B & B	
9	#ZSG	Zelkova serrata 'Green Vase' Japanese Zelkova	2-1/2" cal. min.	B & B	

INTERNAL LANDSCAPING PLANT LIST

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
TREES - ORNAMENTAL (55)					
1	CBE	Carpinus betulus European Hornbeam	8-10" ht. min.	B & B	Fastigate
12	CEC	Cercis canadensis Eastern Redbud	8-10" ht. min.	B & B	
4	LIN	Lagerstroemia indica x fauriei 'Natchez' Natchez Crape Myrtle	8-10" ht. min.	B & B	Multistem/4 cones min.
38	MVI	Magnolia virginiana Sweetbay Magnolia	8-10" ht. min.	B & B	Multistem/4 cones min.
SHRUBS (770)					
39	CAP	Clethra alnifolia 'Pink Spire' Pink Spire Summersweet	24"-30" ht.	Cont.	36" o.c.
54	HPA	Hydrangea paniculata 'Little Lime' 'Little Lime' Hydrangea	30"-36" ht.	Cont.	40" o.c.
203	HYC	Hypericum calycinum Aaronsbeard St. Johnswort	18-24" ht.	Cont.	18" o.c.
68	ICH	Ilex crenata 'Hellerii' Heller Holly	24"-30" ht.	Cont.	36" o.c.
66	IGS	Ilex glabra 'Shamrock' Inkberry	24"-30" ht.	Cont.	36" o.c.
82	ITH	Itea virginica 'Little Henry' Sweetspire	24"-30" ht.	Cont.	36" o.c.
4	ITV	Itea virginica 'Henry's Garnet' Sweetspire	24"-30" ht.	Cont.	36" o.c.
38	RKO	Rosa 'Radrazz' Knockout Rose	24"-30" ht.	Cont.	36" o.c.
200	SBA	Spiraea x bumalda 'Anthony Waterer' Anthony Waterer Spiraea	18"-24" ht.	Cont.	24" o.c.
16	TMB	Taxus x media 'Brownii' Anglojap Yew	24"-30" ht.	B & B	40" o.c.

- GENERAL PLANTING NOTES:**
- CLEAR & GRUB ALL PLANTING AREAS.
 - CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIAL.
 - NO CHANGES SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
 - PRIOR TO CONSTRUCTION OF PLANTING BEDS, THE CONTRACTOR SHALL STAKE OUT PLANTING BED LINES IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT.
 - INSTALL ALL REQUIRED PLANTING AND LAWN SOILS AS PER DETAILS. ALL SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE PLANTED IN PLANTING BEDS PREPARED AS REQUIRED BY THE DETAILS.
 - MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE AND MAINTAIN POSITIVE DRAINAGE OF ALL LAWN AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS.
 - ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
 - IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE DRAWINGS AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL APPLY.
 - ALL PLANTS SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION.
 - PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL PLANTS IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANT LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
 - ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED OR SODDED.
 - NO TURF SHALL BE PLANTED IN "DENSELY SHADED AREAS" AS INDICATED ON PLANTING PLANS.

STORMWATER MANAGEMENT PLANT LIST A

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
ESD PLANTS					
128	anb	Aster novo-belgii New York Aster	#1	Cont.	18" o.c.
104	asl	Aster laevis Smooth Aster	#1	Cont.	18" o.c.
232	ast	Asclepias tuberosa Butterfly Weed	#1	Cont.	18" o.c.
58	chg	Chelone glabra White Turtlehead	#1	Cont.	18" o.c.
405	epm	Echinacea purpurea 'Magnus' Purple Coneflower	#1	Cont.	18" o.c.
52	eup	Eupatorium purpureum 'Little Joe' Joe-Pye Weed	#1	Cont.	24" o.c.
395	igs	Ilex glabra 'Shamrock' Inkberry	24"-30" ht.	Cont.	40" o.c., provide males & females
188	irv	Iris versicolor Blue Flag Iris	#1	Cont.	18" o.c.
147	ith	Itea virginica 'Little Henry' Sweetspire	24"-30" ht.	Cont.	36" o.c.
92	itv	Itea virginica 'Henry's Garnet' Sweetspire	24"-30" ht.	Cont.	36" o.c.
44	mev	Mertensia virginica Virginia Bluebells	#1	Cont.	18" o.c.
18	osr	Osmunda regalis Royal Fern	#2	Cont.	24" o.c.
144	phm	Panicum virgatum 'Heavy Metal' Heavy Metal Switchgrass	#2	Cont.	36" o.c.
296	rfg	Rudbeckia fulgida 'Goldstrum' Black-Eyed Susan	#1	Cont.	18" o.c.
46	srf	Solidago rugosa 'Firepower' Goldenrod	#1	Cont.	18" o.c.
700	thn	Thelypteris noveboracensis New York Fern	#2	Cont.	18" o.c.

GREEN NEIGHBORHOODS PLANT LIST

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
TREES - DECIDUOUS SHADE (27)					
9	BNH	Betula nigra 'Heritage' Heritage River Birch	8-10" ht. min.	B & B	Multistem/3 cones min.
4	TDI	Taxodium distichum Common Baldcypress	2-1/2" cal. min.	B & B	
14	NYS	Nyssa sylvatica Black Gum	8-10" ht. min.	B & B	

ADDITIONAL LANDSCAPING PLANT LIST

QTY.	KEY	BOTANICAL NAME COMMON NAME	SIZE	CONT.	REMARKS
SHRUBS & PERENNIALS					
172	Cmi	Carex morrowii 'Ice Dance' Japanese Sedge	#1	Cont.	15" o.c.
80	Epm	Echinacea purpurea 'Magnus' Purple Coneflower	#1	Cont.	18" o.c.
164	Hva	Heuchera villosa 'Autumn Bride' Coral Bells	#1	Cont.	18" o.c.
86	Hqs	Hydrangea quercifolia 'Snow Queen' Oakleaf Hydrangea	24"-30" ht.	Cont.	40" o.c.
24	Ich	Ilex crenata 'Hellerii' Heller Holly	24"-30" ht.	Cont.	36" o.c.
21	Igs	Ilex glabra 'Shamrock' Inkberry	24"-30" ht.	Cont.	40" o.c., provide males & females
814	Lmv	Liriope muscari 'Variegata' Variegated Liriope	#1	Cont.	15" o.c.
108	Nfw	Nepeta x faassenii 'Walker's Low' Catmint	#1	Cont.	18" o.c.
71	Osr	Osmunda regalis Royal Fern	#2	Cont.	24" o.c.
182	Pcb	Panicum virgatum 'Cape Breeze' Heavy Metal Switchgrass	#2	Cont.	24" o.c.
119	Phm	Panicum virgatum 'Heavy Metal' Heavy Metal Switchgrass	#2	Cont.	36" o.c.
108	Rfg	Rudbeckia fulgida 'Goldstrum' Black-Eyed Susan	#1	Cont.	18" o.c.
36	Sba	Spiraea x bumalda 'Anthony Waterer' Anthony Waterer Spiraea	18"-24" ht.	Cont.	24" o.c.

SCHEDULE A PERIMETER LANDSCAPE EDGE

PERIMETER	P6
CATEGORY	Res. Adjacent to Non-Res.
LANDSCAPE TYPE	A
LINEAR FEET OF PERIMETER (THIS SDP)	368'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)	YES (368')
NUMBER OF PLANTS REQUIRED (THIS SDP)	
SHADE TREES	0
EVERGREEN TREES	0
SHRUBS	0
NUMBER OF PLANTS PROVIDED (THIS SDP)	
SHADE TREES	0
EVERGREEN TREES	0
SHRUBS (10:1 SUBSTITUTION)	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	311
NUMBER OF TREES REQUIRED (1:0U SFA; 1:3 DU APTS)	104
NUMBER OF TREES PROVIDED	
SHADE TREES	0
OTHER TREES (2:1 SUBSTITUTION)	55
SHRUBS (10:1 SUBSTITUTION)	770

STREET TREE SDP REQUIREMENTS

REQUIREMENTS:

ST. MARGARETS HAS A STREET LENGTH OF 544 LINEAR FEET WHICH REQUIRES APPROXIMATELY 14 TREES ON THE NORTH SIDE OF THE STREET.

MARSTON WAY HAS A STREET LENGTH OF 458 LINEAR FEET WHICH REQUIRES APPROXIMATELY 23 TREES ON BOTH SIDES OF THE STREET.

ALDEN WAY HAS A STREET LENGTH OF 485 LINEAR FEET WHICH REQUIRES APPROXIMATELY 12 TREES ON THE SOUTH SIDE OF THE STREET.

A TOTAL OF APPROXIMATELY 49 TREES ARE REQUIRED.

FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.

LANDSCAPING PROVIDED:

A TOTAL OF 49 TREES HAVE BEEN PROVIDED TO MEET THIS SDP REQUIREMENT. SEE "STREET TREE PLANT LIST".

PERIMETER LANDSCAPING 'SCHEDULE A' SDP REQUIREMENTS

REQUIREMENTS:

REGULATIONS DO NOT REQUIRE LANDSCAPE EDGES, BUFFERING OR SCREENING BETWEEN INTERNAL LOTS OR PARCELS WITHIN THE SAME DEVELOPMENT. THIS PARCEL HAS 368' OF PERIMETER ADJACENT TO A NON-RESIDENTIAL LOT. A SOUND WALL IS BEING PROVIDED ALONG THE ENTIRETY OF THE 368' PERIMETER, THEREFORE NO PERIMETER PLANTING IS REQUIRED.

LANDSCAPING PROVIDED:

N/A

INTERNAL LANDSCAPING 'SCHEDULE C' SDP REQUIREMENTS

REQUIREMENTS:

311 DWELLING UNITS ARE BEING PROVIDED. INTERNAL LANDSCAPING MUST BE PROVIDED AT A RATE OF 1 TREE FOR EVERY THREE DWELLING UNITS. 311 UNITS / 3 = 104 (104 SHADE TREES REQUIRED).

LANDSCAPING PROVIDED:

0 DECIDUOUS SHADE TREES ARE BEING PROVIDED. 55 ORNAMENTAL TREES ARE BEING PROVIDED AT A 2:1 RATIO WHICH IS THE EQUIVALENT OF 27 SHADE TREES. 770 SHRUBS ARE BEING PROVIDED AT A 10:1 RATIO WHICH IS THE EQUIVALENT OF 77 SHADE TREES. THE TOTAL QUANTITY OF DECIDUOUS SHADE TREES, ORNAMENTAL TREES AND SHRUBS PROVIDED IS EQUIVALENT TO 104 SHADE TREES. SEE "INTERNAL LANDSCAPING PLANT LIST".

STORMWATER MANAGEMENT

LANDSCAPING PROVIDED:

SHRUB AND PERENNIAL PLANTINGS ARE PROVIDED IN STORMWATER MANAGEMENT FACILITIES. SEE "STORMWATER MANAGEMENT PLANT LIST".

GREEN NEIGHBORHOODS

LANDSCAPING PROVIDED:

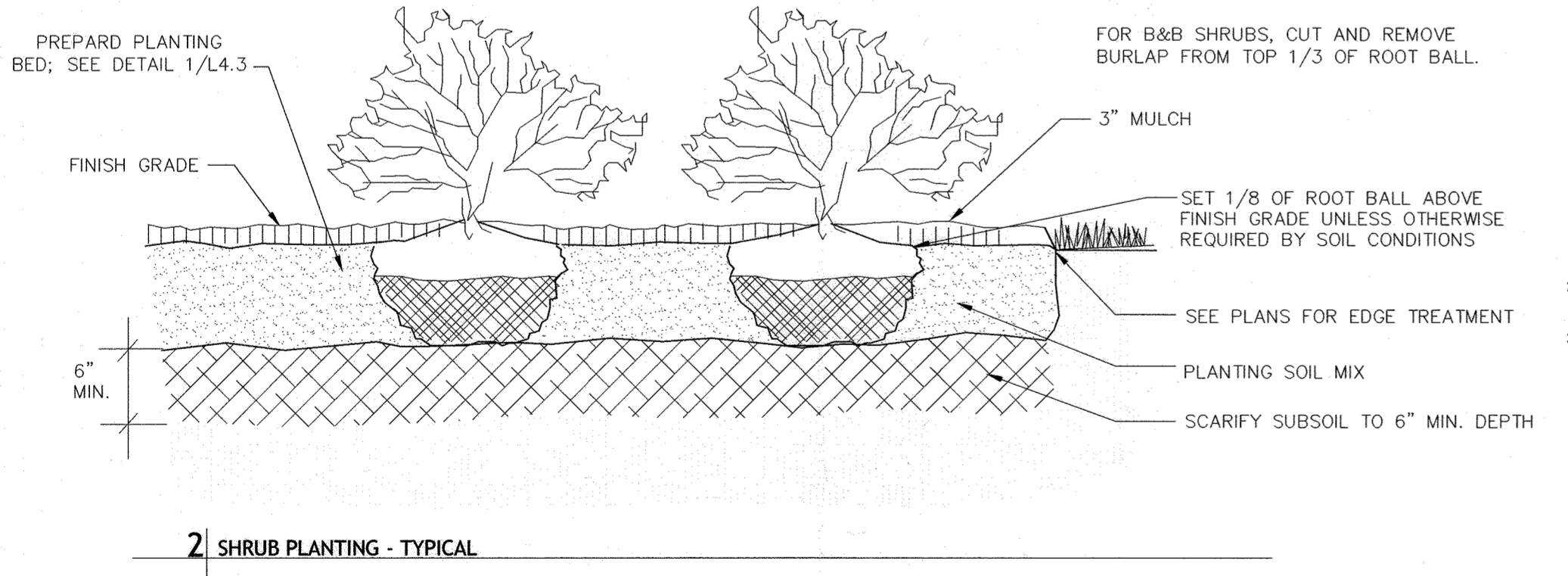
A TOTAL OF 27 EXTRA NATIVE SHADE TREES HAVE BEEN PROVIDED TO QUALIFY FOR GREEN NEIGHBORHOODS CREDIT 'E-1'. SEE "GREEN NEIGHBORHOODS PLANT LIST".

FINANCIAL SURETY

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING TREES (49 SHADE, 55 ORNAMENTALS, 770 SHRUBS) SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$46,050.00 (THE ORIGINAL LANDSCAPE SURETY OF \$46,050.00 WILL REMAIN WITH HOWARD COUNTY). IN ADDITION, FINANCIAL SURETY FOR 27 SHADE TREES SHALL ALSO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$8,100.00 TO MEET THE GN CREDIT E-1.

PURPOSE NOTE: A

THE PURPOSE OF THIS REVISED SDP IS TO ADD ESD W-1 THRU W-6 FROM SDP-15-053 AND ESD V-11, V-15, V-17, V-19 & V-23 THRU V-25 FROM SDP-18-019 AS PROPOSED TO THIS SDP PLAN.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE, PAOL - 10272 BALDPOPE NATIONAL PIKE
ELKTON CITY, MARYLAND 21842
(410) 461-2995

Chief, Division of Land Development: *[Signature]* 5/18/22 Date

Chief, Development Engineering Division: *[Signature]* 5/18/22 Date

Director - Department of Planning and Zoning: *[Signature]* 6/1/22 Date

LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

[Signature] 4/27/22 Name Date

0' 30' 60' 120'

SCALE: 1" = 30'

Owner
Kelllogg-CCP, LLC
c/o David P. Scheffnacker, Jr.,
Managing Member
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

Developer
Preston • Scheffnacker Properties
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

NO.	REVISION	DATE
Δ	ADDED PERIMETER BIO-RETENTION FACILITIES (W-1 THRU W-6, V-11, V-15, V-17, V-19 & V-23 THRU V-25)	2/8/22
Δ	REVISED LANDSCAPE CHARTS & SURETY	9/8/20

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st	601101

REVISED LANDSCAPE DETAILS

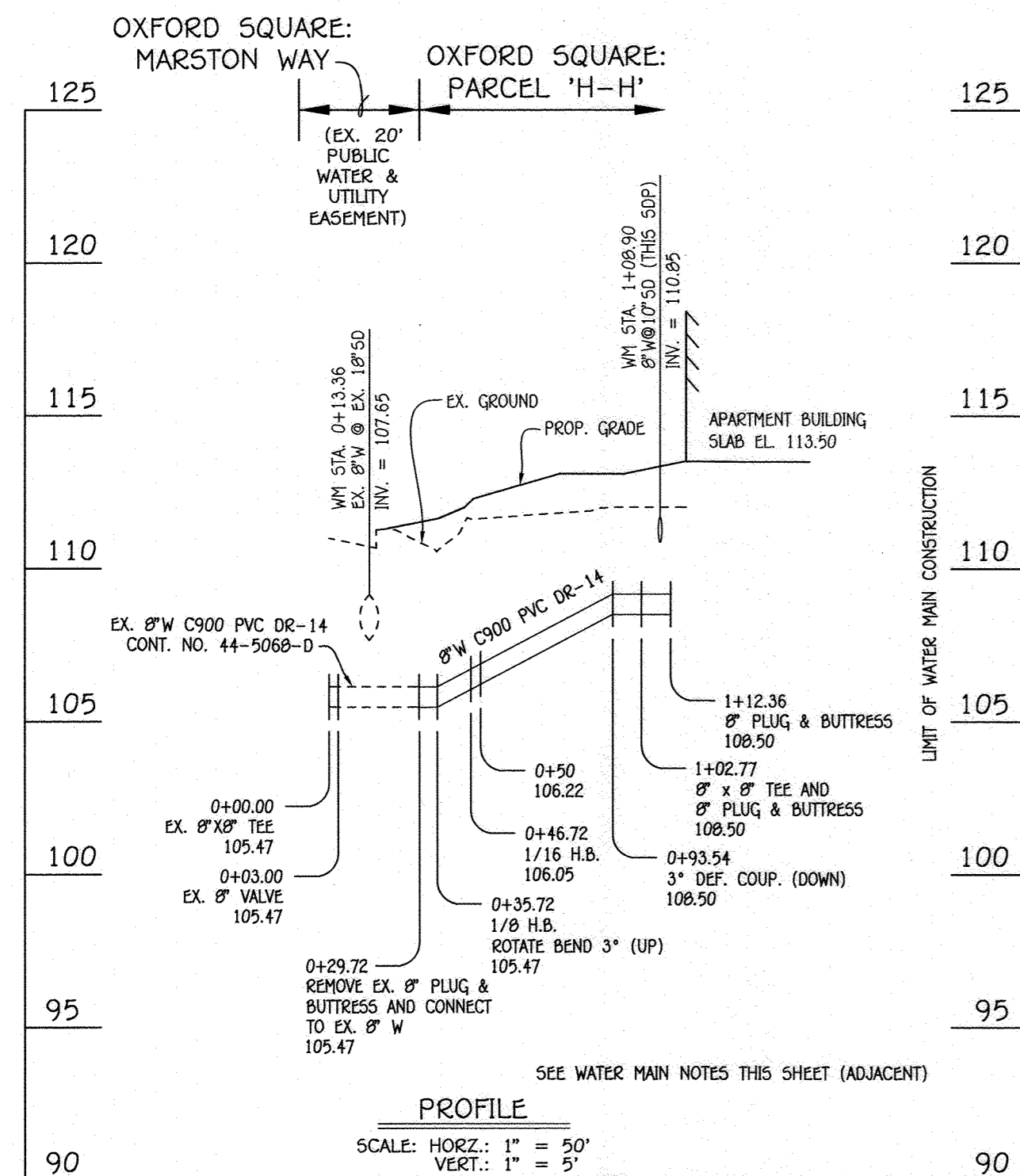
OXFORD SQUARE

"A Howard County Green Neighborhood"

Parcel "H-H"

"Bristol Court" - A Green Building

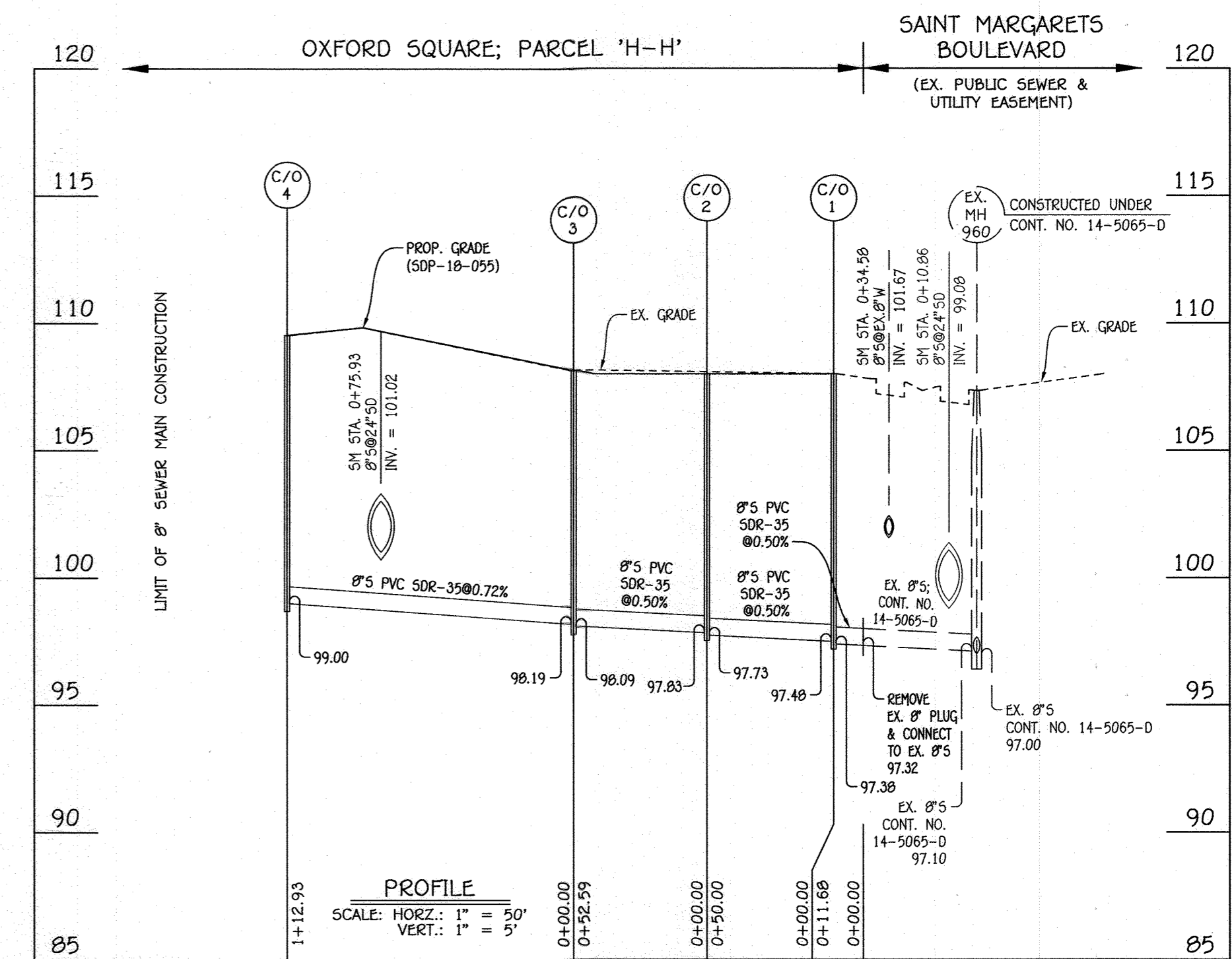
Tax Map No.: 3B Zoned: TOD Grid No.: 20 Parcel No.: 1003
First Election District: Howard County, Maryland
Scale: As Shown
Date: November 22, 2019
Revised Date: September 8, 2020
Revised Date: February 8, 2022
Sheet 14 of 25



PRIVATE 8" WATER MAIN: PARCEL 'H-H'

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: PARCEL 'H-H'			
0+35.72	1/8 H.B.	552957.91	1385405.00
0+46.72	1/16 H.B.	552964.31	1385413.91
0+93.54	3" DEFLECTION COUPLING	553005.92	1385435.17
1+02.77	8" PLUG & BUTTRESS	553014.01	1385439.33
1+12.36	8" PLUG & BUTTRESS	553009.76	1385447.98

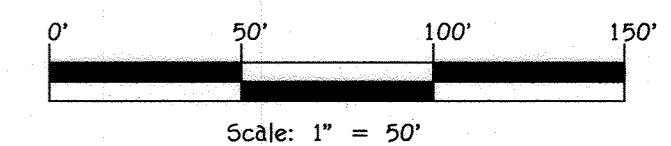
- WATER MAIN NOTES:**
- ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE, DR-14.
 - ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 - DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 - ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.



8" SEWER MAIN: PARCEL 'H-H'

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
EX. 8" PLUG	552786.86	1385877.41	--
C/O 1	552798.08	1385880.64	107.50
C/O 2	552817.91	1385834.34	107.25
C/O 3	552838.48	1385786.33	108.40
C/O 4	552888.45	1385685.06	109.65

NOTE: SET C/O CAPS FLUSH W/PROPOSED GRADE.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10222 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21146
 (410) 461-2995

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development
 Date: 11-2-20
 Chief, Development Engineering Division
 Date: 11-30-20
 Director, Department of Planning and Zoning
 Date: 11-30-20



Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffnacker, Jr.,
 Managing Member
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph: 410-296-3800

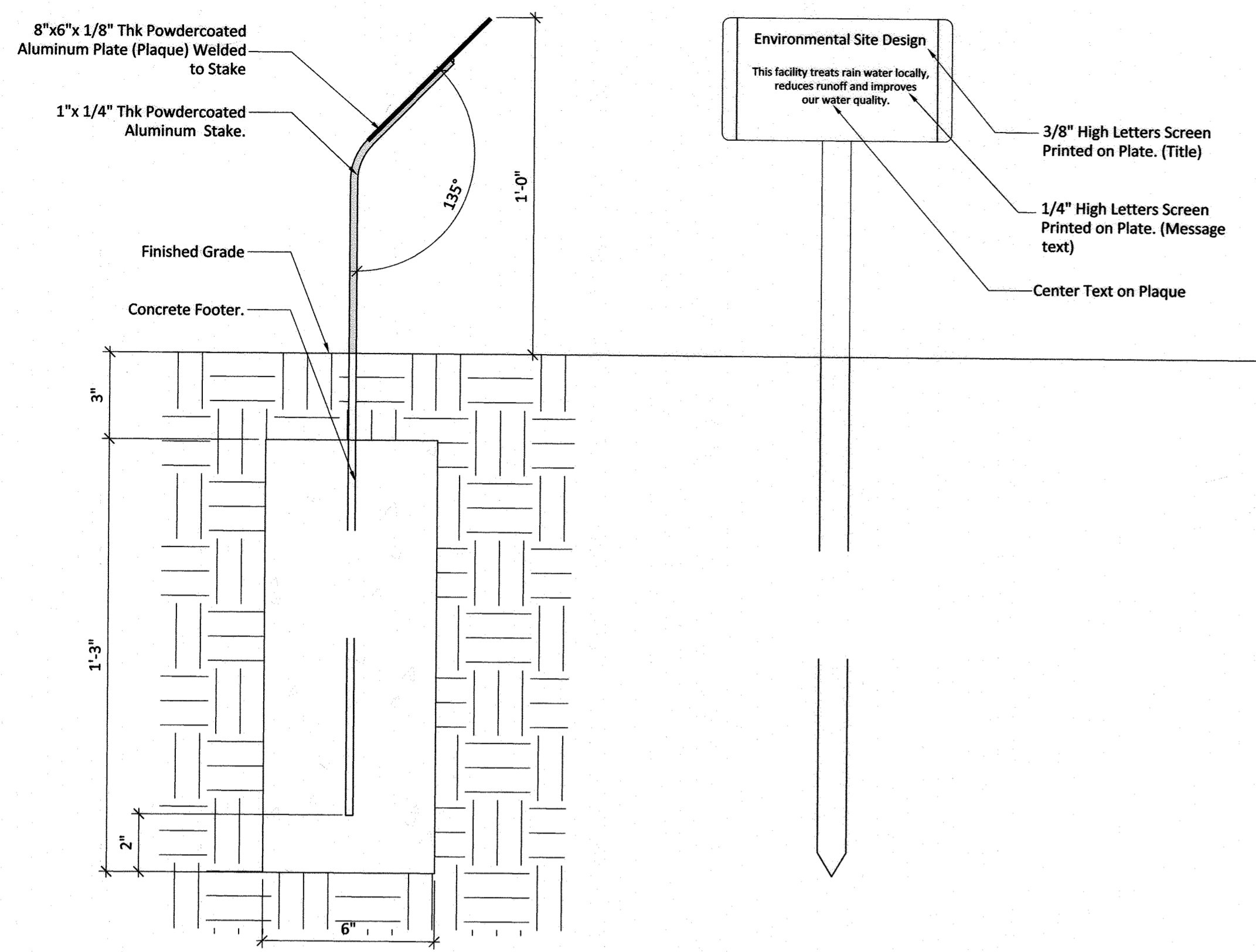
Developer
 Preston + Scheffnacker Properties
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph: 410-296-3800

NO.	REVISION	DATE
1	REVISED SEWER PROFILE & ADDED WATER MAIN PROFILE	9/8/20

SUBDIVISION	SECTION/AREA	PARCEL NO.
OXFORD SQUARE		'H-H'

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050		TOD	38	1st	601101

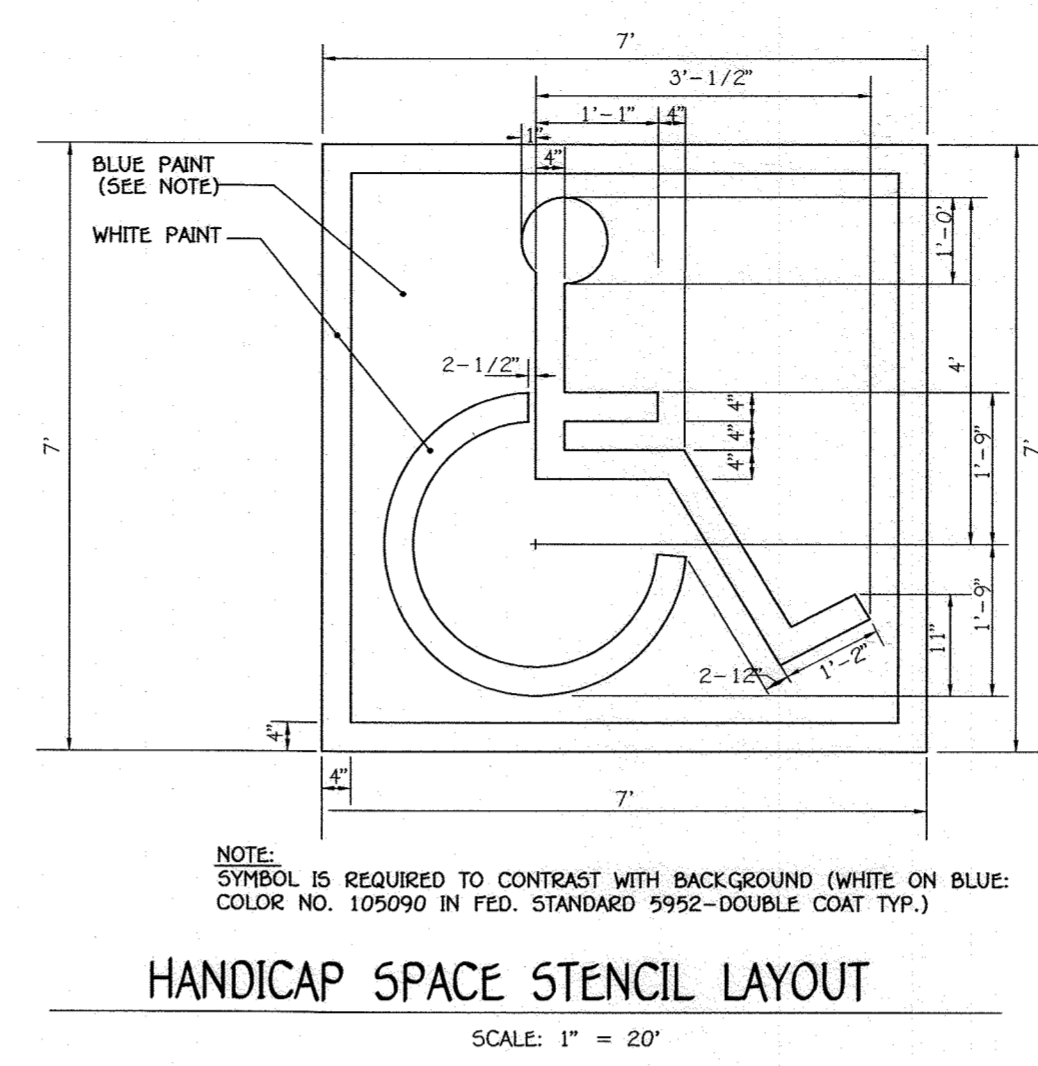
REVISED PRIVATE SEWER & PRIVATE WATER MAIN PROFILES
OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel 'H-H'
 "Bristol Court" - A Green Building
 Zoned: TOD
 Tax Map No.: 38 Grid No.: 20 Parcel No.: 1003
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
 Revised Date: September 8, 2020
 Sheet 17 Of 25



ESD INTERPRETIVE SIGN DETAIL
NO SCALE

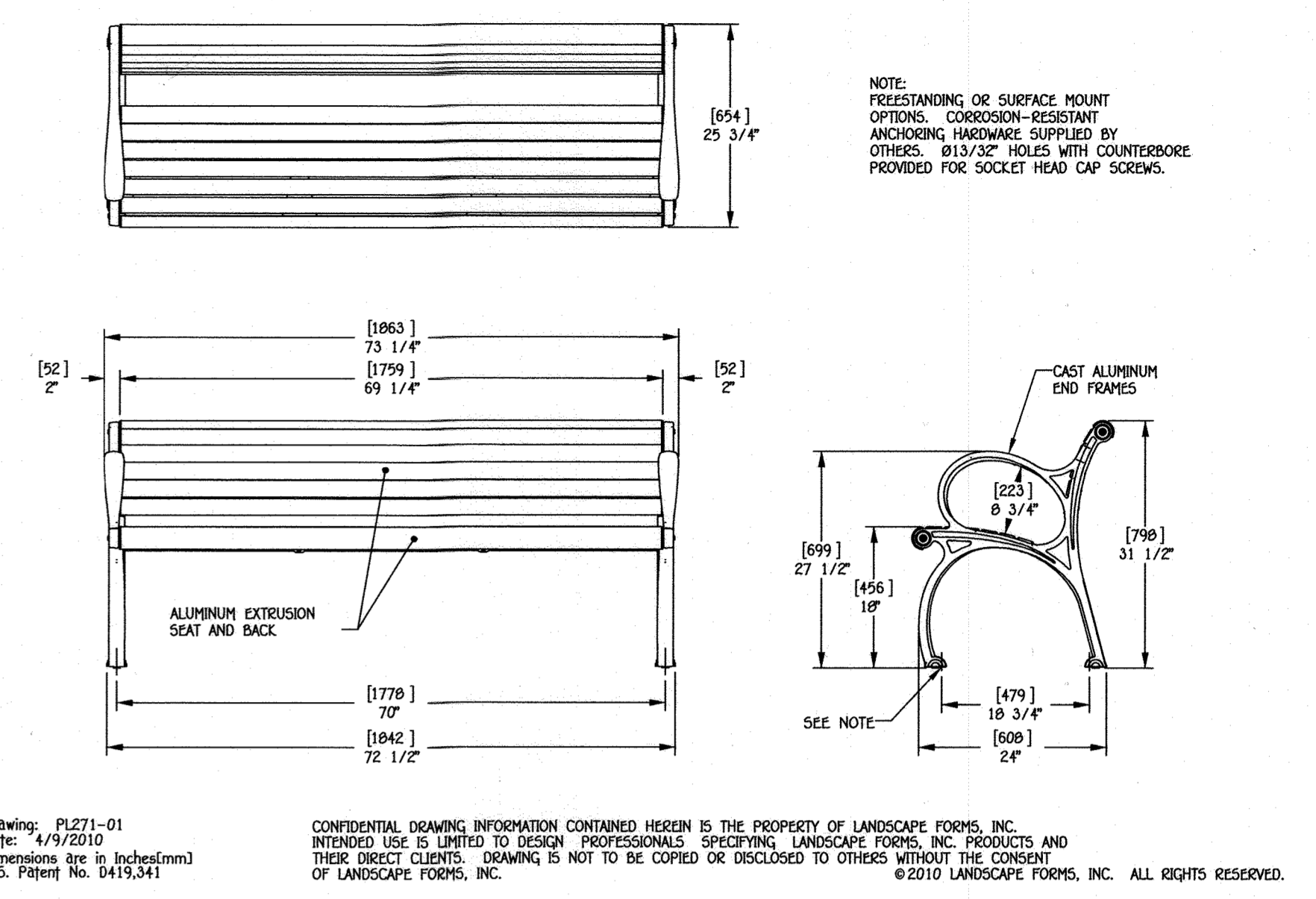


HANDICAP PARKING SIGN DETAIL
NO SCALE

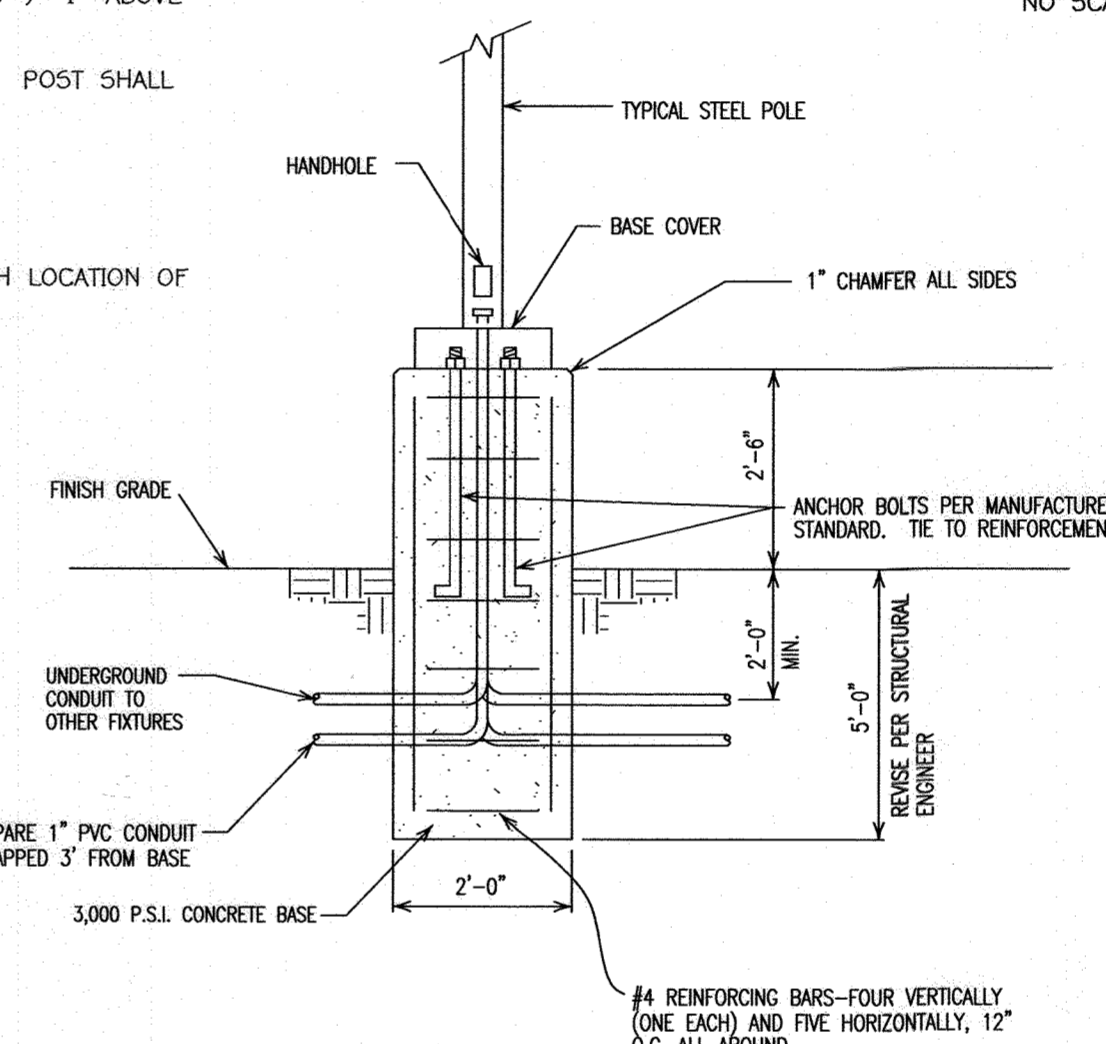


- NOTE: SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND (WHITE ON BLUE; COLOR NO. 105090 IN FED. STANDARD 5952-DOUBLE COAT TYP.)
- SCALE: 1" = 20"
- GENERAL NOTES:
- SIGNS SHALL MEET DESIGN STANDARDS OF THE FEDERAL HIGHWAY ADMINISTRATION AND CONFORM TO THE STATE OF MARYLAND STANDARD HIGHWAY SIGN BOOKLET DETAIL R7-8.
 - ONE SIGN IS REQUIRED PER SPACE PLACED AS SHOWN ON SITE IMPROVEMENT PLAN.
 - SIGNS SHALL BE POLE MOUNTED WITH HOT DIPPED GALVANIZED COUNTY APPROVED PERFORATED CHANNEL POSTS W/TOP OF SIGNS 9'-1" ABOVE FINISHED GRADE OR AS INDICATED ON SITE DRAWINGS.
 - SIGN SHALL BE ATTACHED TO FLANGED SIDE OF POST. POST SHALL EXTEND INTO GROUND 2'-6" MIN.
 - COLORS: LEGEND AND BORDER- GREEN SYMBOL- WHITE ON BLUE BACKGROUND BACK- GROUND- WHITE
 - CONTRACTOR SHALL COORDINATE ARROW DIRECTION WITH LOCATION OF ADJACENT AISLE.

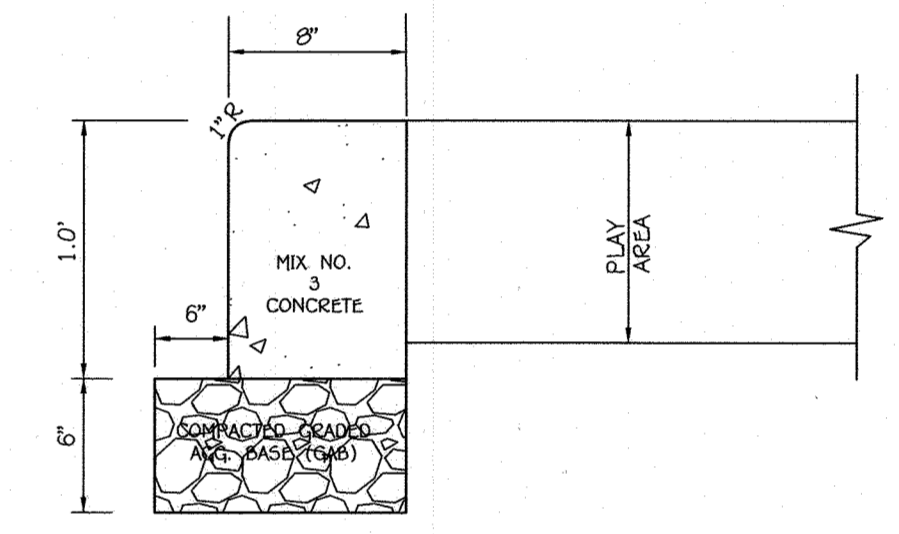
HANDICAP SPACE STENCIL LAYOUT



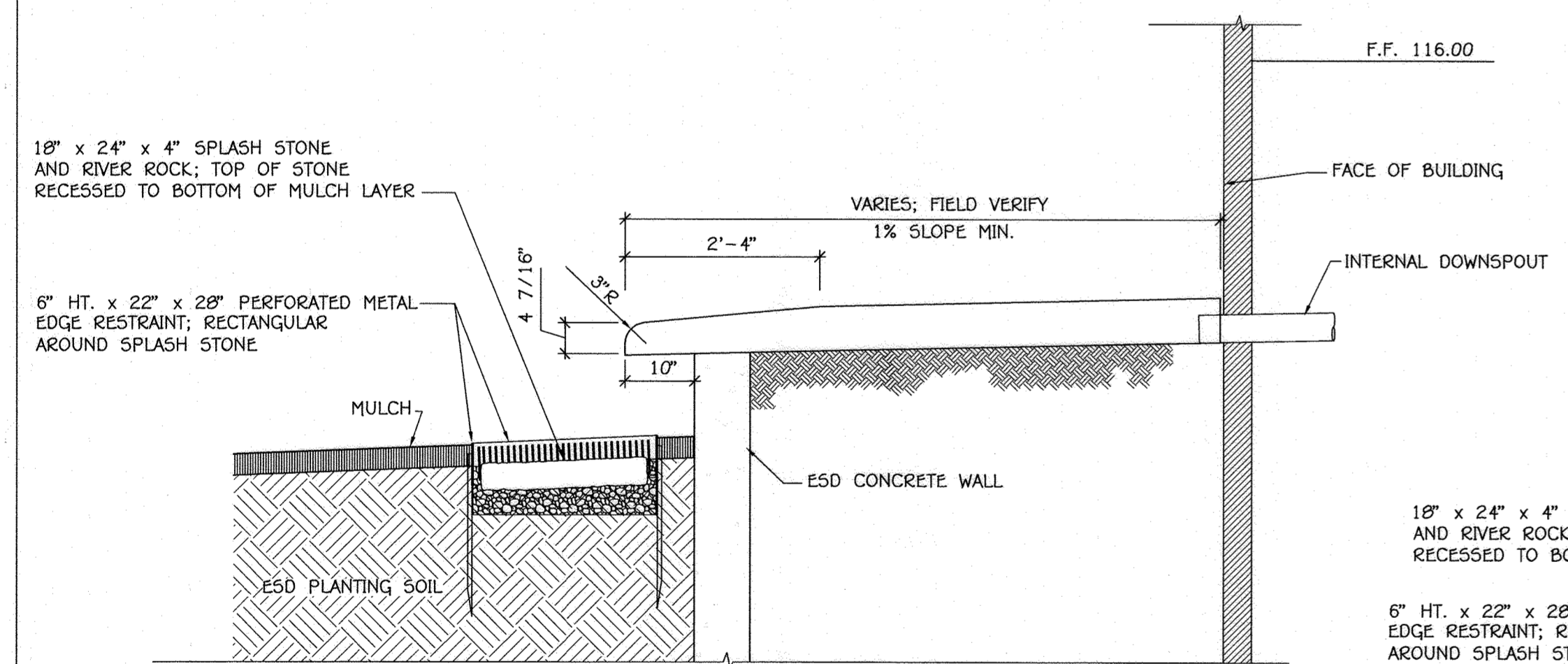
BENCH DETAIL
NO SCALE



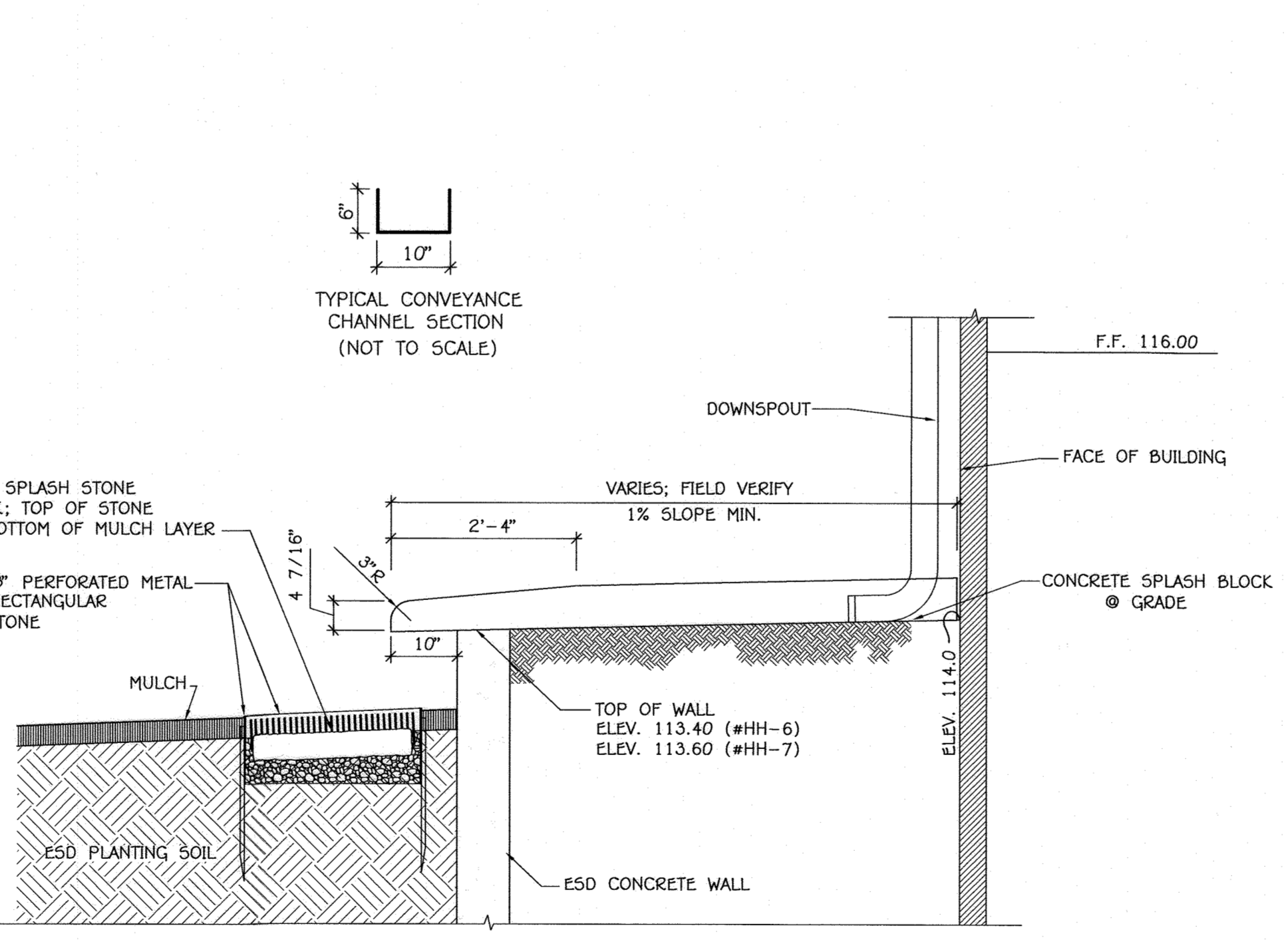
LIGHTING FIXTURE BASE
NO SCALE



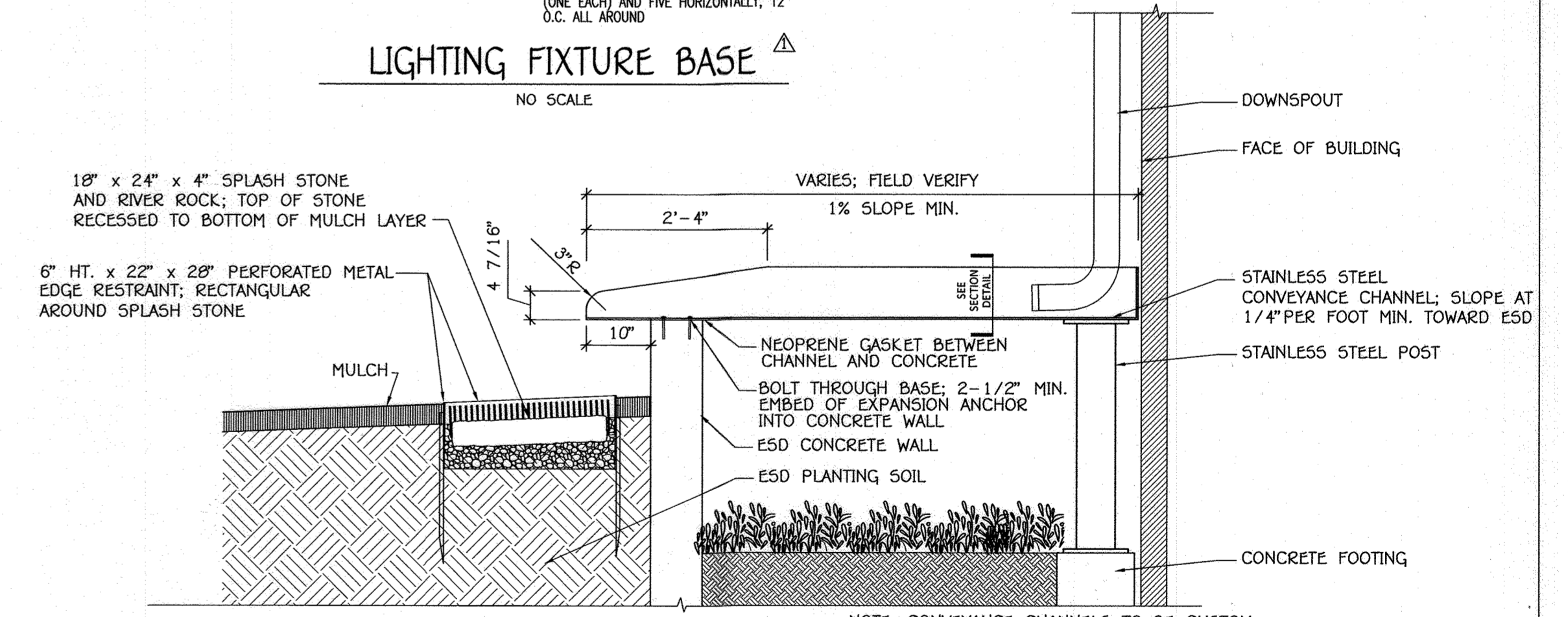
CURB FLUSH (R-3.07)
NO SCALE



STORMWATER ESD CONVEYANCE CHANNEL - (DRAIN PIPE UNDER SLAB CONDITION)
NO SCALE



STORMWATER ESD CONVEYANCE CHANNEL - (@ #HH-6 & #HH-7)
NO SCALE



STORMWATER ESD CONVEYANCE CHANNEL - (@ #HH-1 THRU #HH-5)
NO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLETTT CITY, MARYLAND 21042
 (410) 441-2999

Chief, Division of Land Development: *[Signature]* Date: 11-2-20
 Chief, Development Engineering Division: *[Signature]* Date: 11-30-20
 Director, Department of Planning and Zoning: *[Signature]* Date: 11-30-20

STATE OF MARYLAND PROFESSIONAL ENGINEER No. 20748

Owner
 Kellogg-CP, LLC
 c/o David P. Schefflenacker, Jr.,
 Managing Member
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph: 410-296-3800

Developer
 Preston • Schefflenacker Properties
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph: 410-296-3800

NO.	REVISION	DATE
1	ADDED LIGHTING FIXTURE BASE, ESD CONVEYANCE CHANNEL DETAILS	9/8/20

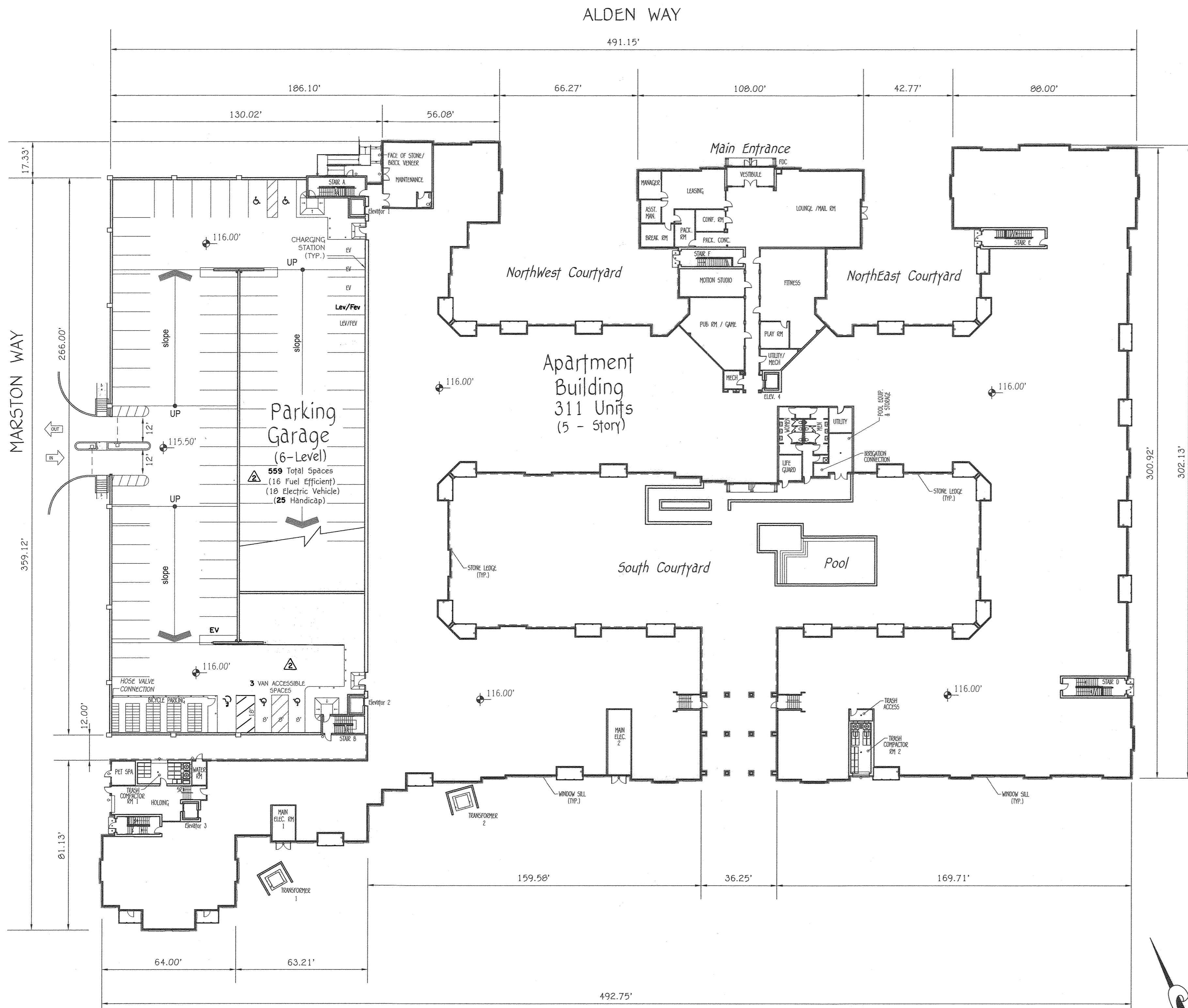
SUBDIVISION	SECTION/AREA	PARCEL NO.
OXFORD SQUARE	---	'H-H'

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st	601101

REVISED SITE DETAILS

OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel 'H-H'
 "Bristol Court" - A Green Building

Tax Map No.: 3B Grid No.: 20 Parcel No.: 1003
 Zoned: TOD
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
 Revised Date: September 8, 2020
 Sheet 18 of 25



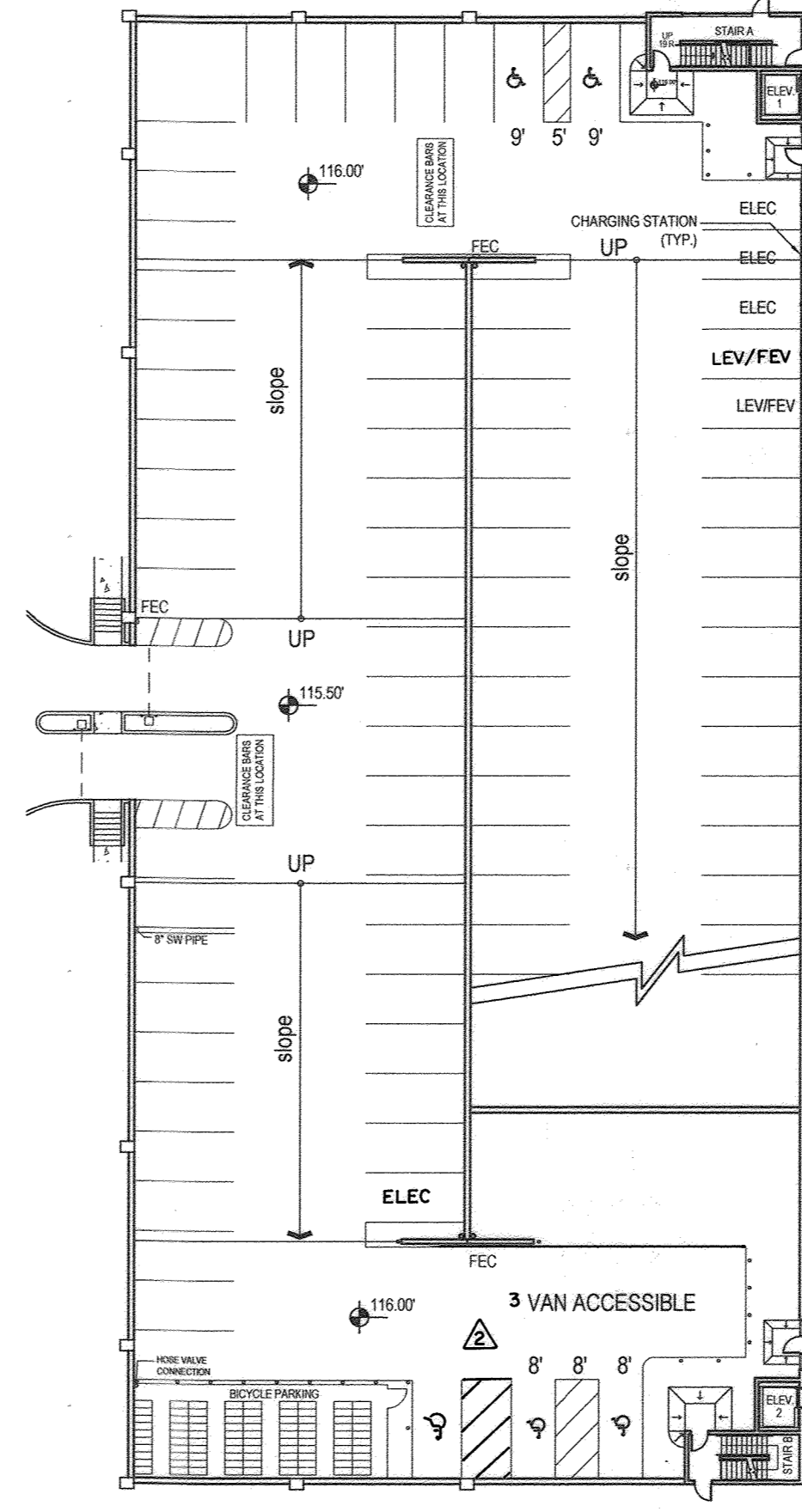
GARAGE DATA:
 LEVEL 1 - 53 SPACES
 LEVEL 2 - 101 SPACES
 LEVEL 3 - 101 SPACES
 LEVEL 4 - 101 SPACES
 LEVEL 5 - 101 SPACES
 LEVEL 6 - 102 SPACES

TOTAL SPACES - 559
 HANDICAPPED @ 2% = 12
 (25 SPACES PROVIDED)
 - 16 FEV / LEV SPACES
 - 10 EV (Charging Station) SPACES

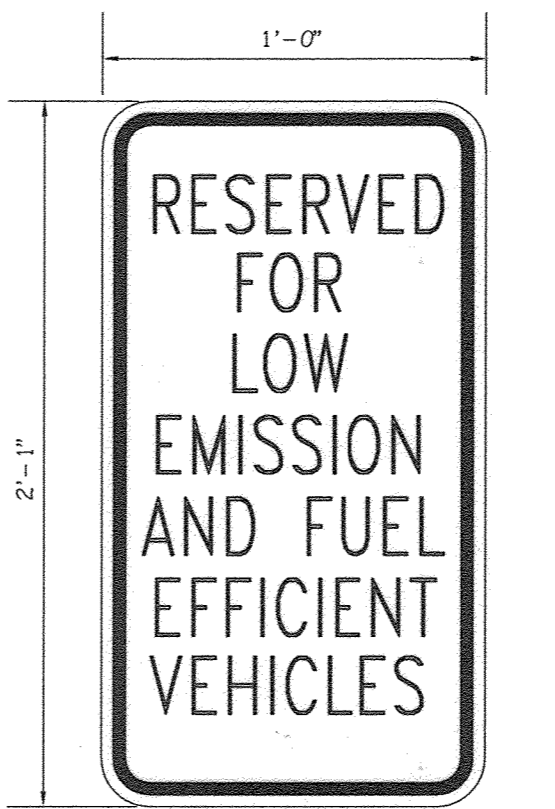
ST. MARGARETS BLVD.

1st. Floor Plan View
 SCALE: 1" = 30'

Note: See Sheet 18 For Handicap Sign Details.

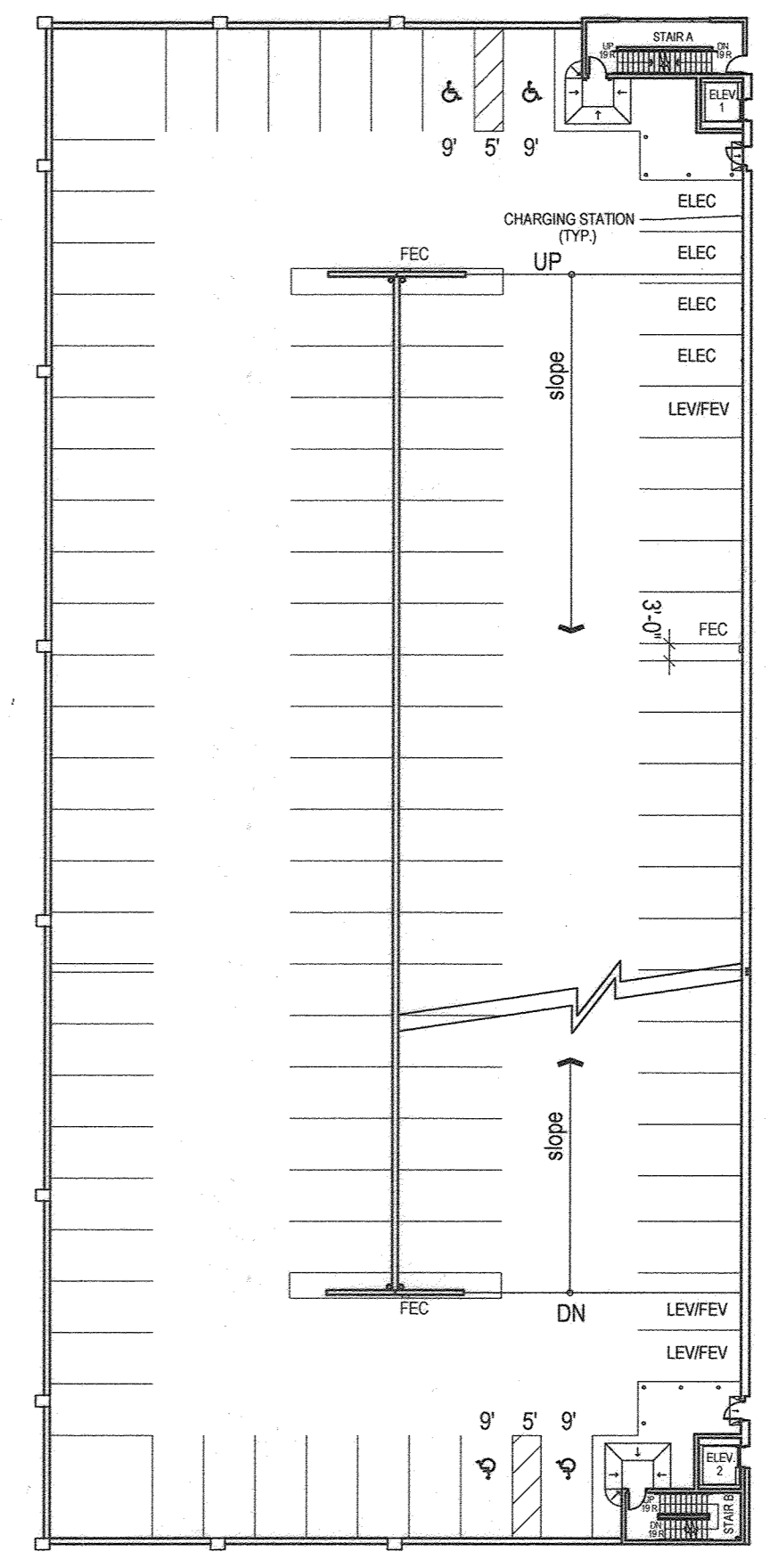


1ST LEVEL PARKING
 TOTAL 1ST LEVEL PARKING SPACES = 53
 EV STATIONS ON 1ST. LEVEL = 4
 LEV / FEV SPACES ON 1ST. LEVEL = 2
 VAN ACCESSIBLE HDCP SPACES = 3
 HDCP SPACES = 2



LE & FE SIGN DETAIL
 NOT TO SCALE

Note: To be located within parking garage.

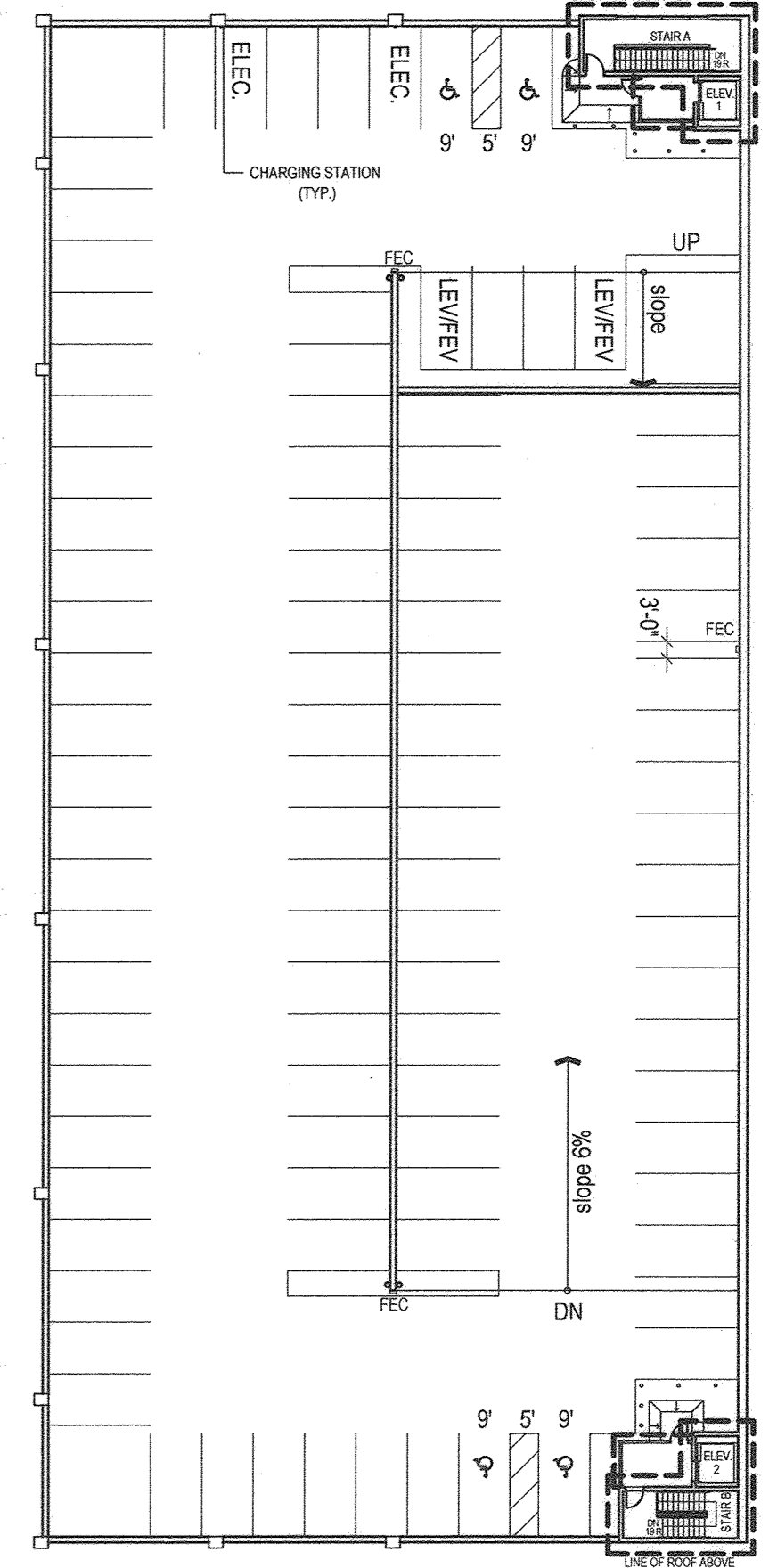


2ND THRU 5TH LEVEL PARKING
 TOTAL 2ND LEVEL PARKING SPACES = 101
 EV STATIONS ON 2ND. LEVEL = 4
 FEV / LEV SPACES ON 2ND. LEVEL = 3
 HDCP SPACES = 4

TOTAL 3RD LEVEL PARKING SPACES = 101
 EV STATIONS ON 3RD. LEVEL = 4
 FEV / LEV SPACES ON 3RD. LEVEL = 3
 HDCP SPACES = 4

TOTAL 4TH LEVEL PARKING SPACES = 101
 EV STATIONS ON 4TH. LEVEL = 2
 FEV / LEV SPACES ON 4TH. LEVEL = 3
 HDCP SPACES = 4

TOTAL 5TH LEVEL PARKING SPACES = 101
 EV STATIONS ON 5TH. LEVEL = 2
 FEV / LEV SPACES ON 5TH. LEVEL = 3
 HDCP SPACES = 4



6TH LEVEL PARKING
 TOTAL 6TH LEVEL PARKING SPACES = 102
 EV SPACES ON 6TH. LEVEL = 2
 FEV / LEV SPACES ON 6TH. LEVEL = 2
 HDCP SPACES = 4

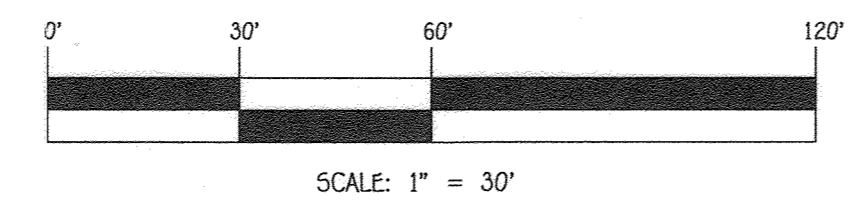
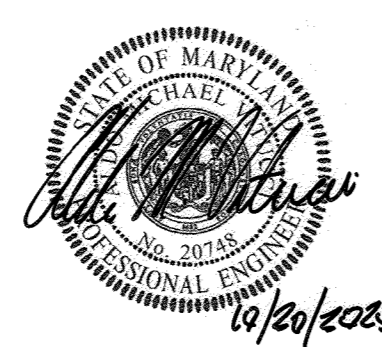
GARAGE HDCP PARKING NOTE:
 THE MINIMUM HDCP PARKING REQUIREMENT IS 2% OF THE 562 TOTAL OR 12 SPACES. OUT OF THESE 12 AT LEAST 3 ARE REQUIRED TO BE VAN ACCESSIBLE USING THE 1 IN 4 REQUIREMENT. THIS REQUIREMENT HAS BEEN MET WITH ADDITIONAL HDCP SPACES PROVIDED ABOVE CODE AS AN AMENITY TO THE APT. BUILDING. THERE IS 1 EXTRA VAN SPACE FOR A TOTAL OF 4 VAN AND 13 EXTRA HDCP SPACES FOR A TOTAL OF 22 STD. HDCP SPACES. THE COMBINED TOTAL IS 26 HDCP SPACES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development
 Date: 11-2-20

Chief, Development Engineering Division
 Date: 11-30-20

Director, Department of Planning and Zoning
 Date: 11-30-20



Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffenacker, Jr.,
 Managing Member
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph# 410-296-3800

Developer
 Preston • Scheffenacker Properties
 100 West Road, Suite 304
 Towson, Maryland 21204
 Ph# 410-296-3800

SUBDIVISION		SECTION/AREA		PARCEL No.	
OXFORD SQUARE		---		"H-H"	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st.	601101

REVISED BUILDING & GARAGE FLOOR PLANS

OXFORD SQUARE
 "A Howard County Green Neighborhood"
 Parcel "H-H"
 "Bristol Court" - A Green Building

Zoned: TOD
 Tax Map No.: 3B Grid No.: 20 Parcel No.: 1003
 First Election District: Howard County, Maryland
 Scale: As Shown
 Date: November 22, 2019
 Revised Date: September 8, 2020
 Sheet 21 Of 25

RESIDENTIAL DEVELOPMENT AREA CALCULATION

Gross Acre	129.53 Acres
Developable Acreage (Net Acre)	107.51 Acres
Permitted Residential Development Area (RDA) (50% of Developable Acreage)	53.76 Acres

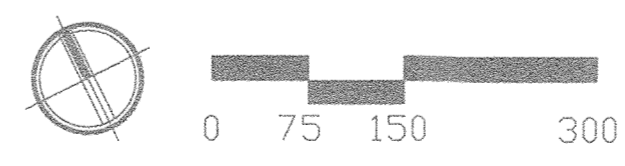
Residential Developments	Residential Development Area
SDP-14-027: Woodfield (Multifamily)	7.31 Acres
SDP-14-071: Lennar (Multifamily)	0.86 Acres
SDP-14-072: Lennar (Multifamily)	5.38 Acres
SDP-15-053: Preston (Multifamily)	3.26 Acres
SDP-18-055: Parcel 'H-H' (Multifamily)	3.97 Acres
Total Multifamily Development Area:	20.78 Acres
SDP-13-068: Lennar (Single Family Attached)	6.63 Acres
SDP-14-019: Lennar (Single Family Attached)	5.80 Acres
SDP-14-071: Lennar (Single Family Attached)	2.06 Acres
SDP-16-052: Lennar (Single Family Attached)	2.89 Acres
SDP-18-019: Lennar (Single Family Attached)	3.09 Acres
Total Single Family Attached Development Area:	20.47 Acres
Total Residential Development Area:	41.25 Acres
% of Developable Acreage:	38.37%

ANALYSIS ASSUMPTIONS

- Residential Development Area:** Land area of which "no more than 50% of developable acreage excluding road right-of-way and open space devoted to residential buildings, parking and amenity spaces." (Section 127.4.F.2.b)
- Developable Acreage:** "Net Acre: An acre of land that includes no 100-year floodplain and no steep slopes existing at the time of subdivision." (Section 103.0)
- Right-of-Way:** "A strip or parcel of land designated for use as a street, highway, driveway, alley or walkway, or for any drainage or public utility purpose or other similar uses. For public streets, the right-of-way width shall be as required by the State for State roads and the Howard County Design Manual for County Roads." (Section 103.0)
Oxford Square clarifies the definition of Right-of-Way to include both private and public streets between the outer edge of associated walkways (sidewalks). Oxford Square excludes alleys and driveways from right-of-way as they functionally support residential parking.
- Open Space:** "A separate lot or area which provides for protection of the environment, for recreation or for public use, including public facilities such as schools, libraries, fire stations and parks as shown on the General Plan or hiking, biking and equestrian trails. Parking areas may be included within open space if accessory to an open space use." (Section 103.0)
Oxford Square clarifies the definition of Open Space to include land reserved for the protection of the environment and for general public use and recreation, such as the lawn space at Beaumont Place and the shared use path network.



Note: The information depicted on this analysis is derived from multiple SDPs and S-15-001. The areas depict current conditions and future development known at this point in time. This analysis is subject to change and refinement as Oxford Square development is implemented.



hord | coplan | macht

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim McManis (Acting)
Chief, Division of Land Development
12/31/19
Date

[Signature]
Chief, Development Engineering Division
12/23/19
Date

[Signature]
Director - Department of Planning and Zoning
1-2-20
Date



Owner
Kelllogg-DCP, LLC
c/o David P. Scheffnacker, Jr.,
Managing Member
100 West Road, Suite 304
Towson, Maryland 21204
Ph# 410-296-3800

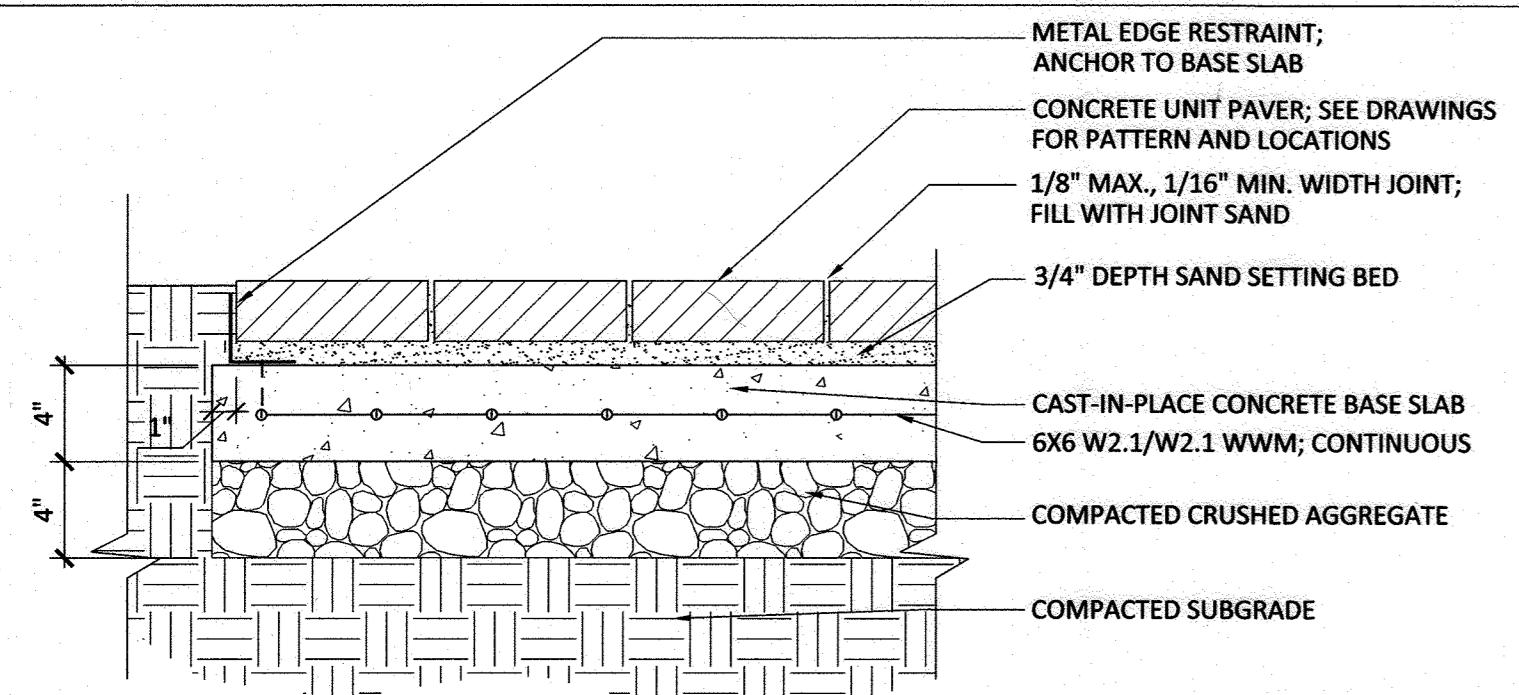
Developer
Preston + Scheffnacker Properties
100 West Road, Suite 304
Towson, Maryland 21204
Ph# 410-296-3800

RESIDENTIAL DEVELOPMENT AREA

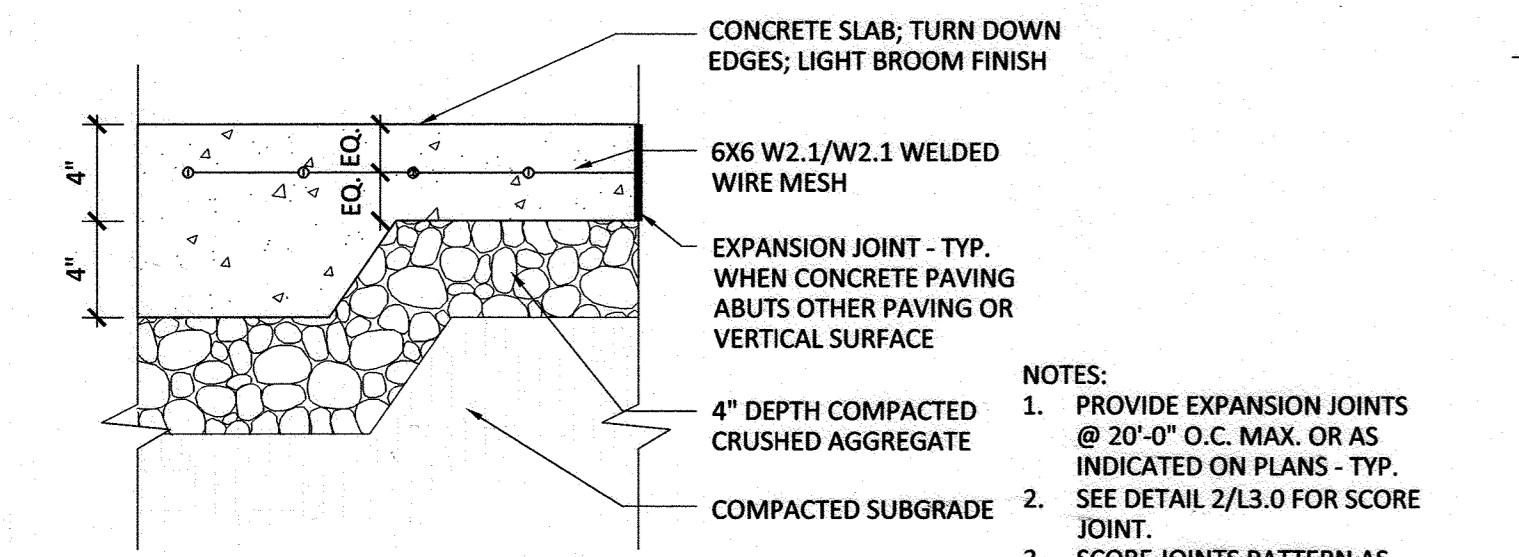
OXFORD SQUARE
"A Howard County Green Neighborhood"
Parcel 'H-H'
"Bristol Court" - A Green Building

Zoned: TOD
Tax Map No.: 3B Grid No.: 20 Parcel No.: 1003
First Election District: Howard County, Maryland
Scale: As Shown
Date: November 22, 2019
Sheet 22 of 25

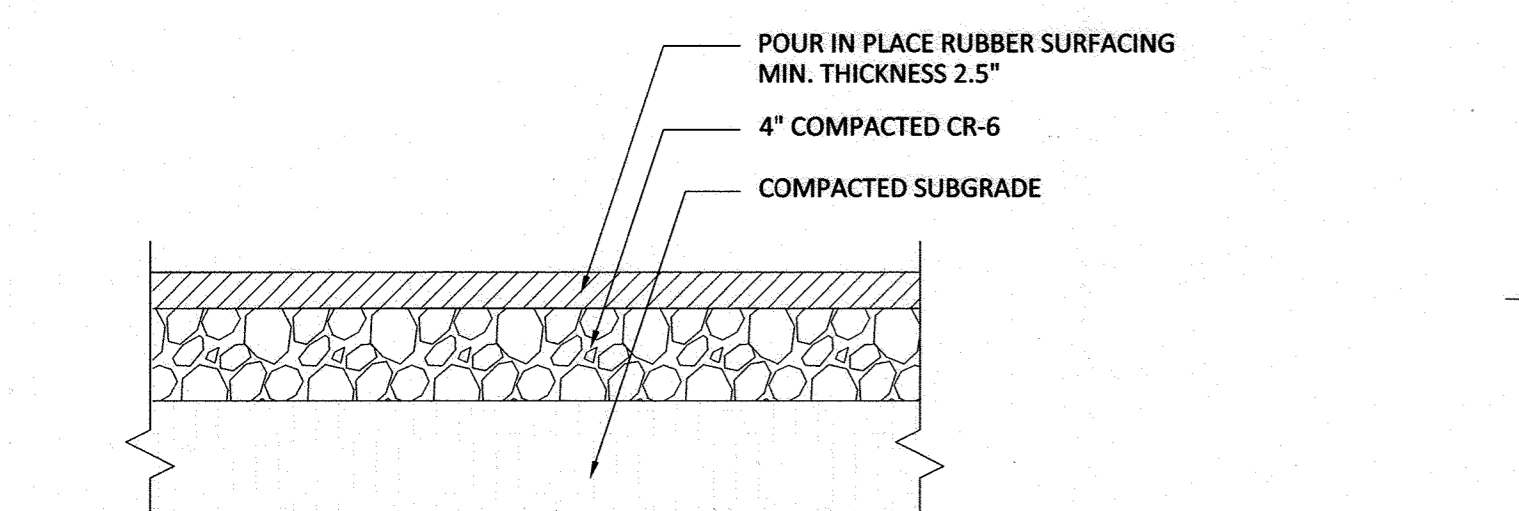
SUBDIVISION		SECTION/AREA	PARCEL No.		
OXFORD SQUARE		----	"H-H"		
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st	601101



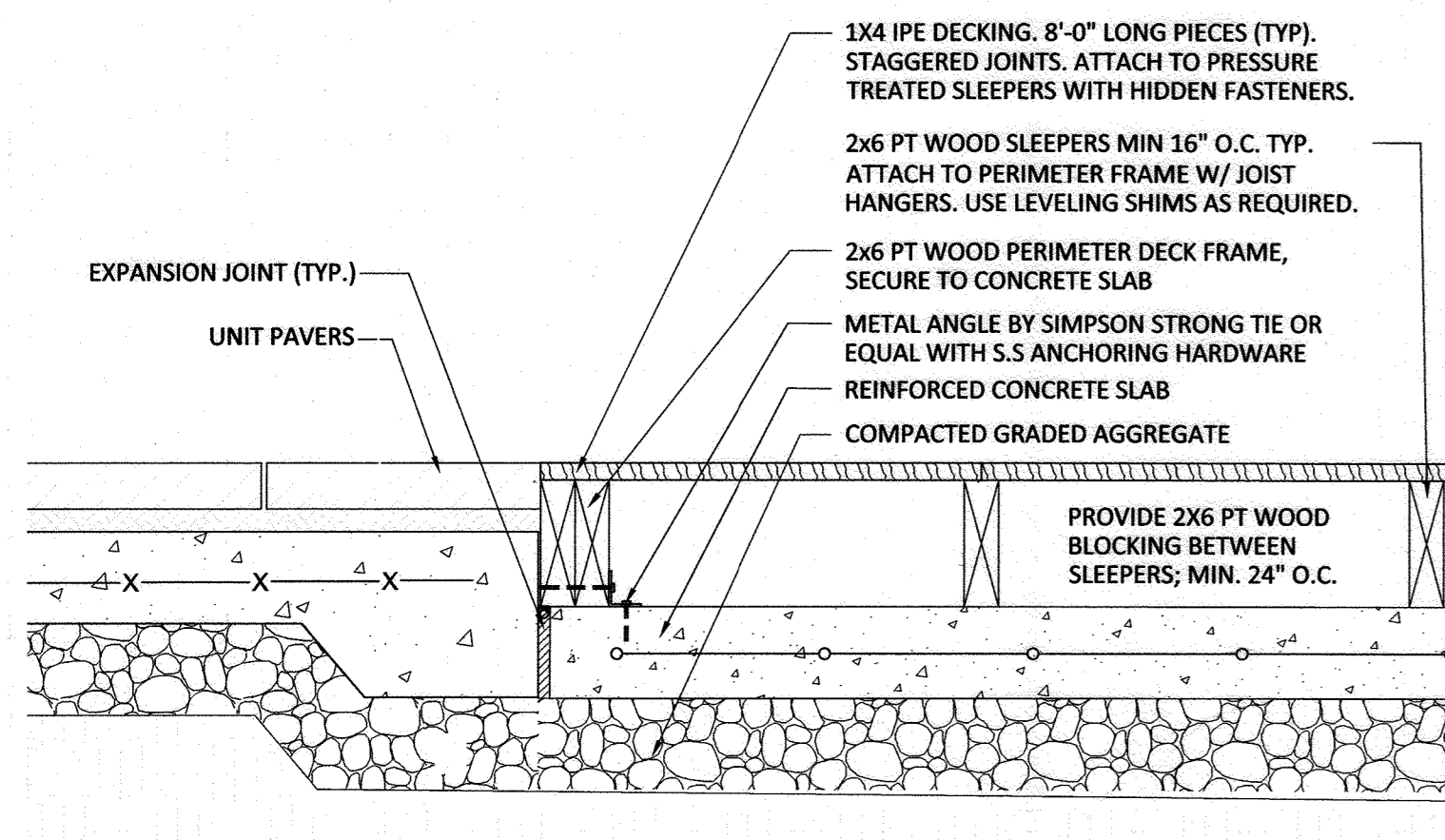
1 CONCRETE UNIT PAVING ON SAND SETTING BED - PEDESTRIAN APPLICATION
1-1/2" = 1'-0"



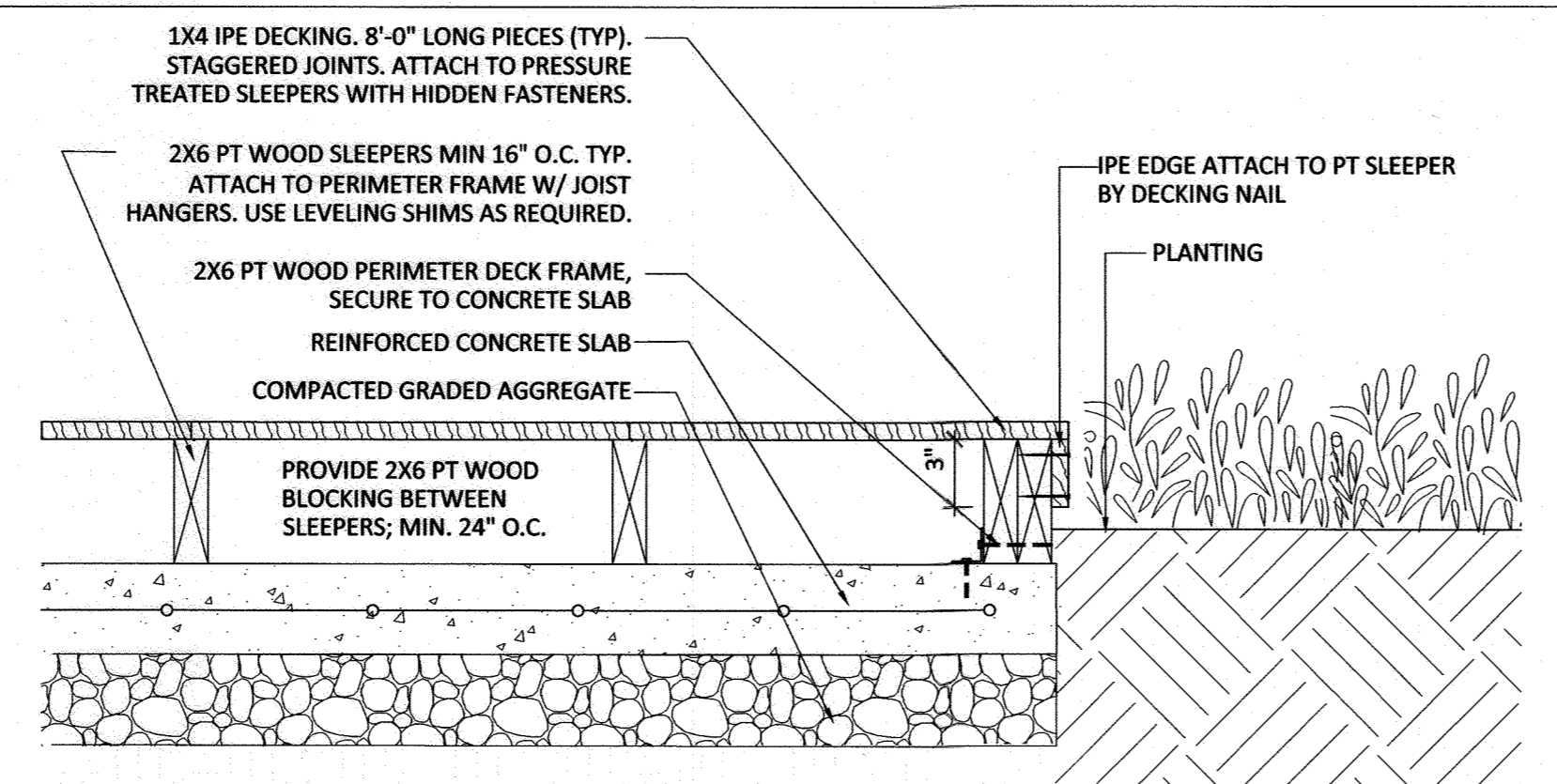
2 SCORED CONCRETE PAVING - PEDESTRIAN APPLICATION
1-1/2" = 1'-0"



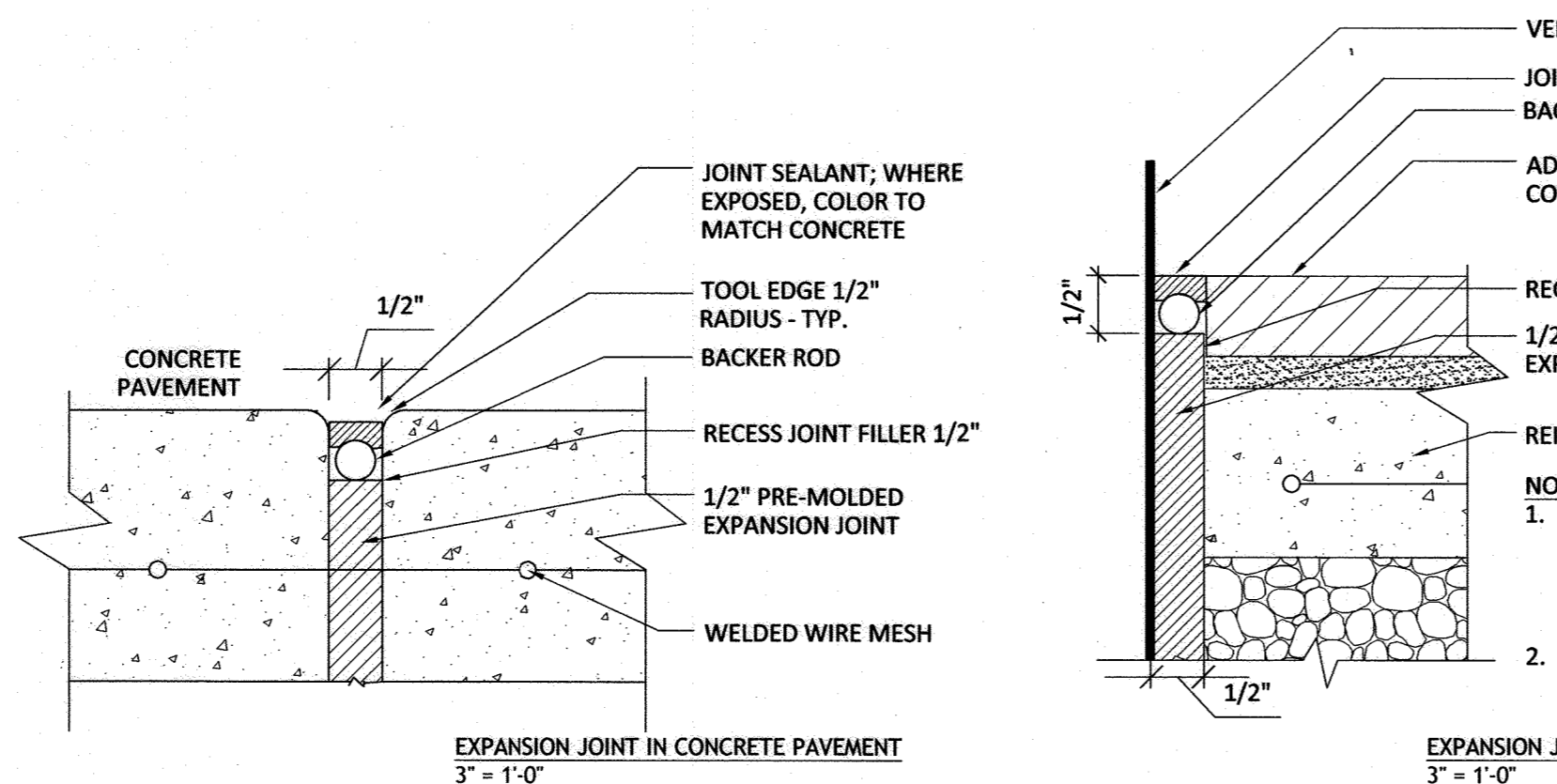
3 PLAY AREA RUBBER SURFACING
1-1/2" = 1'-0"



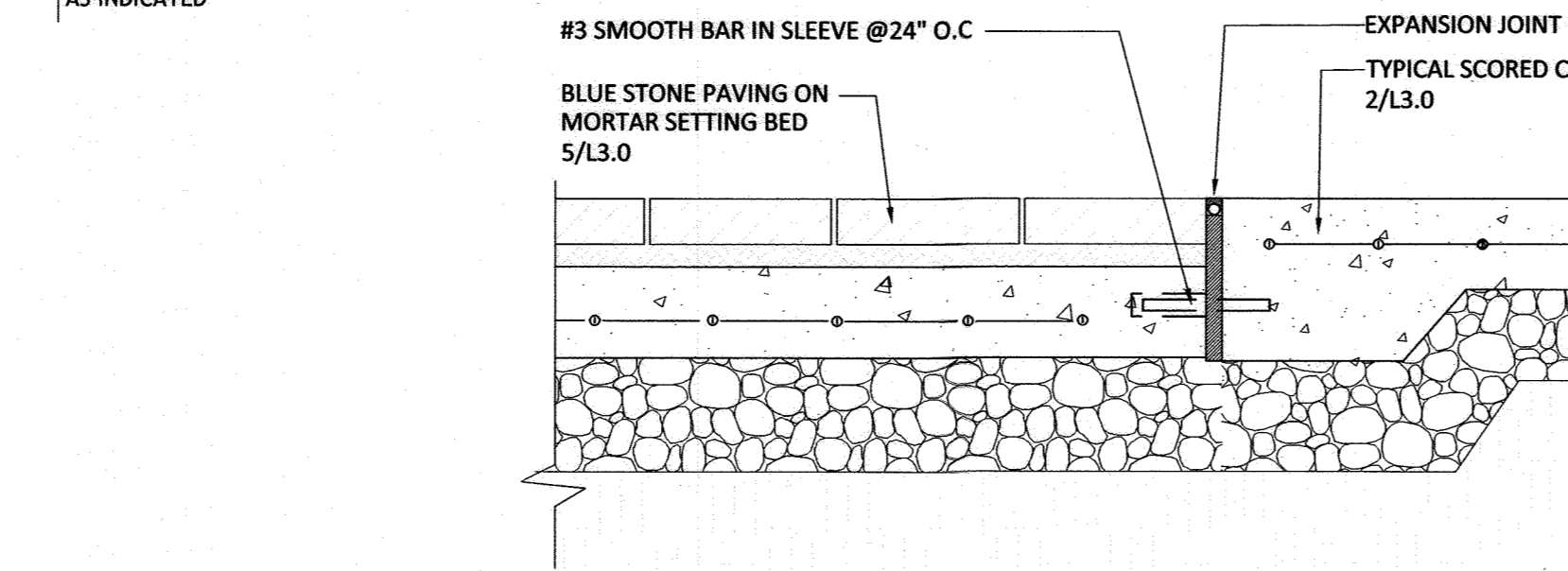
4 IPE WOOD DECKING ON SLEEPERS ADJACENT TO UNIT PAVERS
1-1/2" = 1'-0"



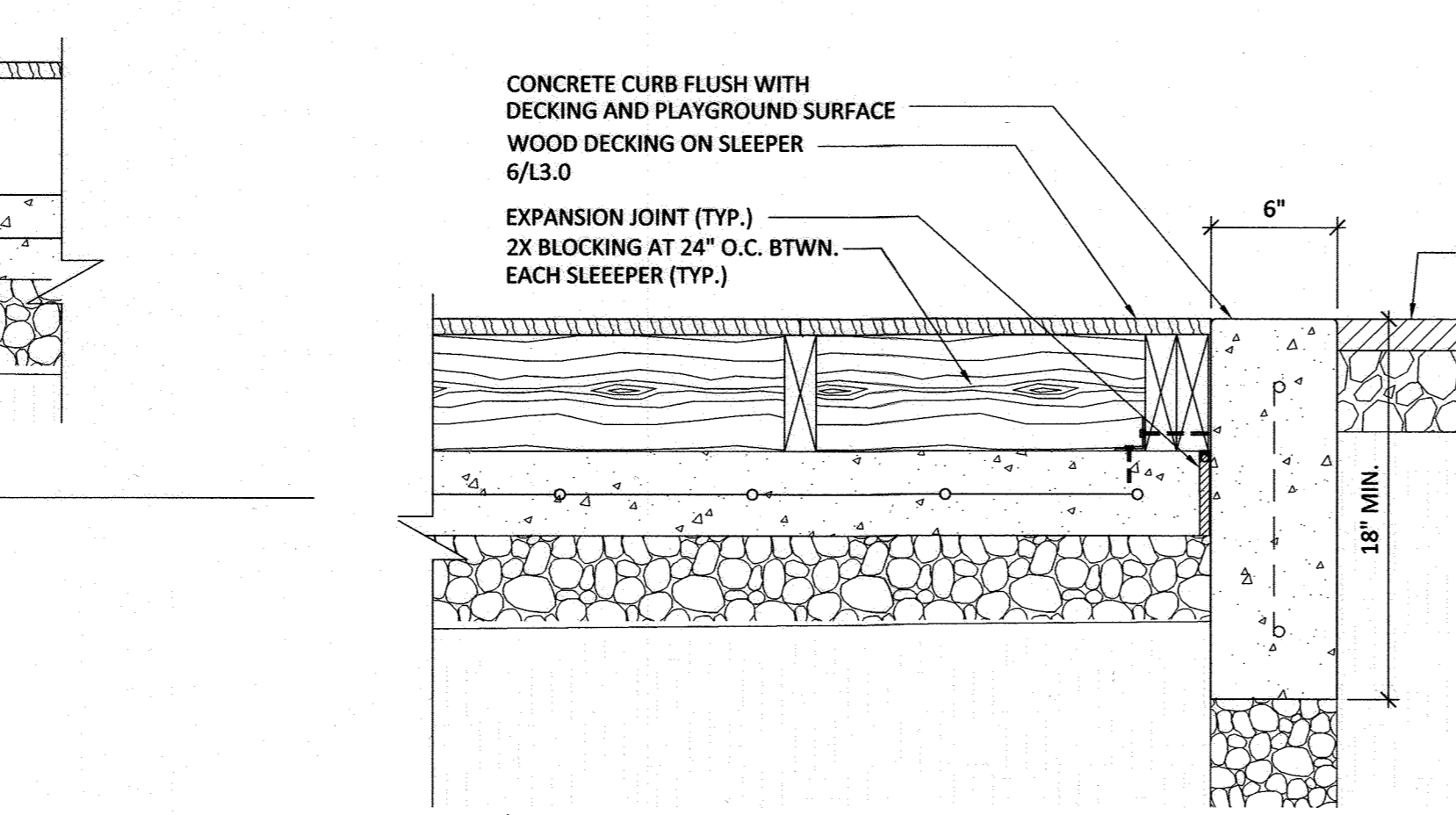
5 IPE WOOD DECKING ON SLEEPERS ADJACENT TO PLANTING AREA
1-1/2" = 1'-0"



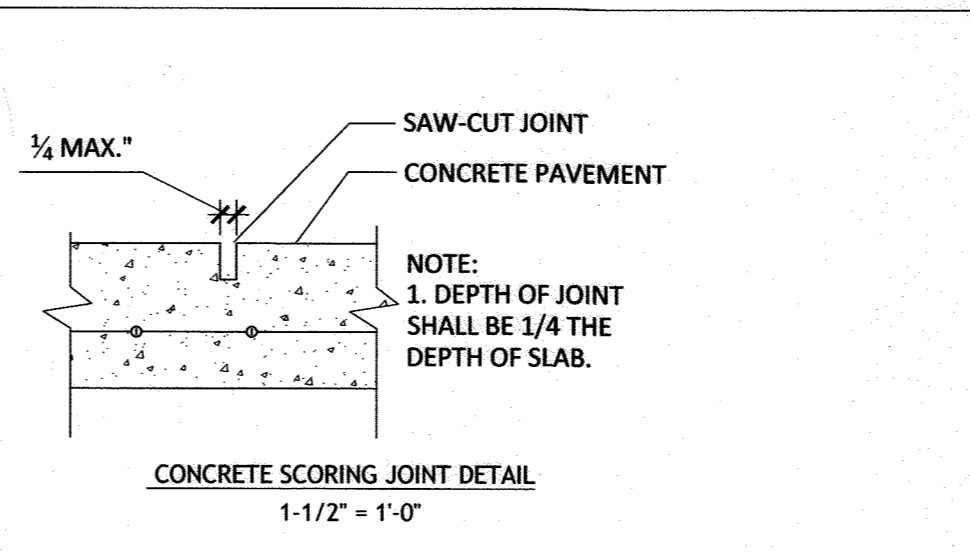
6 EXPANSION JOINT
AS INDICATED



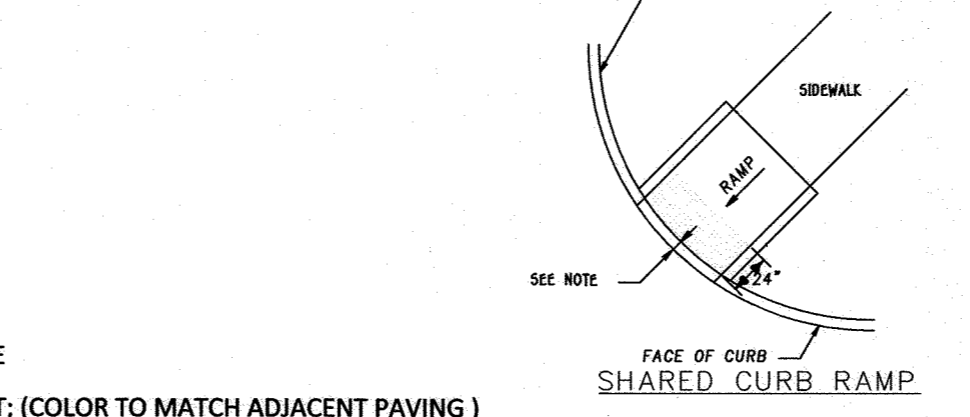
7 UNIT PAVER AND SCORED CONCRETE TRANSITION
1-1/2" = 1'-0"



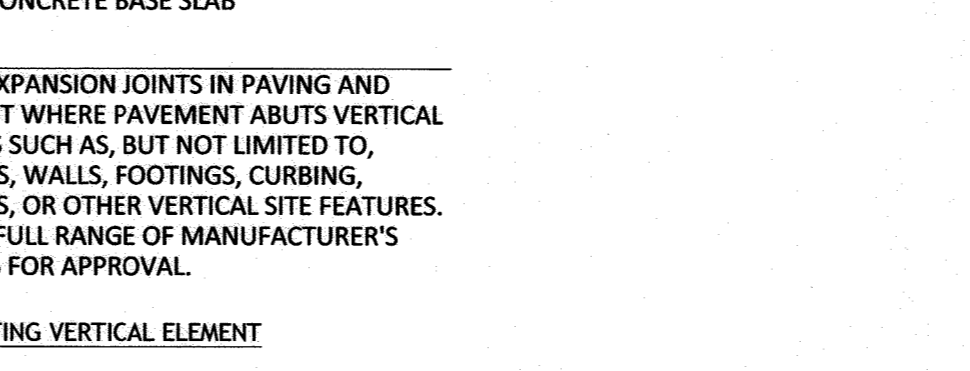
8 FLUSH CONCRETE CURB @ IPE WOOD DECKING AND RUBBER SURFACING
1-1/2" = 1'-0"



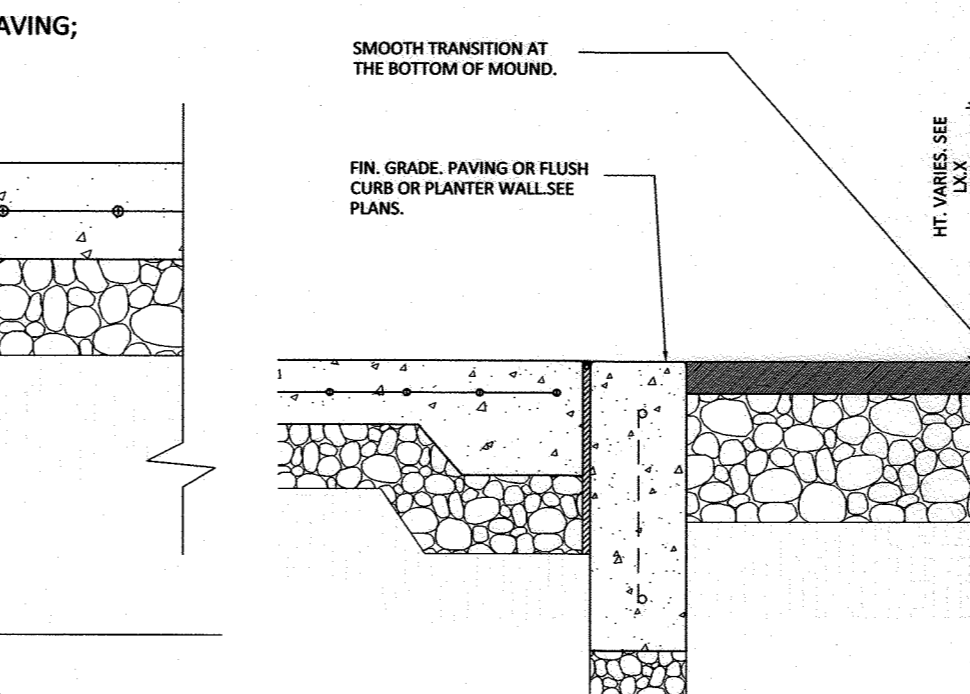
CONCRETE SCORING JOINT DETAIL
1-1/2" = 1'-0"



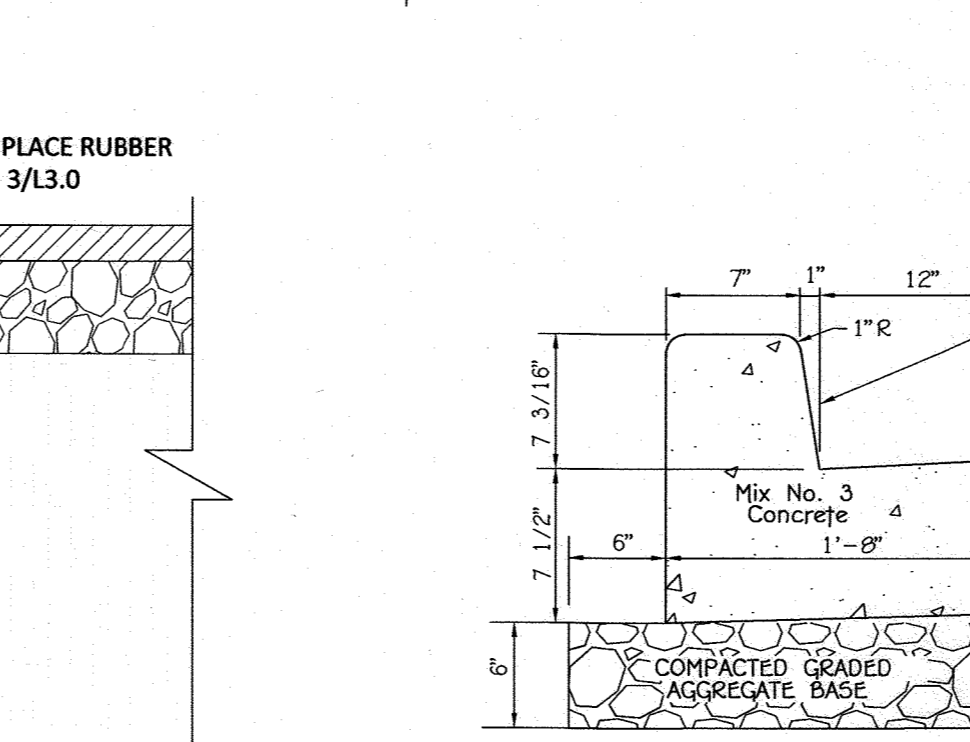
DETECTABLE WARNING SURFACE GUIDELINES
STD. DETAIL NO. 655-40



EXPANSION JOINT ABUTTING VERTICAL ELEMENT
3" = 1'-0"



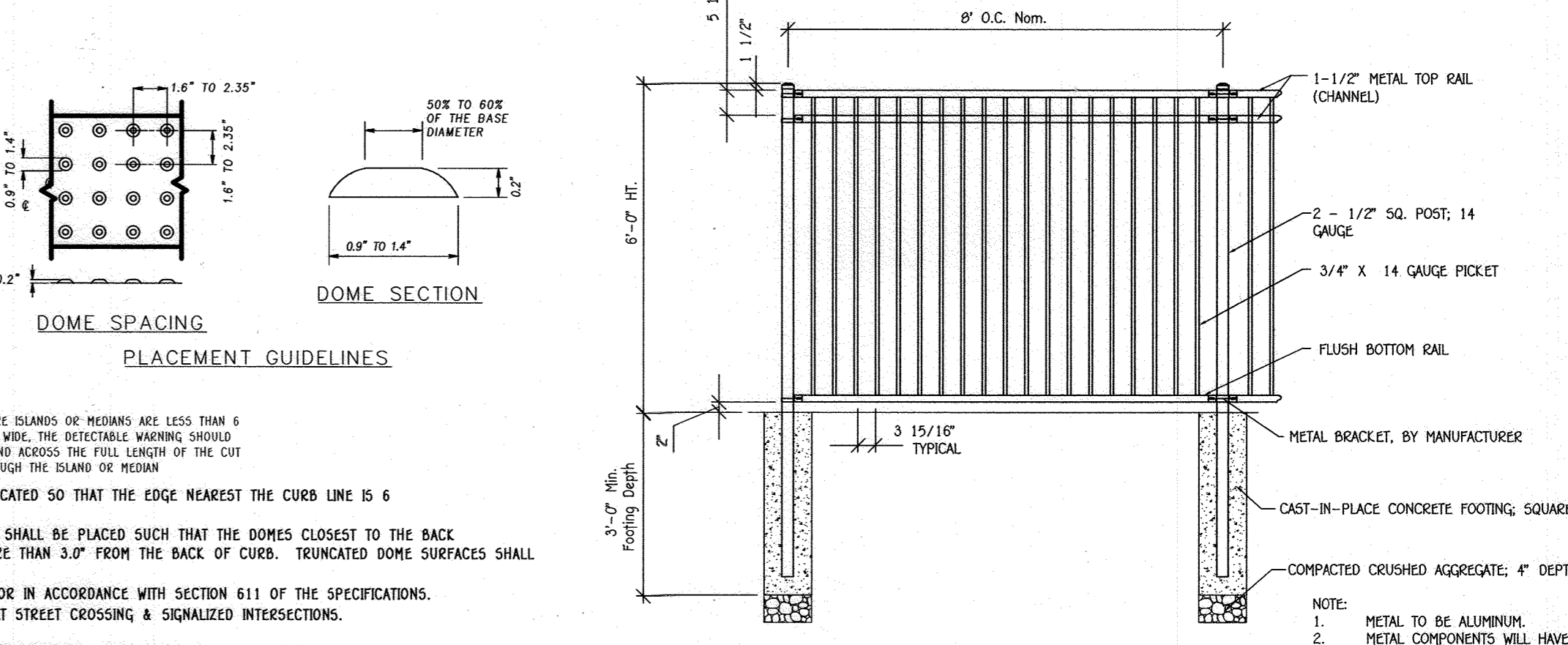
9 MOUND AT PLAY AREA - TYPICAL SECTION DETAIL
1" = 1'-0"



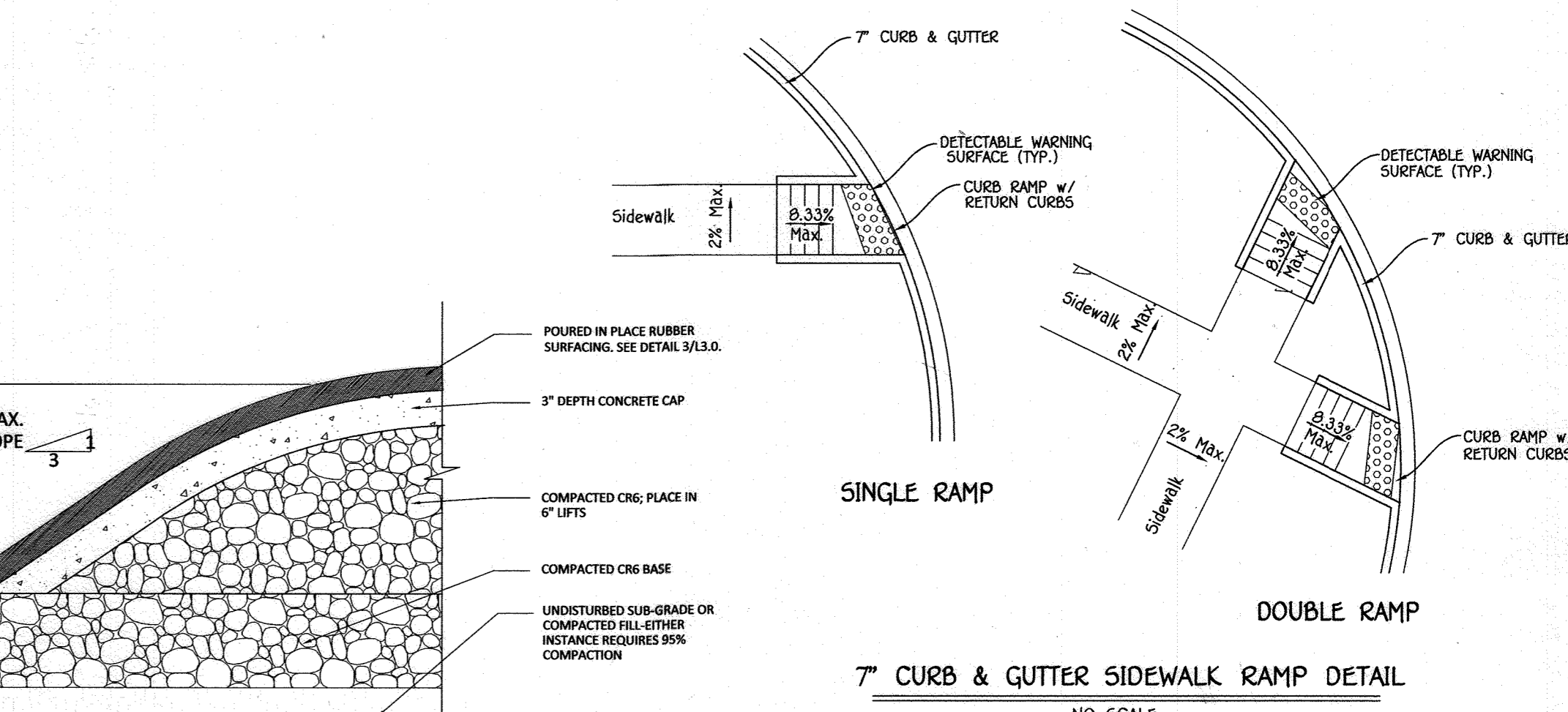
STD. 7" CONC. CURB AND GUTTER
NO SCALE DETAIL R-3.01

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)					
		3 TO <5	5 TO <7	>7	3 TO <5	5 TO <7	>7
P-2	PARKING DRIVE ABLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	PAVEMENT MATERIAL (INCHES)					
		HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)					
		HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)					
		HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (ESAL)					
		MIN HMA WITH GAS		HMA WITH CONSTANT GAS			
		1.5	1.5	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	3.5	2.0	2.0
		8.0	4.0	3.0	4.0	4.0	4.0

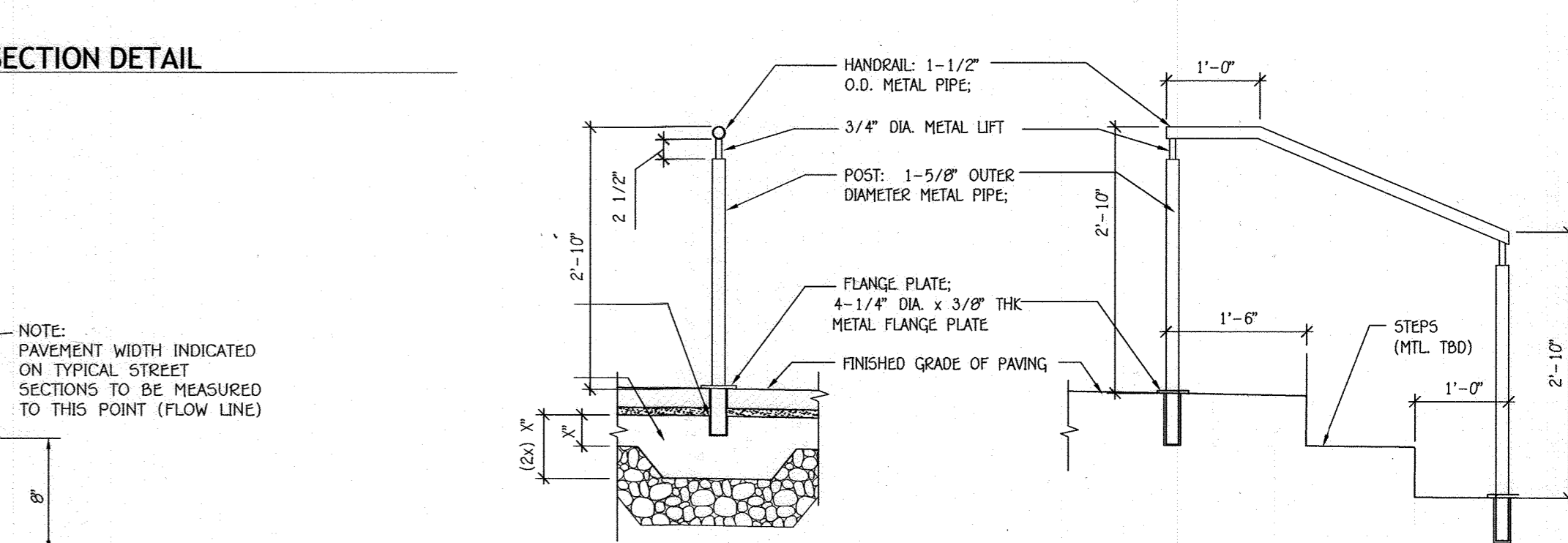
* STD. R-2.01 REVISED FROM 1.0 TO 1.5 PER CONTRACTOR PREFERENCE.



METAL PICKET FENCE
NO SCALE



7" CURB & GUTTER SIDEWALK RAMP DETAIL
NO SCALE



STAIR AND HANDRAIL
NO SCALE

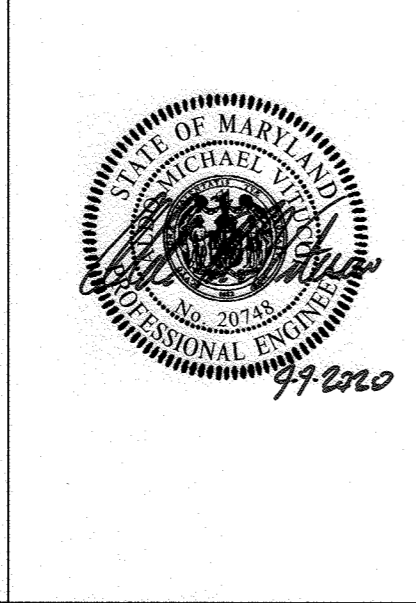
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2095

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: *[Signature]* 11-2-20 Date

Chief, Development Engineering Division: *[Signature]* 11-30-20 Date

Director - Department of Planning and Zoning: *[Signature]* 11-30-20 Date



Owner
Kellogg-CCP, LLC
c/o David P. Scheffacker, Jr.,
Managing Member
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

Developer
Preston - Scheffacker Properties
100 West Road, Suite 304
Towson, Maryland 21204
Ph: 410-296-3800

NO.	REVISION	DATE
1	REVISED AND ADDED ADDITIONAL COURTYARD DETAILS	9/8/20

SUBDIVISION	SECTION/AREA	PARCEL NO.
OXFORD SQUARE	---	"H-H"

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
25047-25050	---	TOD	3B	1st.	601101

REVISED ROADWAY & SITE DETAILS	
OXFORD SQUARE	
"A Howard County Green Neighborhood"	
Parcel "H-H"	
"Bristol Court" - A Green Building	
Tax Map No.: 3B	Grid No.: 20 Parcel No.: 1003
First Election District	Howard County, Maryland
Scale: As Shown	Date: November 22, 2019
Revised Date: September 8, 2020	Sheet 25 Of 25

NO SCALE