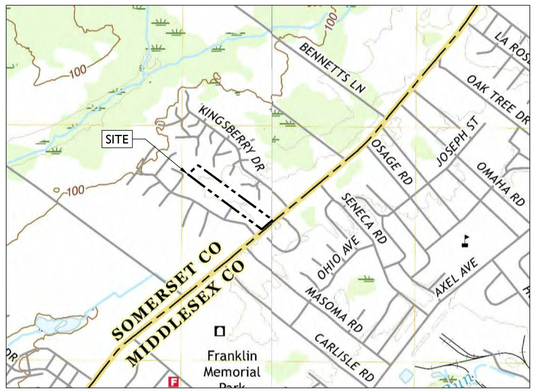
PRELIMINARY & FINAL MAJOR SITE PLAN

FOR

1784 CAPITAL HOLDINGS, LLC

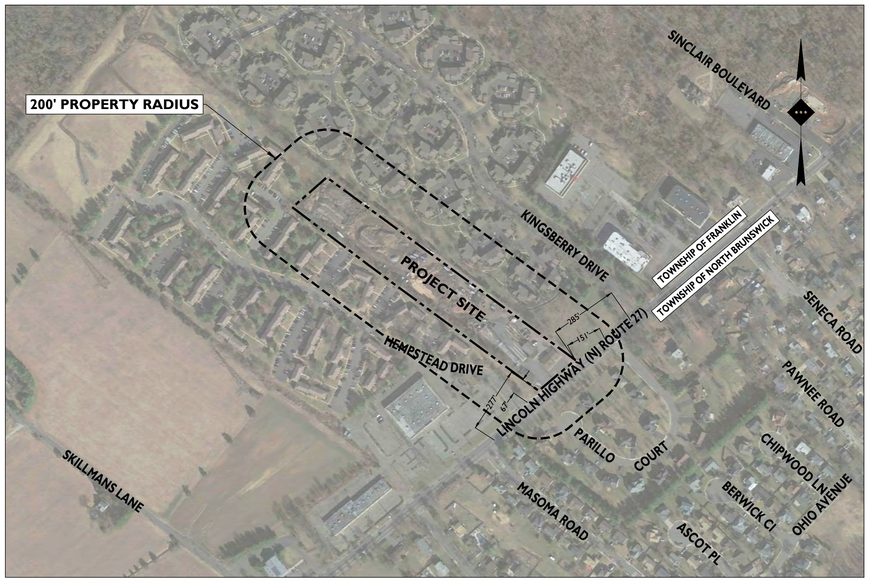
PROPOSED SELF-STORAGE FACILITY

BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY



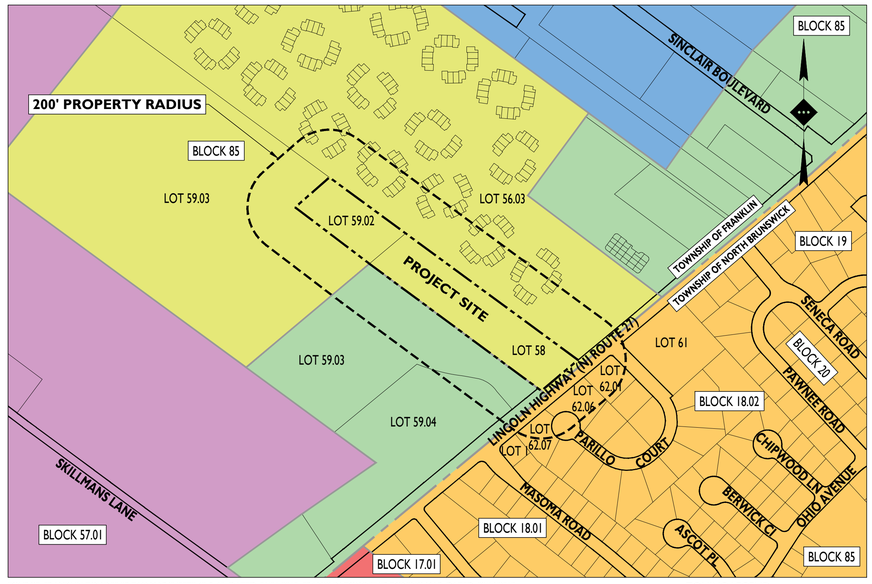
SOURCE: USGS MONMOUTH JUNCTION & NEW BRUNSWICK QUADRANGLE - NJ - 7.5-MINUTE SERIES, DATED: 2019.

KEY MAP
SCALE: 1" = 1,000'±



SOURCE: GOOGLE EARTH PRO, DATED: 02/22/2020.

AERIAL MAP
SCALE: 1" = 300'±



SOURCE: FRANKLIN TOWNSHIP TAX MAP SHEETS 42 & 43, DATED: 01/01/2010. FRAMKLIN TOWNSHIP ZONING MAP, DATED: 08/16/2013.
SOURCE: TOWNSHIP OF NORTH BRUNSWICK TAX MAP SHEETS 4 & 5, DATED: 04/2013. TOWNSHIP OF NORTH BRUNSWICK ZONING MAP, DATED: 02/20/2007.

TAX & ZONING MAP
SCALE: 1" = 300'±

ZONING LEGEND
- C-R (CLUSTER-RESIDENTIAL)
- A (AGRICULTURAL ZONE)
- G-B (GENERAL BUSINESS)
- R-40 (SINGLE-FAMILY RESIDENTIAL)
- R-2 (SINGLE FAMILY RESIDENTIAL ZONE)
- EER (EDUCATION - RECREATION - RESEARCH ZONE)

ZONING RELIEF TABLE

RELIEF TYPE	CODE SECTION	REQUIRED	PROPOSED
USE VARIANCE	§ 112-SCHEDULE 1	SELF-STORAGE FACILITY NOT PERMITTED	SELF-STORAGE FACILITY
BULK VARIANCE	§ 112-SCHEDULE 2	MAXIMUM BUILDING HEIGHT: 2.5 STORIES / 35 FT	34.0 FT / 3 STORIES (V)
BULK VARIANCE	§ 112-SCHEDULE 2	MAXIMUM BUILDING COVERAGE: 20% (50,379 SF)	29.4% (74,117 SF) (V)
BULK VARIANCE	§ 112-SCHEDULE 2	MAXIMUM IMPERVIOUS COVERAGE: 40% (116,579 SF)	WITH PAVERS: 60.9% (153,516 SF) (V) WITHOUT PAVERS: 52.8% (132,890 SF) (V)
VARIANCE	§ 112-SCHEDULE 4	REQUIRED PARKING (WAREHOUSE*): 1 SPACE PER 1,000 SF OF GROSS FLOOR AREA FOR THE FIRST 5,000 SF THEN 1 SPACE PER 2,500 SF 1 SPACE x (5,000 SF / 1,000 SF) = 5 SPACES 1 SPACE x ((121,718 SF - 5,000 SF) / 2,500 SF) = 46 SPACES[min] TOTAL REQUIRED: 51 SPACES	19 SPACES (V)
VARIANCE	§ 112-102.C	PARKING LOCATION REQUIREMENTS: NOT PERMITTED IN: FRONT YARD AREA	57.5 FT (V)
VARIANCE	§ 112-88	MINIMUM DRIVE AISLE WIDTH REQUIREMENTS: 90 DEGREE PARKING = 26 FT	25 FT (V)
DESIGN WAIVERS	§ 112-33.2C.(2)	LIGHTING LEVEL FOR PARKING LOTS REQUIREMENTS: MINIMUM LEVEL = 0.2 FC AVERAGE TO MAXIMUM RATIO: 5:1 MAXIMUM TO MINIMUM RATIO: 20:1 MINIMUM VERTICAL ILLUMINANCE: 0.1 FC	0.1 FC (W) 27.2:1 FC (W) 147:1 FC (W) 0.0 FC (W)

PLANS PREPARED BY:

STONEFIELD engineering & design
Rutherford, NJ · New York, NY · Boston, MA
Princeton, NJ · Tampa, FL · Detroit, MI
www.stonefieldeng.com

Headquarters: 92 Park Avenue, Rutherford, NJ 07070
Phone 201.340.4468 · Fax 201.340.4472

PLAN REFERENCE MATERIALS:

1. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
   - ATLA/NSPS LAND TITLE SURVEY PREPARED BY STONEFIELD ENGINEERING & DESIGN, DATED: 06/08/2020.
   - ARCHITECTURAL PLANS PREPARED BY EAPC ARCHITECTS, DATED: 12/06/2020.
   - GEOTECHNICAL REPORT PREPARED BY WHITESTONE ASSOCIATES, INC. DATED JUNE 2, 2020.
   - STORMWATER MANAGEMENT AREA EVALUATION PREPARED BY WHITESTONE ASSOCIATES, INC. DATED SEPTEMBER 15, 2020.
   - AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO, DATED: 02/22/2020.
   - LOCATION MAP OBTAINED FROM USGS MONMOUTH JUNCTION & NEW BRUNSWICK QUADRANGLE - NJ - 7.5-MINUTE SERIES, DATED: 2019.
   - TAX MAPS OBTAINED FROM THE TOWNSHIP OF FRANKLIN TAX MAP SHEETS 42 & 43, DATED: 01/01/2010 & THE TOWNSHIP OF NORTH BRUNSWICK TAX MAP SHEETS 4 & 5, DATED: 04/2013.
   - ZONING MAP OBTAINED FROM THE TOWNSHIP OF FRANKLIN ZONING MAP, DATED: 08/16/2013 & THE TOWNSHIP OF NORTH BRUNSWICK ZONING MAP, DATED: 02/20/2007.
2. ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

SHEET INDEX

DRAWING TITLE	SHEET #
COVER SHEET	C-1
EXISTING CONDITIONS PLAN	C-2
DEMOLITION PLAN	C-3
SITE PLAN	C-4
GRADING PLAN	C-5
STORMWATER MANAGEMENT PLAN	C-6
UTILITY PLAN	C-7
LIGHTING PLAN	C-8
SOIL EROSION & SEDIMENT CONTROL PLAN	C-9
LANDSCAPING PLAN	C-10 - C-11
CONSTRUCTION DETAILS	C-12 - C-17

APPLICANT
1784 CAPITAL HOLDINGS, LLC
8777 N. GAINEY CENTER DRIVE, SUITE 191
SCOTTSDALE, ARIZONA 85258

OWNER
JOSEPH R AND ROSE FAMA
FAMA FAMILY LLC
BOX 534 HIGHWAY 27
NORTH BRUNSWICK, NJ 08902

ATTORNEY
CHRIS MURPHY
MURPHY SCHILLER & WILKED LLP
24 COMMERCE STREET 12TH FLOOR
NEWARK, NEW JERSEY 07102

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

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
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TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

NEW JERSEY JEFFREY MARTELL No. GE47290 PROFESSIONAL ENGINEER *LICENSED*
JEFFREY S. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell

STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: PRI-200094

TITLE: COVER SHEET

DRAWING: C-1

200' PROPERTY OWNERS LIST			
BLOCK	LOT	OWNER	OWNER'S ADDRESS
18.02	1	SANCIO COSMO & GALE	1499 MASOMA ROAD NORTH BRUNSWICK NJ 08902
18.02	61	GRACELAND GARDENS LLC	1628 ROUTE 27 NORTH BRUNSWICK NJ 08902
18.02	62.01	AHMED SHAJEE & FATIMA ASFAR	1400 PARILLO COURT NORTH BRUNSWICK NJ 08902
18.02	62.06	KARANDE ARUN T & PRADNYA A	1490 PARILLO COURT NORTH BRUNSWICK NJ 08902
18.02	62.07	CHEN JENLUNG & VICKY CHANG CHUN-CHI	1473 PARILLO COURT NORTH BRUNSWICK NJ 08902
85	56.03	SALERNO, IRIS D.	50 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	ANTUNES, EDMUND & DENISE BOURSCHEID	31 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	HOLT, MICHAEL FRANCIS	40 KINGSBERRY DR SOMERSET, NJ 08873
85	56.03	QURASHI, AMAN	27 KINGSBERRY DR SOMERSET, NJ 08873
85	56.03	KINGBRIDGE ESTATES%KINGSBERRY ACRES	P.O. BOX 6088 SOMERSET, NJ 08875
85	56.03	GORDON, CELIA A	8 KINGSBERRY DRIVE SOMERSET, NJ 08873
85	56.03	REAL PROPERTY SOLUTIONS GROUP,LLC	73 MOUNTAIN VIEW BLVD BASKING RIDGE, NJ 07920
85	56.03	PATEL, VYOMESCHANDRA	58 KINGSBERRY DRIVE SOMERSET, NJ 08873
85	56.03	WASHINGTON, WILLIAM	152 KINGSBERRY DRIVE SOMERSET NJ 08873
85	56.03	LAWRENCE, JAMES	59 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	STEWART, ALAN D. & LEAP.	36 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	DUBOIS, LAURIE S.	158 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	NICHOLSON, ROLAND A SR & TRISHA G	151 KINGSBERRY DRIVE SOMERSET, NJ 08873
85	56.03	ARANOFF, ESTA	157 KINGSBERRY DRIVE SOMERSET, NJ 08873
85	56.03	SINGH, CHARANJEET & GABA, MINI	2 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	ECKENRODE, SARAH	6 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	ARANGO, HERNAN	15 W WALNUT ST. METUCHEN, NJ 08840
85	56.03	BRADLEY, KATHERINE UPSHAW-	154 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	ALLEN, ROBERT E	55 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	REID-MERCY,SHARON A. & STACY A.	37 KINGSBERRY DR. SOMERSET NJ 08873
85	56.03	POSTMAN, LYNNE & BIRNBOHM, ARLENE	23 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	POINDEXTER, KEVIN	56 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	HOOKER, DAVIO	43 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	STEPHEN, L YNARKAH	38 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	PALANI, ANBAZHAGAN	39 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	JENNINGS, CARRIE I	53 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	KUNISETTY, VENKATA & NAGAVARAPU,S.	9 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	SANFORD, TONYA E.	26 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	STEIN, SHARON RUBINSKY	5 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	MALLOY, ERICA	60 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	DESSAW, G. GAYLE	41 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	JUZVA, PETER JR	24 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	NALAMADA, VIKRAM & GUJJA, UMA	155 DEANS LN MONMOUTH JUNCTION NJ 08852
85	56.03	MALCOLM, SCOTT	25 KINGSBERRY DR SOMERSET, NJ 08873
85	56.03	COHEN, JASON & COHEN, PAUL	11 KINGSBERRY DR SOMERSET, NJ 08873
85	56.03	ROBINSON, LORI G	52 KINGSBERRY DRIVE SOMERSET NJ 08873
85	56.03	SIEGEL, ARNOLD B. & JOANN DARCY	4 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	BURNS, TAMIKA	3 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	GOLDENBERG, JEFFREY E	21 ABBOTT AVE. OCEAN GROVE, NJ 07756
85	56.03	DORSEY, EVERETT & ELIZABETH	51 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	PARAS, VICTOR J	156 KINGSBERRY DRIVE SOMERSET NJ 08873
85	56.03	TOBIAS, ROBERT G	61 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	NEMERGUT, BRIDGET	28 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	KING, ANTHONY D. & SAMANTHA	42 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	SYED, ZAHID H	29 KINGSBERRY DR SOMERSET NJ 08873
85	56.03	DUNBAR HOMES, INC.	820 MORRIS TPK-STE 301 SHORT HILLS NJ 07078
85	56.03	GENOVESE, CARMINE V	7 KINGSBERRY DRIVE SOMERSET NJ 08873
85	56.03	PENDLETON, LAURA A	32 KINGSBERRY DRIVE SOMERSET NJ 08873
85	56.03	FRATESI, HEATHER G.& FUENTES,TAYLOR	54 KINGSBERRY DR SOMERSET, NJ 08873
85	56.03	CHANDWANI,KAILASH& CHANDWANI,MAHESH	30 KINGSBERRY DR. SOMERSET, NJ 08873
85	56.03	FISHER, SHARON	155 KINGSBERRY DR SOMERSET NJ 08873
85	56.04	DUNBAR HOMES, INC.CID HOFFMAN,D.	820 MORRIS TPK-STE 301 SHORT HILLS NJ 07078

SYMBOL	DESCRIPTION
	BUILDING
	CONCRETE SIDEWALK / MAT
	ASPHALT / CONCRETE CURB
D.C.	DEPRESSED CURB
	PROPERTY LINE
	ADJACENT PROPERTY LINE
C.L.F.	CHAIN LINK FENCE
	WOOD FENCE
	POLE
	LIGHT POLE
	SIGNS
	WATER VALVE
	GAS VALVE
	DRAIN
	INLET
	MAN HOLE
	BOX (ELEC, GAS, ETC.)
	OVERHEAD WIRE
	UNDERGROUND GAS LINE
100	MAJOR CONTOUR
101	MINOR CONTOUR
100.00	GRADE SPOT SHOT
TC 100.50	TOP OF CURB SHOT
BC 100.00	BOTTOM OF CURB SHOT
TW 102.00	TOP OF WALL SHOT
BW 100.00	BOTTOM OF WALL SHOT
A/C	AIR CONDITIONING UNIT
15"	DECIDUOUS TREE - DIAMETER NOTED
15"	CONIFEROUS TREE - DIAMETER NOTED
EDGE PAVEMENT	EDGE OF PAVEMENT
D.W.S.	DETECTABLE WARNING STRIP
C/O	CLEAN OUT
	IRON PIN
	BENCH MARK

SURVEY NOTES:

1. THE SURVEY LISTED WITHIN THE PLAN REFERENCES ON THE COVER SHEET SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THE SURVEY AND ASSOCIATED DOCUMENTS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF THE SURVEY AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

40' 0' 40' 80'
GRAPHIC SCALE IN FEET
1" = 40'

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SOMERSET COUNTY, NEW JERSEY

JEFFREY MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell

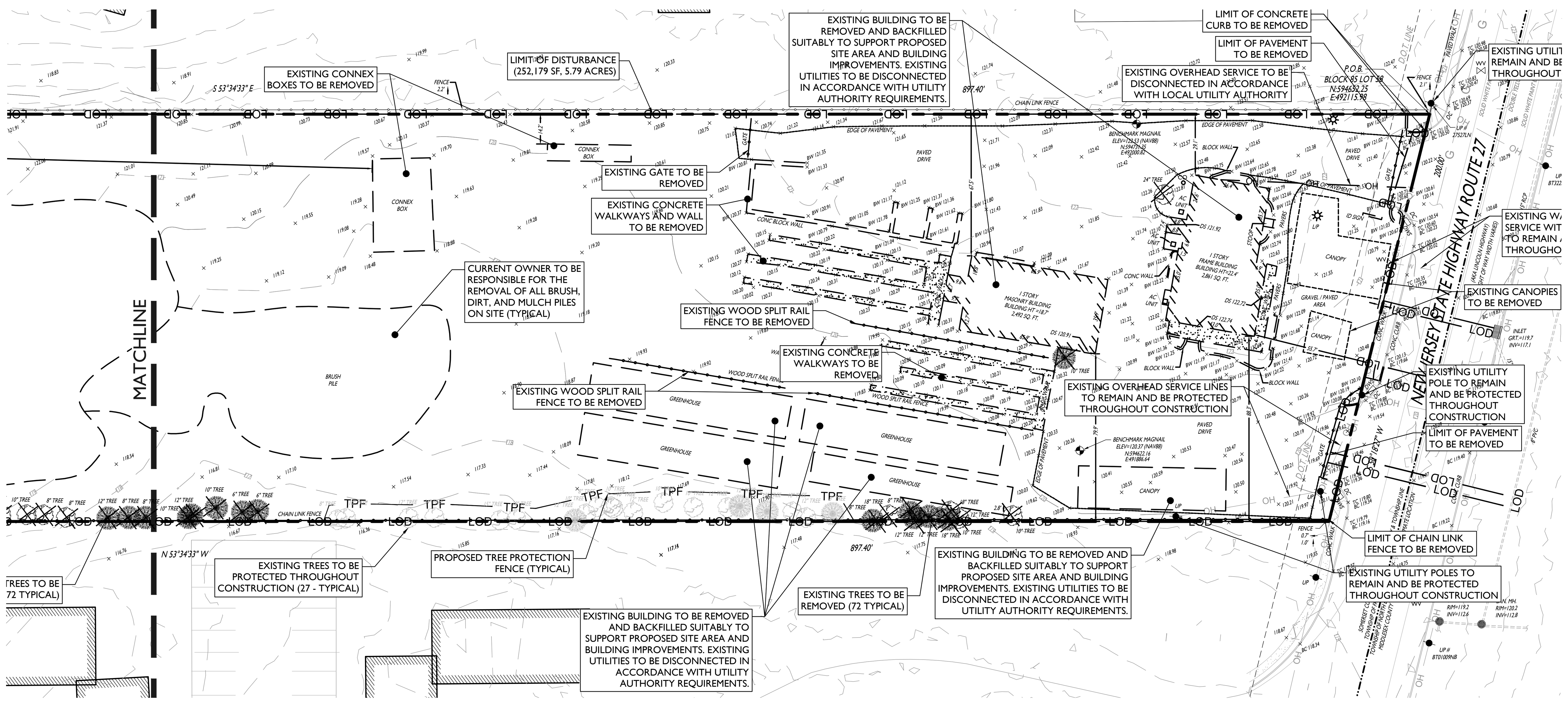
STONEFIELD engineering & design

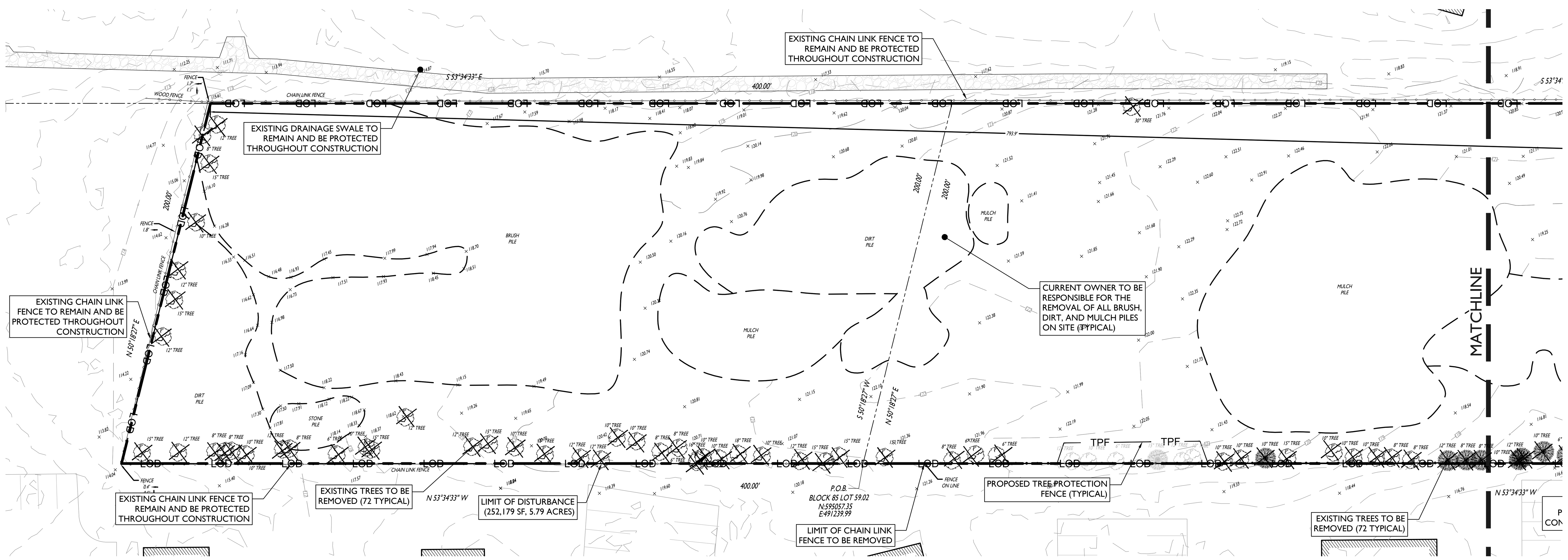
SCALE: 1" = 40' PROJECT ID: PRI-200094

TITLE:
EXISTING CONDITIONS PLAN

DRAWING:
C-2

Z:\PRINCETON\PRI\2020\PRI-200094 ARCO MURRAY - 1613 ROUTE 27, FRANKLIN, NJ\CADD\PLOTS\OP-03-EXIST.DWG

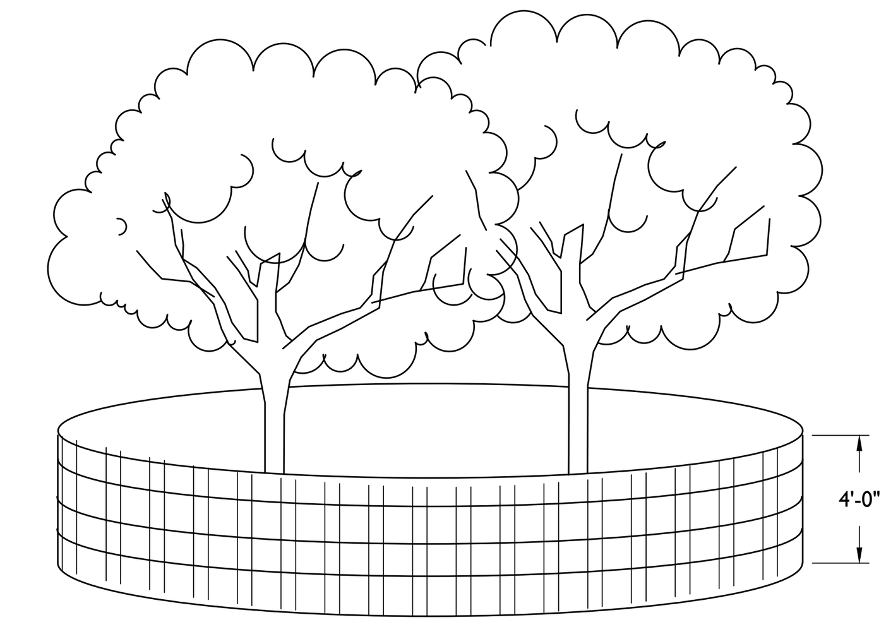




TREES REPLACEMENT CHART				
SIZE OF TREE	QUANTITY ON SITE	QUANTITY TO BE REMOVED	MULTIPLIER / FACTOR	TOTAL REPLACMENT TREES
4 INCHES TO 15 INCHES DBH	83	76	80% OF 76 REMOVED	61
16 INCHES TO 18 INCHES DBH	7	7	3	21
24 INCHES DBH	2	1	5	5
30 INCHES DBH	1	1	8	8
95 TREES TO BE REPLACED				
284 TREES ARE PROPOSED TO BE PLANTED				

SYMBOL	DESCRIPTION
— — — — —	FEATURE TO BE REMOVED / DEMOLISHED
—— LOD ——	LIMIT OF DISTURBANCE
—— TPF ——	PROPOSED TREE PROTECTION FENCE
24" TREE	EXISTING TREE TO BE REMAIN AND BE PROTECTED
24" TREE	EXISTING TREE TO BE REMOVED

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



NOTES:

1. SNOW FENCING IS TO BE 4'-0" HIGH AND SELF SUPPORTED.
2. DO NOT STOCKPILE MATERIALS OR STORE EQUIPMENT WITHIN THE TREE PROTECTION FENCING.
3. SNOW FENCE TO BE INSTALLED AT DRIP LINE OF EXISTING TREE OR TREE CLUSTER TO BE PROTECTED OR NO CLOSER THAN 6' FROM TREE TRUNK IF NECESSARY.
4. IF THE PROJECT AREA ENCOMPASSES A PORTION OF THE DRIP LINE OF THE TREE, NO MORE THAN ONE THIRD OF THE OF THE TOTAL AREA OF WITHIN THE DRIP LINE SHOULD BE DISTURBED BY CONSTRUCTION OR REGRADING AND A 3" THICK LAYER OF MULCH SHALL BE INSTALLED OVER THE AREA OF THE DRIP LINE WHICH IS NOT PROTECTED BY FENCING TO PROVIDE A CUSHION.

TREE PROTECTION DETAIL

NOT TO SCALE

DEMOLITION NOTES

1. THE WORK REFLECTED ON THE DEMOLITION PLAN IS TO PROVIDE GENERAL INFORMATION TOWARDS THE EXISTING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE ENTIRE PLAN SET AND ASSOCIATED REPORTS/REFERENCE DOCUMENTS INCLUDING ALL DEMOLITION ACTIVITIES AND INCIDENTAL TASKS NECESSARY TO COMPLETE THE SITE IMPROVEMENTS.
2. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
3. EXPLOSIVES SHALL NOT BE USED UNLESS WRITTEN CONSENT FROM BOTH THE OWNER AND ANY APPLICABLE GOVERNING AGENCY IS OBTAINED. BEFORE THE START OF ANY EXPLOSIVE PROGRAM, THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL LOCAL, STATE, AND FEDERAL PERMITS. ADDITIONALLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SEISMIC TESTING AS REQUIRED AND ANY DAMAGES AS THE RESULT OF SAID DEMOLITION PRACTICES.
4. ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITIES ARE DISCONNECTED IN ACCORDANCE WITH THE UTILITY AUTHORITY'S REQUIREMENTS PRIOR TO STARTING THE DEMOLITION OF ANY STRUCTURE. ALL EXCAVATIONS ASSOCIATED WITH DEMOLISHED STRUCTURES OR REMOVED TANKS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO SUPPORT SITE AND BUILDING IMPROVEMENTS. A GEOTECHNICAL ENGINEER SHOULD BE PRESENT DURING BACKFILLING ACTIVITIES TO OBSERVE AND CERTIFY THAT BACKFILL MATERIAL WAS COMPACTED TO A SUITABLE CONDITION.
5. DEMOLISHED DEBRIS SHALL NOT BE BURIED ON SITE. ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.

EXISTING UTILITY SERVICES NOTE:

EXISTING GAS, ELECTRIC, WATER, AND SANITARY SERVICES SHALL BE FIELD LOCATED PRIOR TO CONSTRUCTION. EXISTING SERVICES TO THE SITE SHALL BE DISCONNECTED AND ABANDONED IN ACCORDANCE WITH THE LOCAL UTILITY AUTHORITY

ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO BE REMOVED / DEMOLISHED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IF SIGNIFICANT DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN AND FIELD CONDITIONS

40' 0' 40' 80'
GRAPHIC SCALE IN FEET
1" = 40'

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STATE OF NEW JERSEY · JEFFREY MARTELL · No. GE47290 · LICENSED · PROFESSIONAL ENGINEER
JEFFREY A. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
Digitally signed by Jeffrey Martell
DN: CN=Jeffrey Martell, dnQualifier=A01410C0000017BC710DC920000B3EB, O=STONEFIELD ENGINEERING AND DESIGN LLC, C=US
Date: 2022.02.18 10:32:01-05'00'

STONEFIELD engineering & design

SCALE: 1" = 40'	PROJECT ID: PRI-200094

TITLE:

DEMOLITION PLAN

DRAWING:

C-3

LAND USE AND ZONING

BLOCK 85, LOT 58 & 59.02

CLUSTER-RESIDENTIAL ZONE (C-R)

PROPOSED USE

SELF-STORAGE FACILITY — NON-PERMITTED (V)

ZONING REQUIREMENT	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	435,600 SF (10.0 AC)	251,898 SF (5.78 AC) (EN)	251,898 SF (5.78 AC) (EN)
MINIMUM LOT FRONTAGE	300 FT	200.0 FT (EN)	200.0 FT (EN)
MINIMUM FRONT YARD SETBACK*	90 FT	1.8 FT (EN)	BUILDING: 106.5 FT CANOPY: 608.7 FT
MINIMUM SIDE YARD SETBACK (ONE)	45 FT	2.8 FT (EN)	BUILDING: 45.0 FT CANOPY: 57.0 FT
MINIMUM SIDE YARD SETBACK (BOTH)	100 FT	17.0 FT (EN)	BUILDING: 102.8 FT CANOPY: 114.1 FT
MINIMUM REAR YARD SETBACK	75 FT	793.9 FT	205.5 FT
MAXIMUM BUILDING HEIGHT**	2.5 STORIES / 35 FT	1.5 STORIES	BUILDING: 3 STORIES / 34.0 FT (V) CANOPY: 1-STORY / 17 FT
MAXIMUM BUILDING COVERAGE	20% (50,379 SF)	7.0% (17,509 SF)	29.4% (74,117 SF) (V)
MAXIMUM IMPERVIOUS COVERAGE	40% (116,579 SF)	19.1% (48,136 SF)	WITH PAVERS: 60.9% (153,516 SF) (V) WITHOUT PAVERS: 52.8% (132,890 SF) (V)

(V) VARIANCE
(EN) EXISTING NON-CONFORMITY
(*) PER § 112-SCHEDULE 2, FOR LOTS FRONTING ON AN ARTERIAL STREET AN ADDITIONAL 15 FT IS REQUIRED
(**) MEASURED FROM AVERAGE ELEVATION OF FINISHED GRADE AT FRONT OF THE BUILDING (CALCULATED AT 122.50 FT) TO HIGHEST POINT OF THE ROOF.

SIGNAGE REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 112-SCHEDULE 5	FREESTANDING SIGN REQUIREMENTS * : MAXIMUM 1 SIGN MAXIMUM SIGN AREA = 100 SF MAXIMUM SIGN HEIGHT = 10 FT MINIMUM LOT LINE SETBACK = 10 FT	 1 SIGN 100 SF 10 FT 10.0 FT
	ATTACHED SIGN REQUIREMENTS * : MAXIMUM 1 SIGN MAXIMUM SIGN AREA = 100 SF MAXIMUM VERTICAL DIMENSION = 4 FT	 1 SIGN 64.00 SF 4 FT

(V) VARIANCE
(*) PER § 112-SCHEDULE 5, ONE ADDITIONAL SIGN IS PERMITTED AT REAR AND SIDE ENTRANCES, PROVIDED THAT EACH IS EQUAL TO OR LESS THAN THE MAXIMUM PERMITTED SIZE OF THE FRONT SIGN. ONE FREESTANDING SIGN PERMITTED PER ROAD FRONTAGE.

OFF-STREET PARKING REQUIREMENTS

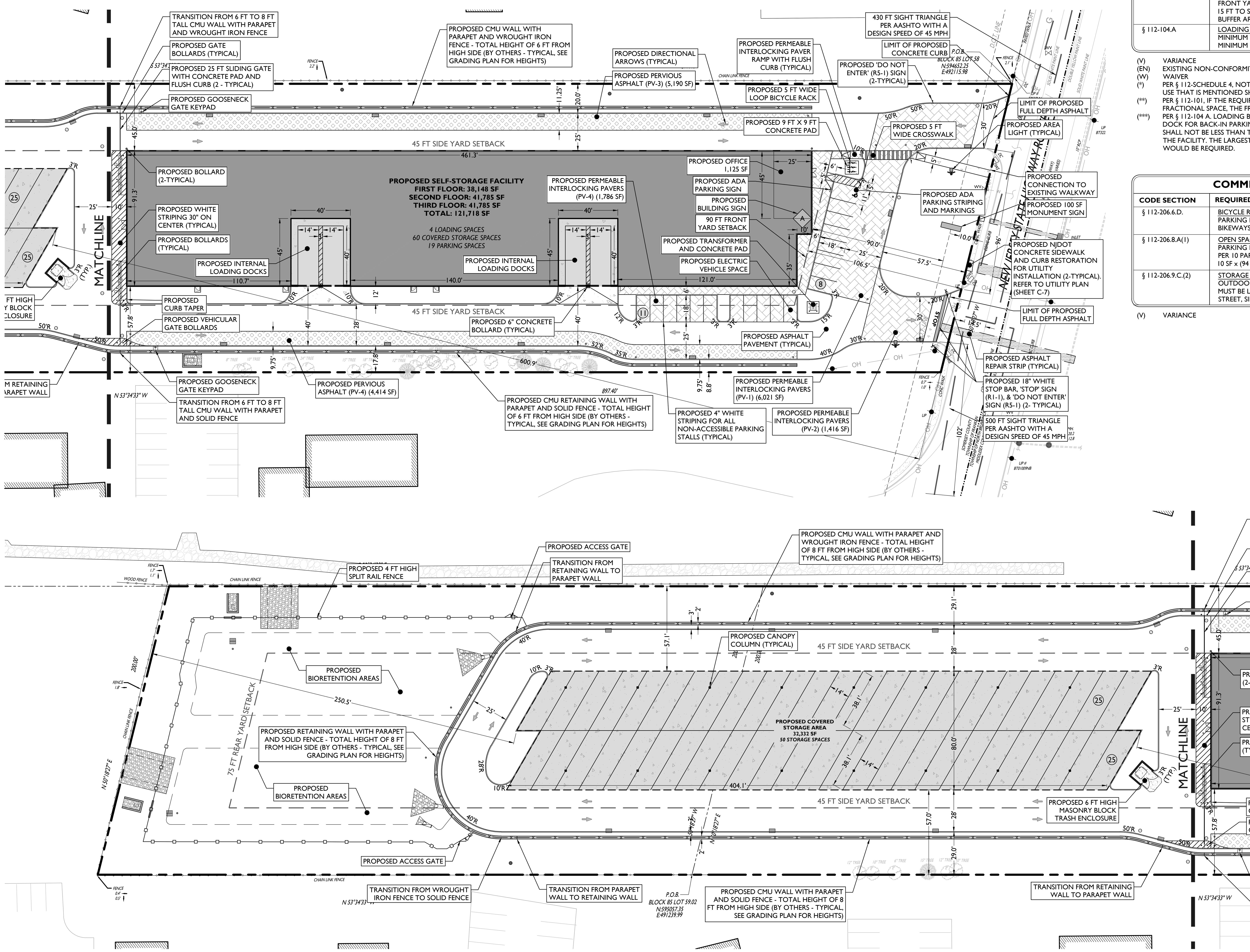
CODE SECTION	REQUIRED	PROPOSED
§ 112-SCHEDULE 4	REQUIRED PARKING (WAREHOUSE *): 1 SPACE PER 1,000 SF OF GROSS FLOOR AREA FOR THE FIRST 5,000 SF THEN 1 SPACE PER 2,500 SF 1 SPACE x (5,000 SF / 1,000 SF) = 5 SPACES 1 SPACE x ((121,718 SF - 5,000 SF) / 2,500 SF) = 46 SPACES ** **TOTAL REQUIRED: 51 SPACES**	19 SPACES (V)
§ 112-83	MINIMUM PARKING SPACE DIMENSIONS: 9 FT X 18 FT	9 FT x 18 FT
§ 112-85	PARKING SPACE SEPARATION REQUIREMENT: ALL PARKING SPACES SHALL BE SEPARATED FROM WALKWAYS, SIDEWALKS, STREETS OR ALLEYS BY CURBING.	COMPLIES
§ 112-86	PRIVATE WALK ADJACENT TO BUILDING REQUIREMENTS: MINIMUM WIDTH = 4 FT	6 FT
§ 112-87	RESIDENTIAL BUFFER REQUIREMENT: OFF-STREET PARKING AND LOADING <50 FT FROM RESIDENTIAL PROPERTY: MINIMUM PLANT SCREENING = 6 FT	COMPLIES
§ 112-88	MINIMUM DRIVE AISLE WIDTH REQUIREMENTS: 90 DEGREE PARKING = 26 FT 60 TO 45 DEGREE PARKING = 18 FT NO PARKING ONE-WAY = 15 FT NO PARKING TWO-WAY = 22 FT	 25 FT (V) 28 FT 30 FT 25 FT
§ 112-90.A	DRIVEWAY REQUIREMENTS: MINIMUM WIDTH = 12 FT MAXIMUM WIDTH = 36 FT	 MINIMUM = 25 FT MAXIMUM = 30 FT
§ 112-90.B	DRIVEWAY GRADE REQUIREMENTS: MAXIMUM GRADE = 15%	3.75%
§ 112-91	DRIVEWAY LOCATION REQUIREMENTS: TO INTERSECTION OF TWO STREETS: MINIMUM 25 FT TO ANY OTHER DRIVEWAY ON SAME LOT: MINIMUM 50 FT	 102.5 FT 98.3 FT
§ 112-102.C	PARKING LOCATION REQUIREMENTS: NOT PERMITTED IN: FRONT YARD AREA 15 FT TO SIDE OR REAR YARD BUFFER AREAS	 57.5 FT (V) 29.0 FT N/A
§ 112-104.A	LOADING BERTH REQUIREMENTS: MINIMUM WIDTH & HEIGHT: 12 FT WIDTH x 15 FT HEIGHT MINIMUM LENGTH: 48 FT ***	 14 FT x 15 FT 80 FT

(V) VARIANCE
(EN) EXISTING NON-CONFORMITY
(W) WAIVER
(*) PER § 112-SCHEDULE 4, NOTE 3 - IF A CASE OF USE IS NOT SPECIFICALLY MENTIONED, THE MOST SIMILAR USE THAT IS MENTIONED SHALL APPLY
(**) PER § 112-101, IF THE REQUIRED OFF-STREET PARKING AND LOADING CALCULATIONS RESULTS IN A FRACTIONAL SPACE, THE FRACTION SHALL BE DISREGARDED
(***) PER § 112-104 A. LOADING BERTHS SHALL BE 48 FT LONG OR A LENGTH SUCH THAT THE FRONT OF A DOCK FOR BACK-IN PARKING TO THE LIMITING BOUNDARY OF THE LOADING AND UNLOADING AREA SHALL NOT BE LESS THAN TWICE THE OVERALL LENGTH OF THE LONGEST VEHICLE EXPECTED TO USE THE FACILITY. THE LARGEST VEHICLE EXPECTED TO USE THE FACILITY IS 40 FT LONG, THEREFORE 80 FT WOULD BE REQUIRED.

COMMERCIAL DESIGN REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 112-206.6.D.	BICYCLE REQUIREMENTS: PARKING IS REQUIRED BIKEWAYS BUFFERED FROM CIRCULATION	COMPLIES
§ 112-206.8.A(1)	OPEN SPACE REQUIREMENTS: PARKING RATIO < 5:1,000 SF = MINIMUM 10 SF SITE AMENITIES PER 10 PARKING SPACES 10 SF x (94 PARKING SPACES / 10 PARKING SPACES) = 94 SF	94 SF
§ 112-206.9.C.(2)	STORAGE LOCATION REQUIREMENTS: OUTDOOR STORAGE, TRASH COLLECTION, OR LOADING MUST BE LOCATED MORE THAN 20 FT FROM ANY PUBLIC STREET, SIDEWALK, OR PEDESTRIAN WALKWAY	COMPLIES

(V) VARIANCE



SYMBOL	DESCRIPTION
	PROPERTY LINE
	SETBACK LINE
	SAWCUT LINE
	PROPOSED CURB
	PROPOSED FLUSH CURB
	PROPOSED SIGNS / BOLLARDS
	PROPOSED BUILDING
	PROPOSED CONCRETE PAVEMENT
	PROPOSED PERVIOUS PAVERS
	PROPOSED AREA LIGHT
	PROPOSED RETAINING WALL
	PROPOSED WROUGHT IRON FENCE
	PROPOSED GUIDERAIL
	PROPOSED BUILDING DOORS

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTORS EXPENSE.
8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
11. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC. BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.
13. THIS SITE PLAN SET IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
14. THE DESIGN AND PLACEMENT OF ALL TRAFFIC SIGNS AND STRIPING SHALL FOLLOW THE REQUIREMENTS SPECIFIED IN THE LATEST "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," (MUTCD) PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION AND ADOPTED BY THE N.J. DEPARTMENT OF TRANSPORTATION.
15. ALL CONSTRUCTION SHALL COMPLY WITH THE CURRENT RULES AND REGULATIONS/ OR ORDINANCES OF FRANKLIN TOWNSHIP, NJDEP, AWWA AND ALL APPLICABLE REGULATORY AGENCIES HAVING JURISDICTION

40' 0' 40' 80'
GRAPHIC SCALE IN FEET
1" = 40'

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01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY | DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY
BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

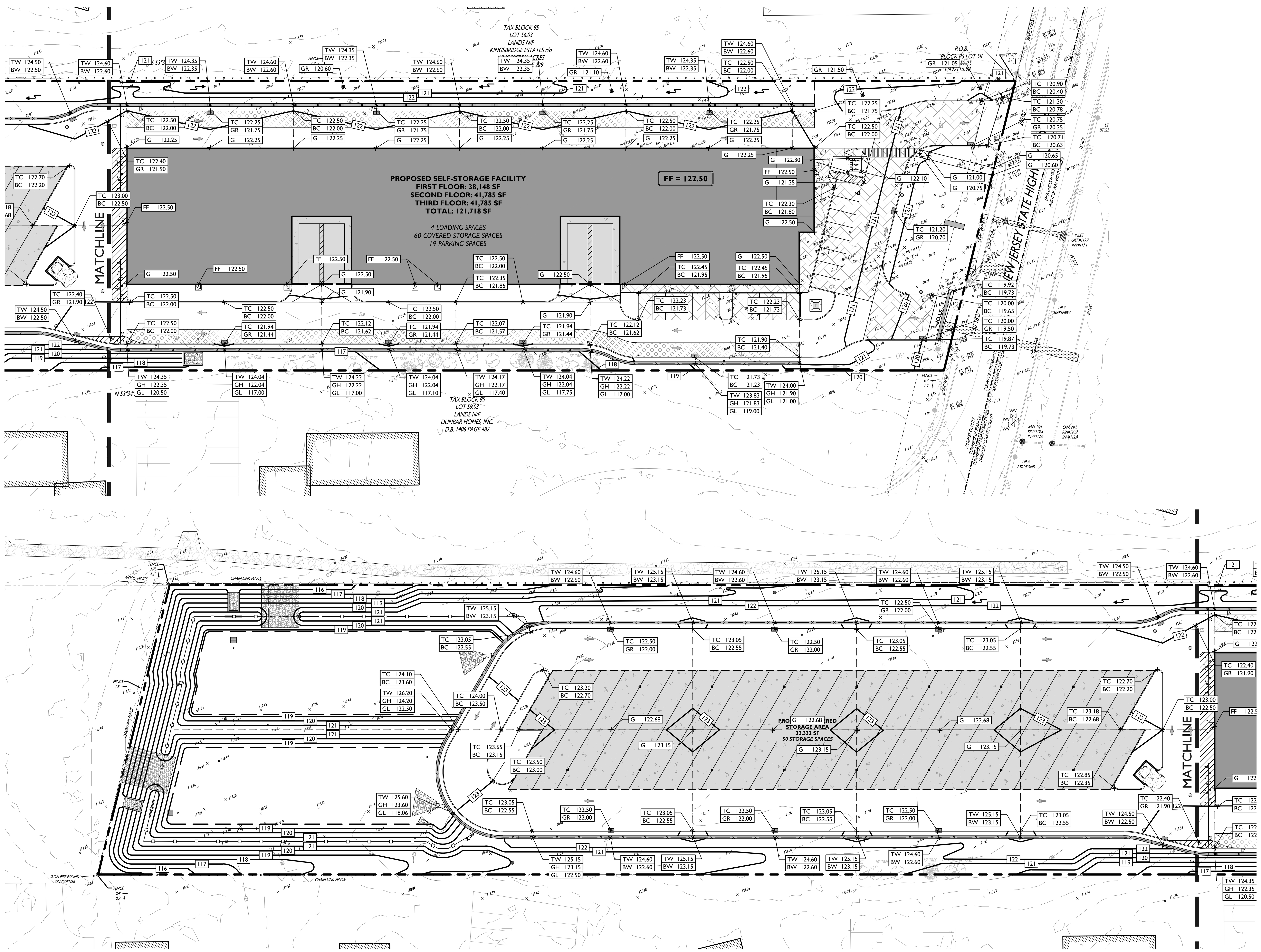
STATE OF NEW JERSEY · JEFFREY MARTELL · No. GE47290 · LICENSED PROFESSIONAL ENGINEER
JEFFREY A. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell

STONEFIELD engineering & design

SCALE: 1" = 40' | PROJECT ID: PRI-200094

TITLE: **SITE PLAN**

DRAWING: **C-4**



SYMBOL	DESCRIPTION
	PROPERTY LINE
100	PROPOSED GRADING CONTOUR
RIDGELINE	PROPOSED GRADING RIDGELINE
	PROPOSED DIRECTION OF DRAINAGE FLOW
G 100.00	PROPOSED GRADE SPOT SHOT
TC 100.50 / BC 100.00	PROPOSED TOP OF CURB / BOTTOM OF CURB SPOT SHOT
FC 100.00	PROPOSED FLUSH CURB SPOT SHOT
DC 100.12 / BC 100.00	PROPOSED DEPRESSED CURB / BOTTOM OF CURB SPOT SHOT
TW 102.00 / BW 100.00	PROPOSED TOP OF WALL / BOTTOM OF WALL SPOT SHOT

GRADING NOTES

1. ALL SOIL AND MATERIAL REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. ANY GROUNDWATER DE-WATERING PRACTICES SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE DISCHARGE OF DE-WATERED GROUNDWATER. ALL SOIL IMPORTED TO THE SITE SHALL BE CERTIFIED CLEAN FILL. CONTRACTOR SHALL MAINTAIN RECORDS OF ALL FILL MATERIALS BROUGHT TO THE SITE.
2. THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY AND/OR PERMANENT SHORING WHERE REQUIRED DURING EXCAVATION ACTIVITIES, INCLUDING BUT NOT LIMITED TO UTILITY TRENCHES, TO ENSURE THE STRUCTURAL INTEGRITY OF NEARBY STRUCTURES AND STABILITY OF THE SURROUNDING SOILS.
3. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 4 INCHES TO 7 INCHES ABOVE EXISTING GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR WILL SUPPLY ALL STAKEOUT CURB GRADE SHEETS TO STONEFIELD ENGINEERING & DESIGN, LLC. FOR REVIEW AND APPROVAL PRIOR TO POURING CURBS.
4. THE CONTRACTOR IS RESPONSIBLE TO SET ALL PROPOSED UTILITY COVERS AND RESET ALL EXISTING UTILITY COVERS WITHIN THE PROJECT LIMITS TO PROPOSED GRADE IN ACCORDANCE WITH ANY APPLICABLE MUNICIPAL, COUNTY, STATE AND/OR UTILITY AUTHORITY REGULATIONS.
5. MINIMUM SLOPE REQUIREMENTS TO PREVENT PONDING SHALL BE AS FOLLOWS:
   - CURB GUTTER: 0.50%
   - CONCRETE SURFACES: 1.00%
   - ASPHALT SURFACES: 1.00%
5. A MINIMUM SLOPE OF 1.00% SHALL BE PROVIDED AWAY FROM ALL BUILDINGS. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE BUILDING IS ACHIEVED AND SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IF THIS CONDITION CANNOT BE MET.
6. FOR PROJECTS WHERE BASEMENTS ARE PROPOSED, THE DEVELOPER IS RESPONSIBLE TO DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED STRUCTURE. IF GROUNDWATER IS ENCOUNTERED WITHIN THE BASEMENT AREA, SPECIAL CONSTRUCTION METHODS SHALL BE UTILIZED AND REVIEWED/APPROVED BY THE CONSTRUCTION CODE OFFICIAL. IF SUMP PUMPS ARE UTILIZED, ALL DISCHARGES SHALL BE CONNECTED DIRECTLY TO THE PUBLIC STORM SEWER SYSTEM WITH APPROVAL FROM THE GOVERNING STORM SEWER SYSTEM AUTHORITY.

ADA NOTES

1. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION WITHIN THE ADA PARKING SPACES AND ACCESS AISLES.
2. THE CONTRACTOR SHALL PROVIDE COMPLIANT SIGNAGE AT ALL ADA PARKING AREAS IN ACCORDANCE WITH STATE GUIDELINES.
3. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 5.00% RUNNING SLOPE AND A MAXIMUM OF 2.00% CROSS SLOPE ALONG WALKWAYS WITHIN THE ACCESSIBLE PATH OF TRAVEL (SEE THE SITE PLAN FOR THE LOCATION OF THE ACCESSIBLE PATH). THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ACCESSIBLE PATH OF TRAVEL IS 36 INCHES WIDE OR GREATER UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
4. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 2.00% SLOPE IN ANY DIRECTION AT ALL LANDINGS. LANDINGS INCLUDE, BUT ARE NOT LIMITED TO, THE TOP AND BOTTOM OF AN ACCESSIBLE RAMP, AT ACCESSIBLE BUILDING ENTRANCES, AT AN AREA IN FRONT OF A WALK-UP ATM, AND AT TURNING SPACES ALONG THE ACCESSIBLE PATH OF TRAVEL. THE LANDING AREA SHALL HAVE A MINIMUM CLEAR AREA OF 60 INCHES BY 60 INCHES UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
5. THE CONTRACTOR SHALL MAINTAIN A MAXIMUM 8.33% RUNNING SLOPE AND A MAXIMUM 2.00% CROSS SLOPE ON ANY CURB RAMPS ALONG THE ACCESSIBLE PATH OF TRAVEL. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 10.00% IF A LANDING AREA IS PROVIDED AT THE TOP OF THE RAMP. FOR ALTERATIONS, A CURB RAMP FLARES SHALL NOT HAVE A SLOPE GREATER THAN 8.33% IF A LANDING AREA IS NOT PROVIDED AT THE TOP OF THE RAMP. CURBS RAMPS SHALL NOT RISE MORE THAN 6 INCHES IN ELEVATION WITHOUT A HANDRAIL. THE CLEAR WIDTH OF A CURB RAMP SHALL BE NO LESS THAN 36 INCHES WIDE.
6. ACCESSIBLE RAMPS WITH A RISE GREATER THAN 6 INCHES SHALL CONTAIN COMPLIANT HANDRAILS ON BOTH SIDES OF THE RAMP AND SHALL NOT RISE MORE THAN 30” IN ELEVATION WITHOUT A LANDING AREA IN BETWEEN RAMP RUNS. LANDING AREAS SHALL ALSO BE PROVIDED AT THE TOP AND BOTTOM OF THE RAMP.
7. A SLIP RESISTANT SURFACE SHALL BE CONSTRUCTED ALONG THE ACCESSIBLE PATH AND WITHIN ADA PARKING AREAS.
8. THE CONTRACTOR SHALL ENSURE A MAXIMUM OF ¼ INCHES VERTICAL CHANGE IN LEVEL ALONG THE ACCESSIBLE PATH. WHERE A CHANGE IN LEVEL BETWEEN ¼ INCHES AND ½ INCHES EXISTS, CONTRACTOR SHALL ENSURE THAT THE TOP ¼ INCH CHANGE IN LEVEL IS BEVELED WITH A SLOPE NOT STEEPER THAN 1 UNIT VERTICAL AND 2 UNITS HORIZONTAL (2:1 SLOPE).
9. THE CONTRACTOR SHALL ENSURE THAT ANY OPENINGS (GAPS OR HORIZONTAL SEPARATION) ALONG THE ACCESSIBLE PATH SHALL NOT ALLOW PASSAGE OF A SPHERE GREATER THAN ½ INCH.

40' 0' 40' 80'

GRAPHIC SCALE IN FEET
1" = 40'

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY DESIGN BUILD

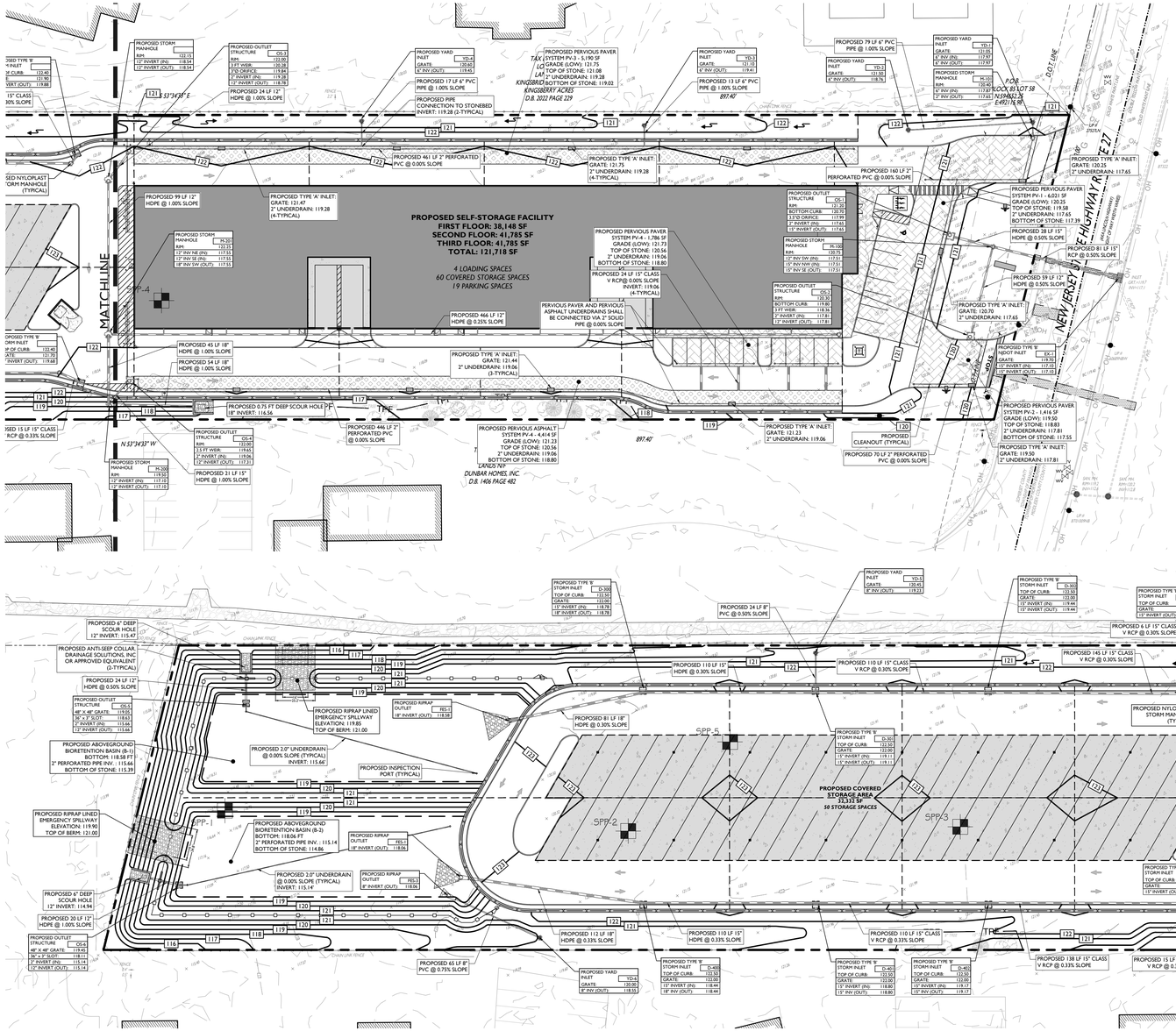
PROPOSED SELF-STORAGE FACILITY
BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

JEFFREY MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
STONEFIELD engineering & design

SCALE: 1" = 40' PROJECT ID: PRI-200094

TITLE: GRADING PLAN

DRAWING: C-5



STORM EVENT ELEVATIONS (BY BMP)

BMP ID	WQ ELEVATION	2-YR ELEVATION	10-YR ELEVATION	25-YR ELEVATION	100-YR ELEVATION
PERVIOUS PAVERS (PV-1)	117.98 FT	118.28 FT	118.59 FT	118.81 FT	119.19 FT
PERVIOUS PAVERS (PV-2)	118.35 FT	118.46 FT	118.50 FT	118.52 FT	118.56 FT
PERVIOUS PAVERS (PV-3)	119.83 FT	120.35 FT	120.58 FT	120.66 FT	120.78 FT
PERVIOUS PAVERS (PV-4)	119.64 FT	119.90 FT	120.04 FT	120.11 FT	120.22 FT
BIORETENTION AREA (B-1)	116.19 FT	118.71 FT	118.94 FT	119.13 FT	119.35 FT
BIORETENTION AREA (B-2)	116.03 FT	118.23 FT	118.51 FT	118.75 FT	119.15 FT

SYMBOL	DESCRIPTION
— — —	PROPERTY LINE
100	PROPOSED GRADING CONTOUR
RIDGELINE	PROPOSED GRADING RIDGELINE
▤ ▤ MH MH	PROPOSED STORMWATER STRUCTURES
▨	PROPOSED STORMWATER PIPING

DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
2. CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP-GRADIENT.
3. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IMMEDIATELY IN WRITING.
4. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES

1. THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION, THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
2. THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OF RECORD.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL. SHORING DESIGNS SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC. AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.

STORMWATER INFILTRATION BMP CONSTRUCTION NOTES

1. PRIOR TO THE START OF CONSTRUCTION, ANY AREA DESIGNATED TO BE USED FOR AN INFILTRATION BMP (E.G. BASIN, BIORETENTION AREA, ETC.) SHALL BE FENCED OFF AND SHALL NOT BE UTILIZED AS STORAGE FOR CONSTRUCTION EQUIPMENT OR AS A STOCKPILE AREA FOR CONSTRUCTION MATERIALS. NO ACTIVITY SHALL BE PERMITTED WITHIN THE INFILTRATION BASIN AREA UNLESS RELATED TO THE CONSTRUCTION OF THE INFILTRATION BASIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL SUBCONTRACTORS OF BASIN AREA RESTRICTIONS.
2. THE CONTRACTOR SHALL MAKE EVERY EFFORT, WHERE PRACTICAL, TO AVOID SUBGRADE SOIL COMPACTION IN THE AREAS DESIGNATED TO BE USED FOR AN INFILTRATION BMP.
3. ALL EXCAVATION WITHIN THE LIMITS OF ANY INFILTRATION BMP SHALL BE PERFORMED WITH THE LIGHTEST PRACTICAL EXCAVATION EQUIPMENT. ALL EXCAVATION EQUIPMENT SHALL BE PLACED OUTSIDE THE LIMITS OF THE BASIN WHERE FEASIBLE. THE USE OF LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT (LESS THAN 8 PSI APPLIED TO THE GROUND SURFACE) IS RECOMMENDED WITHIN THE BASIN LIMITS.
4. THE SEQUENCE OF SITE CONSTRUCTION SHALL BE COORDINATED WITH BASIN CONSTRUCTION TO ADHERE TO SEQUENCING LIMITATIONS.
5. DURING THE FINAL GRADING OF AN INFILTRATION BASIN, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAW OR EQUIVALENT GRADING EQUIPMENT. ALL GRADING EQUIPMENT SHALL BE LOCATED OUTSIDE OF THE BASIN BOTTOM WHERE FEASIBLE.
6. FOLLOWING CONSTRUCTION OF AN INFILTRATION BASIN, SOIL INFILTRATION TESTING BY A LICENSED GEOTECHNICAL ENGINEER IS REQUIRED TO CERTIFY COMPLIANCE WITH THE DESIGN INFILTRATION RATES IN ACCORDANCE WITH APPENDIX E OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL, LATEST EDITION. IF THE FIELD INFILTRATION RATES ARE LOWER THAN THE RATE USED DURING DESIGN, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING IMMEDIATELY TO DETERMINE THE APPROPRIATE COURSE OF ACTION.
7. THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY TO DETERMINE IF WITNESS TESTING IS REQUIRED DURING INFILTRATION BASIN EXCAVATION AND/OR SOIL INFILTRATION TESTING.

STORMWATER UNDERGROUND BMP CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
2. UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
3. NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM A FIXED POSITION OVER THE BASIN.

40' 0' 40' 80'
GRAPHIC SCALE IN FEET
1" = 40'

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01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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Phone 609.362.6900

PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY | DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY

BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

No.
GE47290

JEFFREY A. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER

Jeffrey Martell
Digitally signed by Jeffrey Martell
DN: CN=Jeffrey Martell, dnQualifier=A01410C0000017BC710DC920000B3EB, O=STONEFIELD ENGINEERING AND DESIGN LLC, C=US
Date: 2022.02.18 10:33:34-05'00'

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SCALE: 1" = 40' | PROJECT ID: PRI-200094

TITLE:

STORMWATER MANAGEMENT PLAN

DRAWING:

C-6

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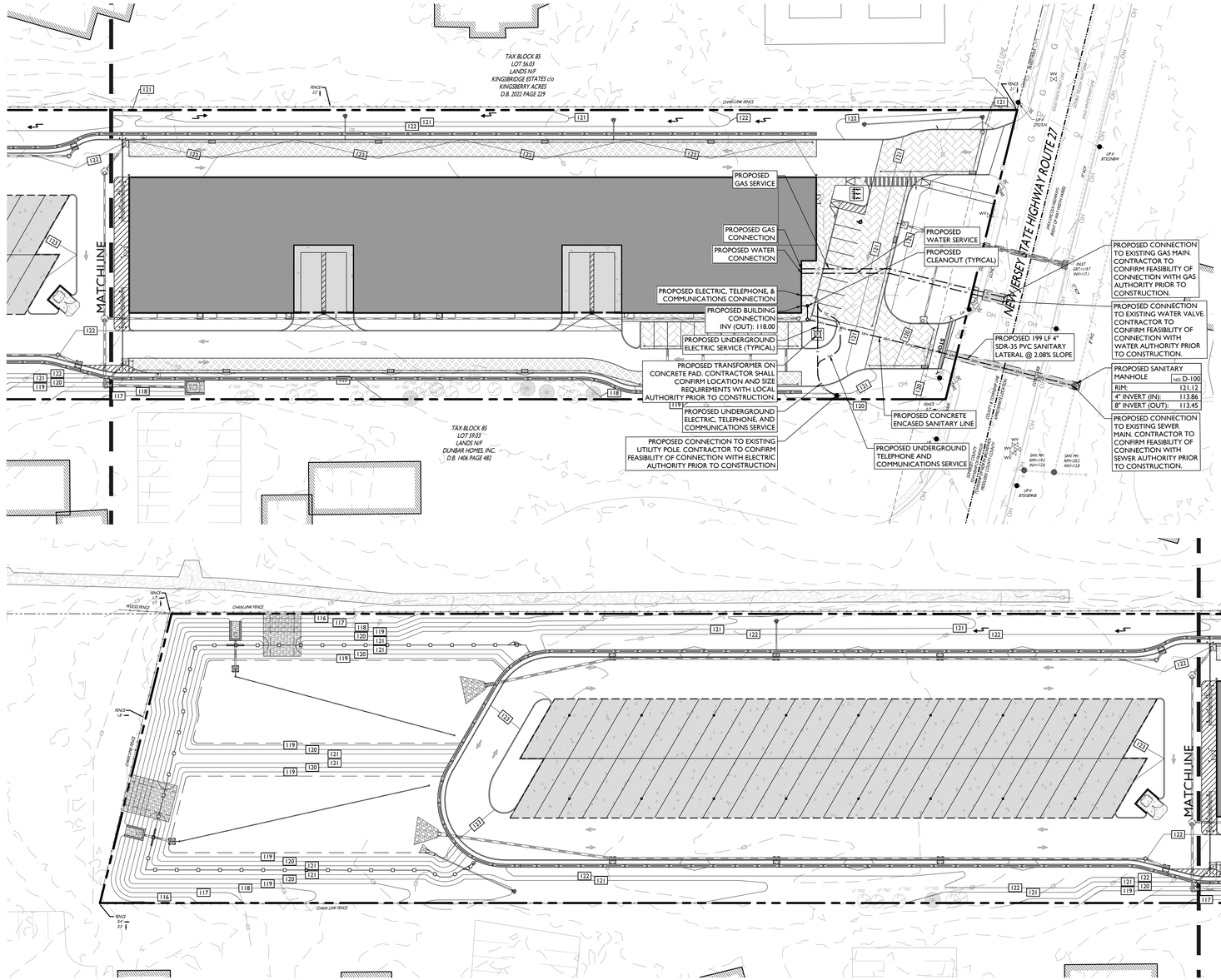

SYMBOL	DESCRIPTION
	PROPERTY LINE
SAN	PROPOSED SANITARY LATERAL
W	PROPOSED DOMESTIC WATER SERVICE
F	PROPOSED FIRE SERVICE
E/T/C	PROPOSED ELECTRICAL/DATA CONDUITS
T/C	PROPOSED DATA CONDUITS
E	PROPOSED ELECTRIC CONDUITS
OH	PROPOSED OVERHEAD WIRES
G	PROPOSED GAS LINE
	PROPOSED VALVE
S	PROPOSED SANITARY MANHOLE / CLEANOUT
	PROPOSED UTILITY POLE
T	PROPOSED TRANSFORMER ON CONCRETE PAD WITH BOLLARDS

DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IMMEDIATELY IN WRITING.
2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY IDENTIFIED TO REMAIN WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
4. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER SERVICE AND ANY WATER LINES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
5. ALL WATER LINES SHALL BE VERTICALLY SEPARATED ABOVE SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES. IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS APPROVED BY STONEFIELD ENGINEERING & DESIGN, LLC.
6. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR WATER AND SANITARY SEWER CONNECTION IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
8. CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER AT THE LOWEST INVERT AND WORK UP-GRADIENT.
9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT HAVE BEEN CAPPED, ABANDONED, OR RELOCATED BASED ON THE DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
11. THE MINIMUM CLEARANCES BETWEEN WATER MAINS AND SANITARY SEWERS SHALL BE IN ACCORDANCE WITH THE STATE STANDARDS, I.E. MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER MAIN AND SANITARY SEWER IN PARALLEL SHALL BE TEN FT. (10'), MINIMUM VERTICAL CLEARANCE BETWEEN PIPE CROSSING SHALL BE EIGHTEEN INCHES (18") WITH THE SANITARY SEWER BELOW THE WATER LINE. IF SUCH MINIMUM VERTICAL CLEARANCE CANNOT BE PROVIDED, THE SANITARY SEWER SHALL BE ENCASED IN CONCRETE TEN FT. (10') FROM EACH SIDE OF THE CROSSING OR A TOTAL OF TWENTY FT. (20').
12. WATER MAINS CROSSING STONN SEWERS OR DRAINS WHERE THE CLEARANCE BETWEEN THE PIPES IS LESS THAN EIGHTEEN (18") INCHES, PIER SUPPORTS FOR THE STONN LINE SHALL BE PROVIDED IN ORDER TO PREVENT THE LOAD TRANSFER TO THE AFFECTED UTILITY.
13. SANITARY SEWER LATERALS CROSSING STONN SEWERS OR DRAINS WHERE THE CLEARANCE BETWEEN THE PIPES IS LESS THAN EIGHTEEN (18") INCHES, PIER SUPPORTS FOR THE STORM LINE SHALL BE PROVIDED IN ORDER TO PREVENT THE LOAD TRANSFER TO THE AFFECTED UTILITY.

40' 0' 40' 80'
GRAPHIC SCALE IN FEET
1" = 40'

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NEW JERSEY
JEFFREY MARTELL
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Jeffrey Martell

STONEFIELD engineering & design

SCALE: 1" = 40' | PROJECT ID: PRI-200094

TITLE: UTILITY PLAN

DRAWING: C-7

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PROPOSED LUMINAIRE SCHEDULE

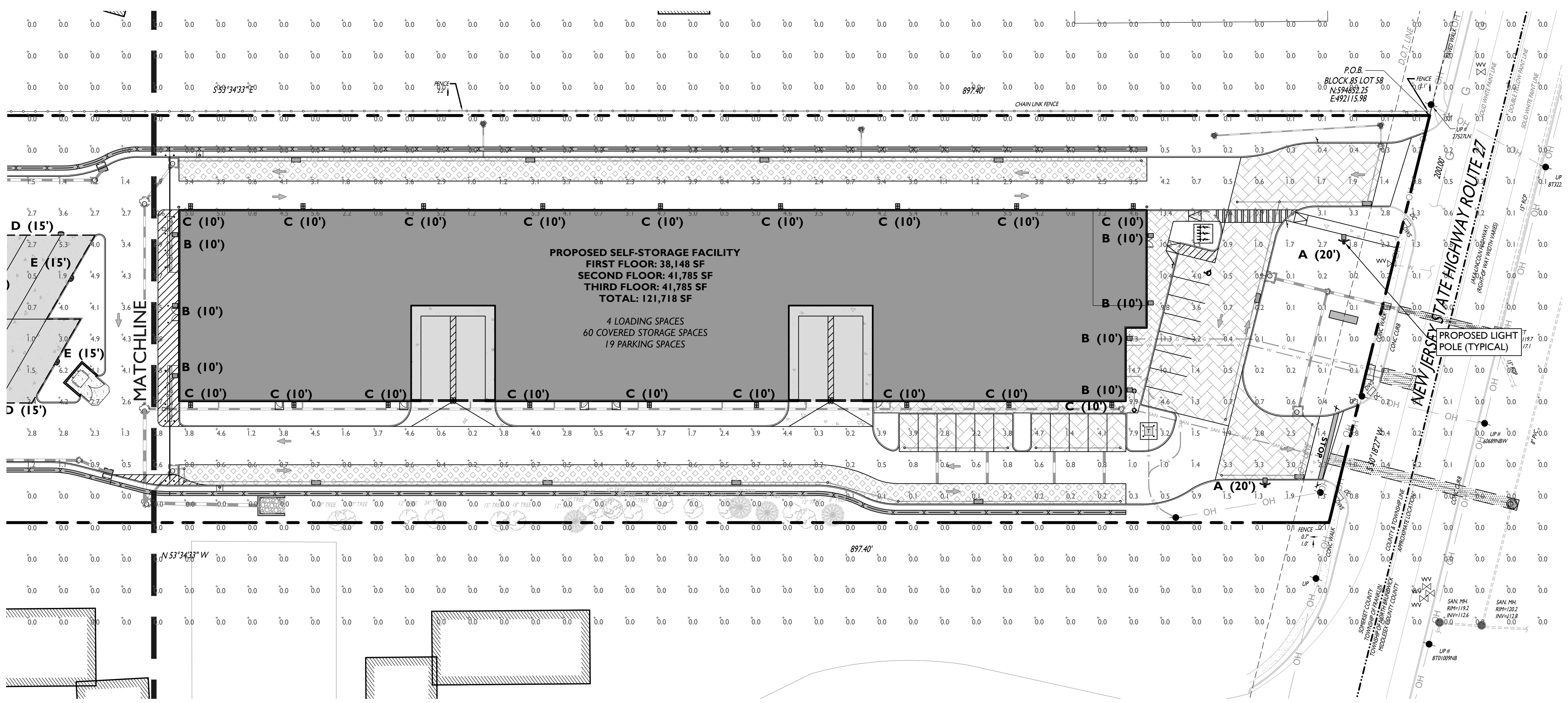
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LLF	MANUFACTURER	IES FILE
	A	2	CREE EDGE AREA LIGHT WITH BLS - 12L - 4,000k - 10,380 LUMENS - 130W	TYPE III	0.9	CREE	3MB-E
	B	7	CREE EDGE WALL-MOUNTED AREA LIGHT - 06L - 700 MA - 4,000K - 10,842 LUMENS	TYPE IV	0.9	CREE	SEC-EDG-4M-06-E-12-700-40K
	C	18	CREE EDGE WALL-MOUNTED AREA LIGHT - 04L - 700 MA - 4,000K - 7,312 LUMENS	TYPE IV	0.9	CREE	SEC-EDG-4M-04-E-12-700-40K
	D	14	CREE XSP WALL MOUNTED LIGHT - 8L - 4,000K	TYPE III	0.9	CREE	XSPW-B-WM-3ME-8L-40K-UL-WH
	E	4	CREE XSP WALL MOUNTED LIGHT - 8L - 4,000K	TYPE IV	0.9	CREE	XSPW-B-WM-4ME-8L-40K-UL
	F	12	CREE C-LITE CANOPY LIGHT - 7L - 4,000 K	TYPE V	0.9	CREE	C-CP-B-SQ-7L-40K

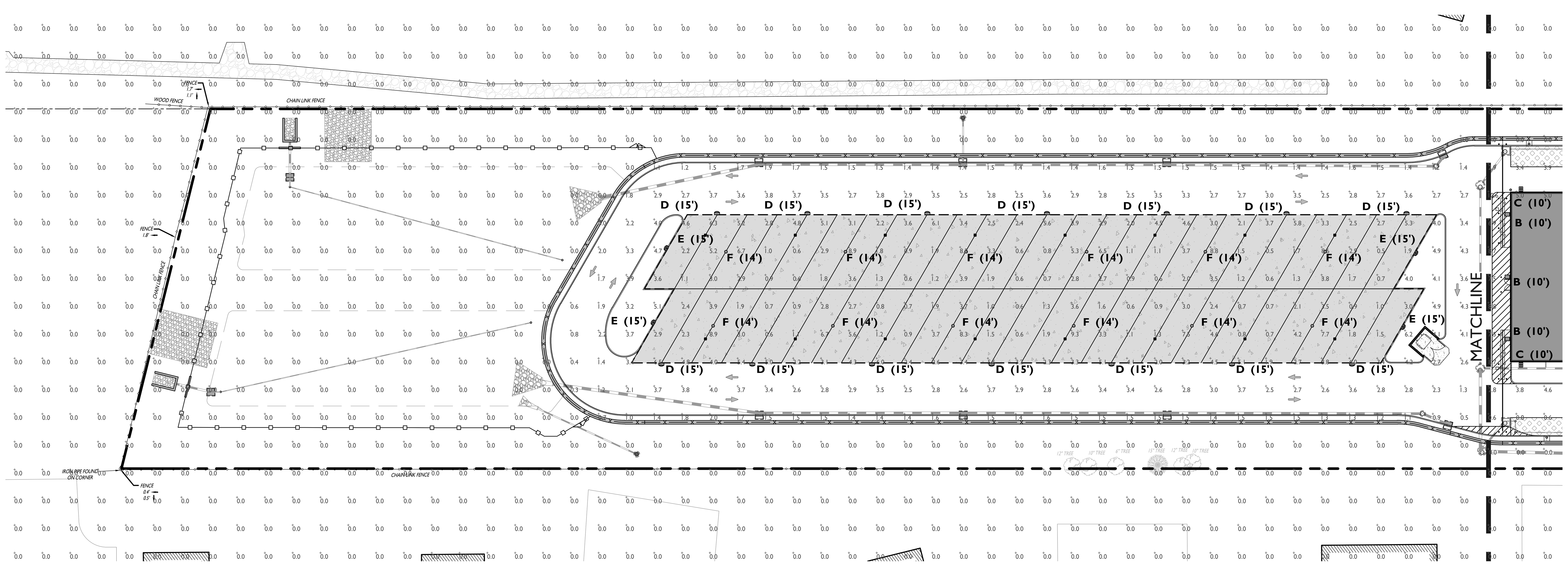
LIGHTING REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 112-33.2A.(1)	ONLY SHIELDED LIGHT FIXTURES SHALL BE USED	COMPLIES
§ 112-33.2A.(4)	LIGHT POLE REQUIREMENTS: UNLESS LOCATED >3 FT BEHIND CURB, FOUNDATIONS = MINIMUM 30"	COMPLIES
§ 112-33.2B.(1)	LIGHT TRESPASS REQUIREMENTS: ABUTS RESIDENTIAL ZONE: MAXIMUM 0.1 FC AT PROPERTY LINE	0.1 FC
§ 112-33.2C.(2)	LIGHTING LEVEL FOR PARKING LOTS REQUIREMENTS: MINIMUM LEVEL = 0.2 FC AVERAGE = 1.0 FC AVERAGE TO MINIMUM RATIO: 5:1 MAXIMUM TO MINIMUM RATIO: 20:1 MINIMUM VERTICAL ILLUMINANCE: 0.1 FC	0.1 FC (W) 2.72 FC 27.2:1 FC (W) 147:1 FC (W) 0.0 FC (W)
§ 112-33.2C.(2)	MINIMUM VERTICAL ILLUMINANCE TO BE MEASURED 5 FT ABOVE PARKING SURFACE	COMPLIES
§ 112-33.2E.(1)	OUTDOOR LIGHTING SHALL BE REDUCED, ACTIVATED BY MOTION SENSOR, OR TURNED OFF DURING NON-OPERATIVE HOURS	COMPLIES
§ 112-206.10.	PEDESTRIAN WALKWAY LIGHTING REQUIREMENTS: MUST BE PEDESTRIAN LEVEL, BOLLARD, GROUND-MOUNTED AND/OR LOW GLARE	COMPLIES

(W) WAIVER

SYMBOL	DESCRIPTION
	PROPOSED CALCULATION AREA
	PROPOSED ISOMETRIC LINE
A (XX')	PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
X.X	PROPOSED LIGHTING INTENSITY (FOOTCANDLES)
	PROPOSED AREA LIGHT
	PROPOSED BUILDING MOUNTED LIGHT





GENERAL LIGHTING NOTES

1. THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
2. WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
3. UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS:
   - LIGHT EMITTING DIODES (LED): 0.90
   - HIGH PRESSURE SODIUM: 0.72
   - METAL HALIDE: 0.72
4. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING/ PROPOSED DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS.
5. THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC.

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JEFFREY A. MARTELL, P.E.
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Jeffrey Martell
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DN: CN=Jeffrey Martell, dnQualifier=A01410C0000017BC710DC920000B3EB, O=STONEFIELD ENGINEERING AND DESIGN LLC, C=US
Date: 2022.02.18 10:35:11-05'00'
STONEFIELD engineering & design

SCALE: 1" = 40' | PROJECT ID: PRI-200094

TITLE: LIGHTING PLAN

DRAWING: C-8

SOMERSET - UNION COUNTY SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.

3. PERMANENT VEGETATION TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCHING IS REQUIRED ON ALL SEEDING. WHEN HYDROSEEDING, MULCH SHALL NOT BE INCLUDED IN THE TANK WITH THE SEED

4. ALL WORK TO BE DONE IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

5. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUBBASE SHALL BE INSTALLED WITHIN 15 DAYS OF THE PRELIMINARY GRADING.

6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCES OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS.

7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION CONTINUES (I.E. SLOPES GREATER THANN 3:1).

8. THE STANDARDS FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A STONE PAD OF 1 1/2" TO 2" STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.

9. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY-FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.

10. THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 72 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.

11. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATION STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER IT, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

12. IN THAT N.J.S.A. 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, WILL HAVE TO BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.

13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

14. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.

15. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STATE STANDARDS.

16. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.

17. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAY WILL BE REMOVED IMMEDIATELY

18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORM WATER OUTFALLS OR OFF SITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

19. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD, SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. THE DISTRICT RESERVES THE RIGHT TO DETERMINE WHEN CERTIFICATION OF A NEW AND SEPARATE SOIL EROSION AND SEDIMENT CONTROL PLAN WILL BE REQUIRED FOR THESE ACTIVITIES.

20. ALL SOIL STOCKPILES AREA TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #12.

21. A UNIFORM APPLICATION OF TOPSOIL WILL BE APPLIED TO AN AVERAGE DEPTH OF 5.0 INCHES, WITH A MINIMUM OF 4.0 INCHES.

SOIL DE-COMPACTION AND TESTING REQUIREMENTS
SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS **PRIOR TO THE APPLICATION OF TOPSOIL** (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE **GRAPHICALLY DENOTED** ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
3. **COMPACTION TESTING LOCATIONS** ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION MITIGATION VERIFICATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

1. NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.
2. SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION

1. PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION **PRIOR TO PLACEMENT OF TOPSOIL** AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. **RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH)** WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR SOIL EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL AIR QUALITY STANDARDS.
3. THE CONTRACTOR IS RESPONSIBLE TO INSPECT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER A PRECIPITATION EVENT GREATER THAN 1 INCH. THE CONTRACTOR SHALL MAINTAIN AN INSPECTION LOG ON SITE AND DOCUMENT CORRECTIVE ACTION TAKEN THROUGHOUT THE COURSE OF CONSTRUCTION AS REQUIRED.

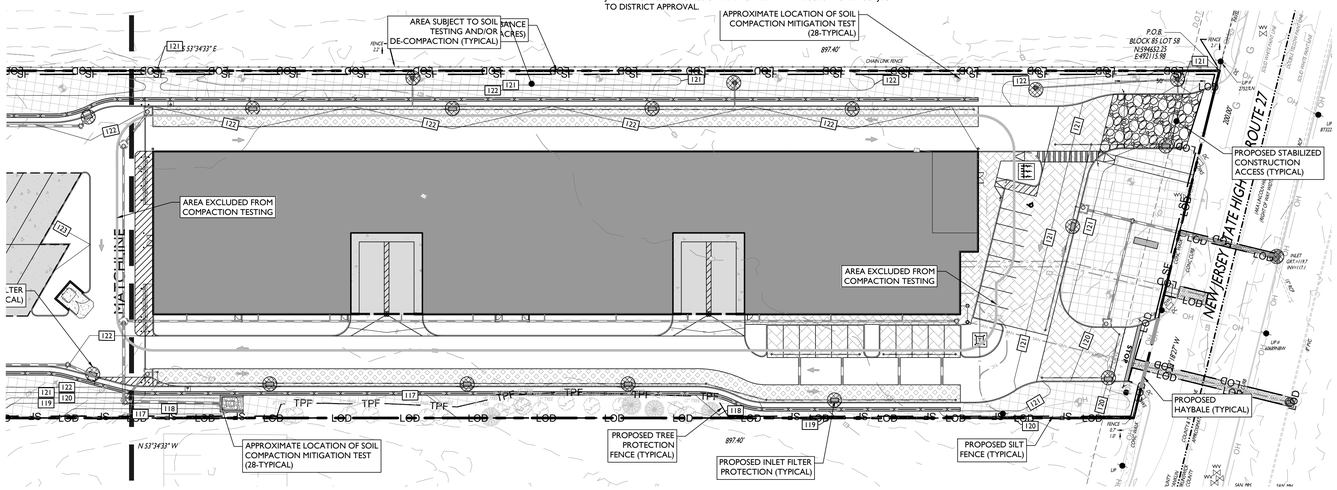
SEQUENCE OF CONSTRUCTION

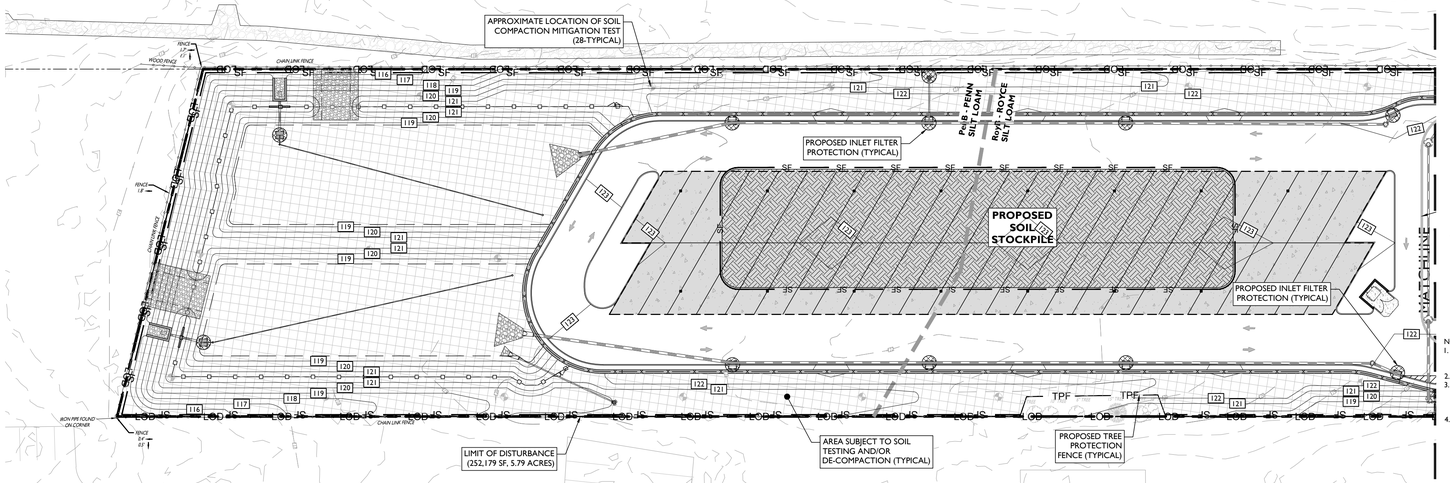
1. INSTALL CONSTRUCTION ENTRANCE AND SILT FENCE (2 DAYS).
2. INSTALL TEMPORARY DRAINAGE STRUCTURES (2 DAYS).
3. DEMOLISH EXISTING PAVEMENT, GRAVEL, TREES, AND BRUSH (7 DAYS).
4. ROUGH GRADING AND TEMPORARY SEEDING (21 DAYS).
5. EXCAVATE AND INSTALL DRAINAGE PIPING AND INLETS (30 DAYS).
6. BASIN CONSTRUCTION INCLUDING ALL STRUCTURES AND STABILIZATION (14 DAYS).
7. INSTALL INLET FILTERS (1 DAY).
8. BUILDING CONSTRUCTION AND SITE IMPROVEMENTS (100 DAYS).
9. SOIL RESTORATION MEASURES (3 DAYS).
10. LANDSCAPING IMPROVEMENTS AND FINAL SEEDING & TOP SOILING (7 DAYS).
11. REMOVE SOIL EROSION MEASURES (1 DAY)

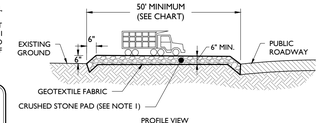
NOTE: TIME DURATIONS ARE APPROXIMATE AND ARE INTENDED TO ACT AS A GENERAL GUIDE TO THE CONSTRUCTION TIMELINE. ALL DURATIONS ARE SUBJECT TO CHANGE BY CONTRACTOR. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO TOWNSHIP AND ENGINEER. CONTRACTOR SHALL PHASE CONSTRUCTION ACCORDINGLY

SOIL CHARACTERISTICS CHART

TYPE OF SOIL	ROYCE SILT LOAM (ROYB)	PENN SILT LOAM (PENB)
PERCENT OF SITE COVERAGE	66.5%	33.5%
HYDROLOGIC SOIL GROUP	C	C
DEPTH TO RESTRICTIVE LAYER	39 TO 60 INCHES	20 TO 40 INCHES
SOIL PERMEABILITY	0.20 TO 0.60 IN / HR	0.00 TO 0.06 IN / HR
DEPTH TO WATER TABLE	> 80 INCHES	> 80 INCHES



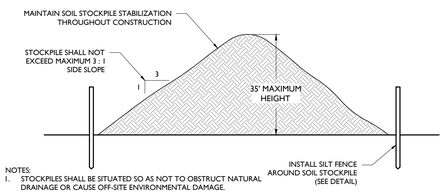




SLOPE OF PUBLIC ROADWAY	LENGTH OF STONE REQ'D	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0% TO 2%	50 FEET	100 FEET
2% TO 5%	100 FEET	200 FEET
> 5%	SEE NOTE 4	

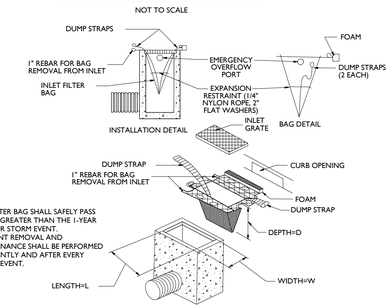
NOTES:
1. STONE SHALL BE ASTM C-33, SIZE No. 3 (2.5" TO 1.5") OR No. 3 (2" TO 1") CLEAN CRUSHED ANGULAR STONE.
2. WIDTH SHALL BE 15' MINIMUM OR THE FULL WIDTH OF THE ACCESS POINT, WHICHEVER IS GREATER.
3. STORMWATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD, WHERE POSSIBLE. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE THE STABILIZED CONSTRUCTION ENTRANCE.
4. WHERE THE SLOPE OF THE ROADWAY EXCEEDS 5%, A STABILIZED BASE OF HOT MIX ASPHALT BASE COURSE SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE BASE COURSE AND USE OF DENSE GRADED AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL MUNICIPAL ORDINANCE OR GOVERNING AUTHORITY.
5. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ACCESS AND THE PUBLIC ROADWAY.

STABILIZED CONSTRUCTION ACCESS DETAIL



NOTES:
1. STOCKPILES SHALL BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
2. STOCKPILES SHALL BE STABILIZED IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT OR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, AS APPROPRIATE (SEE SOIL EROSION NOTES).

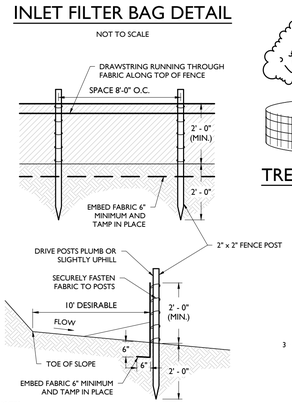
SOIL STOCKPILE DETAIL



NOTES:
1. THE FILTER BAG SHALL SAFELY PASS FLOWS GREATER THAN THE 1-YEAR 24-HOUR STORM EVENT.
2. SEDIMENT REMOVAL AND MAINTENANCE SHALL BE PERFORMED FREQUENTLY AND AFTER EVERY STORM EVENT.

INLET FILTER BAG DETAIL

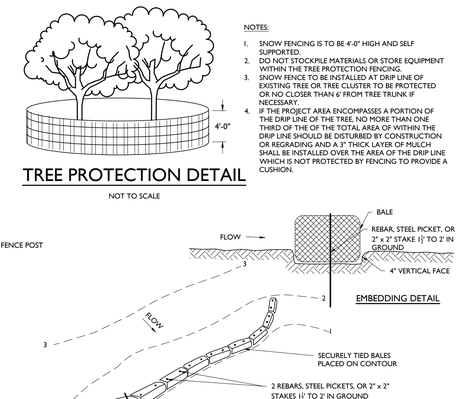
NOT TO SCALE



NOTES:
1. SECURELY FASTEN GEOTEXTILE TO FENCE POST BY USE OF WIRE TIES, HOG RINGS, STAPLES OR POCKETS. FOUR TO SIX FASTENERS PER POST.
2. GEOTEXTILE FABRIC TO BE EMBEDDED 6" (MIN.) AND TAMP IN PLACE.
3. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIRABLE.

SILT FENCE DETAIL

NOT TO SCALE



TREE PROTECTION DETAIL

NOT TO SCALE

HAY BALE DETAIL

NOT TO SCALE

40' 0' 40' 80'
GRAPHIC SCALE IN FEET
1" = 40'

SEEDING SPECIFICATIONS:

I.A. TEMPORARY SEEDING AND MULCHING:
GROUND LIMESTONE - APPLIED UNIFORMLY ACCORDING TO SOIL TEST RECOMMENDATIONS.
FERTILIZER - APPLY 11LBS./1,000 SF OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN (UNLESS A SOIL TEST INDICATES OTHERWISE) WORKED INTO THE SOIL A MINIMUM OF 4".
SEED - PERENNIAL RYEGRASS 100 LBS./ACRE (2.3 LBS./1,000 SF) OR OTHER APPROVED SEEDS; PLANT BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1.
MULCH - UNROTTED STRAW OR HAY AT A RATE OF 70 TO 90 LBS./1,000 SF APPLIED TO ACHIEVE 95% SOIL SURFACE COVERAGE. MULCH SHALL BE ANCHORED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER).

I.B. PERMANENT SEEDING AND MULCHING:
TOPSOIL - UNIFORM APPLICATION TO A DEPTH OF 5" (UNSETTLED).
GROUND LIMESTONE - APPLIED UNIFORMLY ACCORDING TO SOIL TEST RECOMMENDATIONS.
FERTILIZER - APPLY 11 LBS./1,000 SF OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN (UNLESS A SOIL TEST INDICATES OTHERWISE) WORKED INTO THE SOIL A MINIMUM OF 4".
SEED - TURF TYPE TALL FESCUE (BLEND OF 3 CULTIVARS) 350 LBS/ACRE (8 LBS./1,000 SF) OR OTHER APPROVED SEEDS; PLANT BETWEEN MARCH 1 AND OCTOBER 1 (SUMMER SEEDINGS REQUIRE IRRIGATION)
MULCH - UNROTTED STRAW OR HAY AT A RATE OF 70 TO 90 LBS./1,000 SF APPLIED TO ACHIEVE 95% SOIL SURFACE COVERAGE MULCH SHALL BE ANCHORED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDER).

MULCH ANCHORING SPECIFICATIONS:

1. MULCH ANCHORING - SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.
   A. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
   B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
   C. CRIMPER MULCH ANCHORING COULTER TOOL - A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

	DESCRIPTION
	PROPERTY BOUNDARY
	ADJACENT PROPERTY BOUNDARY
LOD	PROPOSED LIMIT OF DISTURBANCE
SF	PROPOSED SILT FENCE
TPF	PROPOSED TREE PROTECTION FENCE
	PROPOSED STOCKPILE & EQUIPMENT STORAGE
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED INLET PROTECTION FILTER

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

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL DRCC & SCD RESUBMISSION
05	01/24/2022	BJD	FOR MUNICIPAL RESUBMISSION
04	07/23/2021	BJD	FOR MUNICIPAL RESUBMISSION
03	06/14/2021	BJD	FOR SCD RESUBMISSION
02	06/02/2021	BJD	FOR MUNICIPAL RESUBMISSION
01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY | DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY
FOR: CUBESMART
1610 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

NEW JERSEY JEFFREY S. MARTELL No. GE47290 LICENSED PROFESSIONAL ENGINEER

JEFFREY S. MARTELL, P.E.
NEW JERSEY LICENSE NO. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
Digitally signed by Jeffrey Martell
DN: C=US, E=jmartell@stonefieldeng.com, O=Stonefield Engineering and Design, LLC, CN=Jeffrey Martell
Date: 2022.02.18 10:35:31 -05'00'

STONEFIELD engineering & design

SCALE: 1" = 40' | PROJECT ID: PRI-200094

TITLE: **SOIL EROSION & SEDIMENT CONTROL PLAN**

DRAWING: **C-9**

Z:\PROJECTS\PRI\200\094\200094 ARCO MURRAY - 1610 ROUTE 27, FRANKLIN, NJ\CADD\PLOT\SOP-09-SESC.DWG

LANDSCAPING AND BUFFER REQUIREMENTS

CODE SECTION	REQUIRED	PROPOSED
§ 112-206.9-A(1) PARKING LOT LANDSCAPING	(A) INTERIOR LANDSCAPE SHALL MINIMIZE THE EXPANSIVE APPEARANCE OF PARKING LOTS, PROVIDE SHADED PARKING AREAS, AND MITIGATE NEGATIVE ACOUSTIC IMPACTS OF VEHICLES. (B) PROVIDE TREES AND OTHER LANDSCAPE SCREENING TO PARKING AREAS (C) THE INTEROIR OF ALL UNCOVERED PARKING BLOCK SPACES MUST BE LANDSCAPED.	COMPLIES
§ 112-206.9-A(2) PARKING LOT LANDSCAPING	(A) PROVIDE AN ATTRACTIVE, SHADED ENVIRONMENT ALONG STREET EDGES, PROVIDE VISUAL COHESION ALONG STREETS, BUFFER TRAFFIC, FOCUS VIEWS, AND INCREASE SENSE OF NEIGHBORHOOD SCALE AND CHARACTER; (B) A LOW CONTINUOUS LANDSCAPED HEDGE; (C) A LOW DECORATIVE MASONRY WALL IN COMBINATION WITH LANDSCAPE	COMPLIES
§ 112-206.9-A(3) PARKING LOT LANDSCAPING	(3) ENTRY LANDSCAPING ANNOUCES AND HIGHLIGHTS ENTRIES IN THE DEVELOPMENT. (A) BUILDING SETBACK AREAS ALONG THOUROUGHFARE, COLLECTOR, OR RESIDENTIAL STREETS OR ALONG PRIVATE DRIVES, MUST BE LANDSCAPED; (B) ARTICULATE BUILDING FACADES WITH LANDSCAPED SEATING AREAS TO PROVIDE VISUAL INTEREST AND PEDESTRIAN-FRIENDLY PLACES; (C) LANDSCAPING AT STREET INTERSECTIONS AND DRIVEWAY CORNERS MUST "PULL BACK" TO OPEN VIEW LINES INTO THE SITE AND NOT INTERFERE WITH SIGHT TRIANGLES.	COMPLIES
§ 112-206.9-A(4) PARKING LOT LANDSCAPING	SPECIAL ATTENTION SHOULD BE PAID TO PRESERVING USE OF NATURAL FEATURES AND VEGETATION WHICH ARE SIGNIFICANT BECAUSE OF UNIQUE CHARACTER, HISTORY, SIZE, VARIETY AND/OR GROWTH HABITS	COMPLIES
§ 112-206.9-A(4) PARKING LOT LANDSCAPING	(1) LOCATE LOADING DOCKS, STORAGE, AND SERVICE AREAS IN AREAS OF LOW VISIBILITY (2) NO AREAS FOR OUTDOOR STORAGE, TRASH COLLECTION OR COMPACTION, LOADING, OR OTHER SUCH USES MUST BE LOCATED WITHIN 20 FEET OF ANY PUBLIC STREET, PUBLIC SIDEWALK, OR INTERNAL PEDESTRIAN WALKWAY. (3) LOADING DOCKS, TRUCK PARKING, STORAGE, TRASH SERVICE FUNCTIONS MUST BE INCORPORATED INTO THE OVERALL DESIGN OF THE BUILDING AND LANDSCAPING SO THAT THE VISUAL AND ACOUSTIC IMPACTS OF THESE FUNCTIONS ARE FULLY CONTAINED AND OUT OF VIEW FROM ADJACENT PROPERTIES AND PUBLIC STREETS. SCREENING MATERIALS MUST BE THE SAME AS, OR OF EQUAL QUALITY TO, THE MATERIALS USED FOR THE PRIMARY BUILDING AND LANDSCAPING.	COMPLIES

LANDSCAPING NOTES

1. ALL PLANT RELOCATIONS/SUBSTITUTIONS SHALL BE SUBMITTED TO THE TOWNSHIP FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION
2. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED.
4. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH .
5. THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1 SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
6. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
7. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.
8. A MINIMUM OF SIX (6) INCHES OF TOPSOIL SHALL BE INSTALLED IN ALL DISTURBED AND PLANTING AREAS, SAME SHOULD BE NOTED ON THE PLANS.

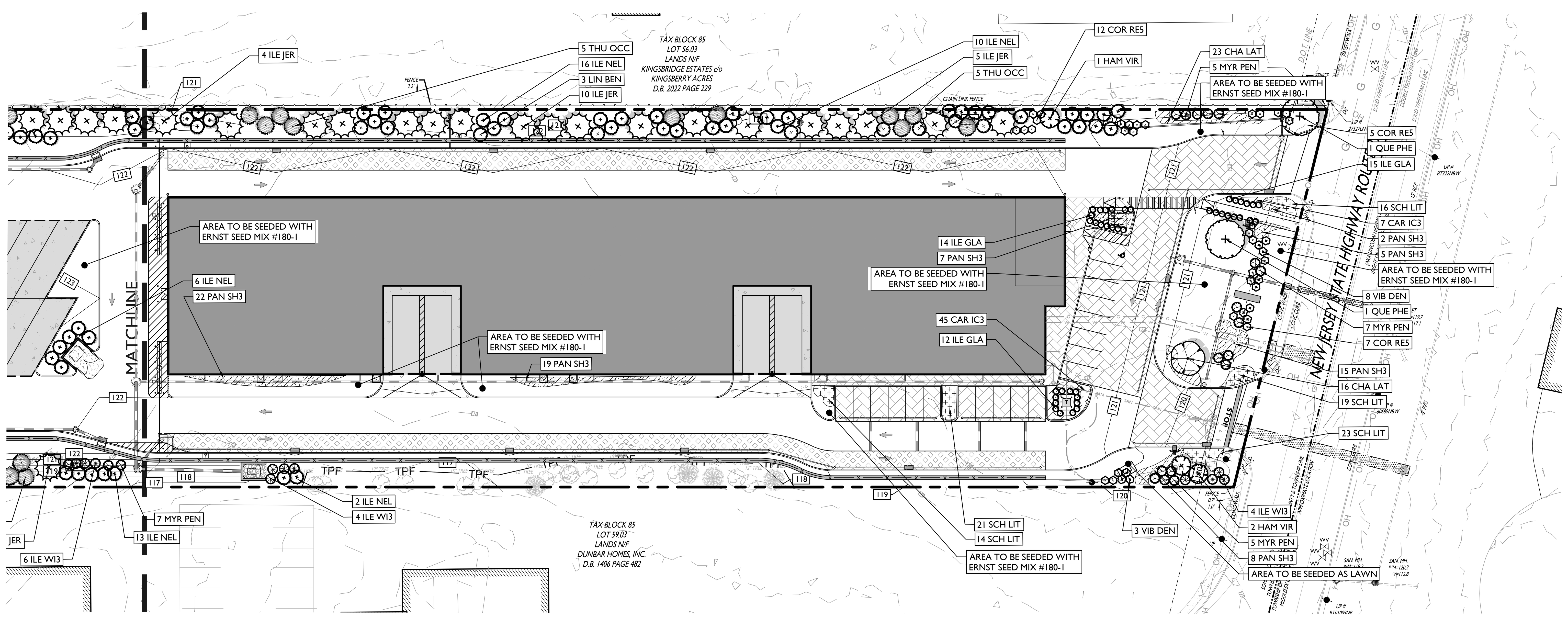
IRRIGATION NOTE:

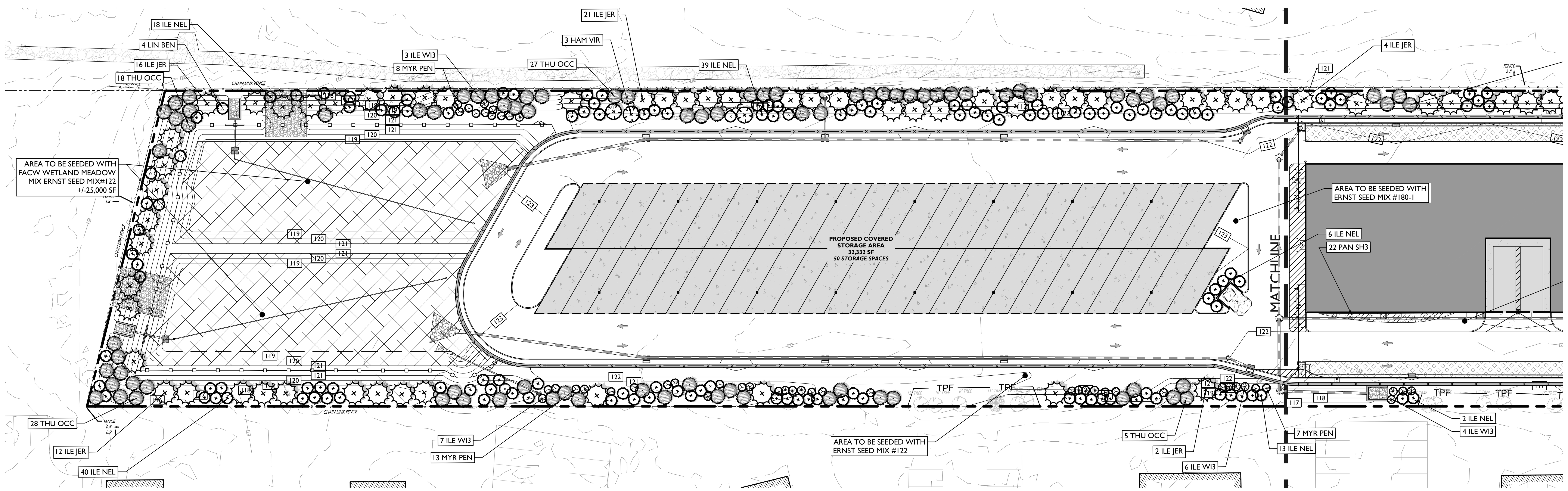
IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	MAG SWE	2	MAGNOLIA VIRGINIANA	SWEET BAY	3" CAL	B&B
	QUE PHE	3	QUERCUS PHELLOS	WILLOW OAK	3" CAL	B&B
EVERGREEN TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	ILE JER	71	ILEX OPACA `JERSEY QUEEN`	AMERICAN HOLLY	6` - 7` HT	B&B
	ILE NEL	166	ILEX X `NELLIE R. STEVENS`	NELLIE R. STEVENS HOLLY	6` - 7` HT	B&B
	THU OCC	92	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6` - 7` HT	B&B
FLOWERING TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	HAM VIR	6	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	4` - 5` HT.	B&B
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	COR RES	27	CORNUS SERICEA	RED TWIG DOGWOOD	3 GAL.	POT
	ILE WI3	30	ILEX VERTICILLATA	WINTERBERRY	5 GAL	POT
	LIN BEN	19	LINDERA BENZOIN	SPICEBUSH	7 GAL	POT
	VIB DEN	11	VIBURNUM DENTATUM `ARROWWOOD`	ARROWWOOD VIBURNUM	7 GAL	POT
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	ILE GLA	41	ILEX GLABRA	INKBERRY HOLLY	3 GAL	POT
	MYR PEN	46	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	5 GAL	POT
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	CAR IC3	52	CAREX X `ICE DANCE`	ICE DANCE SEDGE	1 GAL	24" o.c.
	CHA LAT	39	CHASMANTHIUM LATIFOLIUM	WOOD OATS	1 GAL.	36" o.c.
	PAN SH3	78	PANICUM VIRGATUM `SHENANDOAH`	SWITCH GRASS	3 GAL	48" o.c.
	SCH LIT	93	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM GRASS	1 GAL.	30" o.c.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.





BEFORE YOU BREAK GROUND FOR A PROJECT AROUND YOUR YARD, SUCH AS A FENCE, IN-GROUND POOL, OR HOME ADDITION, YOU MUST CALL NEW JERSEY ONE CALL AT (800) 272-1000 TO REQUEST A MARK OUT OF THE UTILITY SERVICES THAT ARE UNDERGROUND. IT IS RECOMMENDED THAT YOU CALL 3 DAYS BEFORE YOU DIG. THE STATE OF NEW JERSEY REQUIRES THAT YOU CALL "BEFORE" YOU DIG SO THAT YOU CAN IDENTIFY WHERE THE UNDERGROUND UTILITIES ARE LOCATES (SUCH AS WATER, GAS, ELECTRIC, PHONE, CABLE, ETC.) ONCE THE SERVICES ARE "MARKED OUT", YOU CAN DIG WITHOUT THE RISK OF INTERRUPTING SERVICE FROM ONE OF THESE UTILITIES, DAMAGING PROPERTY OR

ONE CALL NEW JERSEY

SUFFERING PERSONAL INJURY. IF YOU ARE HAVING A PROFESSIONAL DO THE WORK FOR YOU, THEY ARE RESPONSIBLE TO CONTACT ONE CALL. UTILITY SERVICES ARE MARKED OUT WITH PAINT OR A FLAG. THE FOLLOWING LIST WILL HELP YOU IDENTIFY WHAT UTILITY HAS PERFORMED A MARK OUT:

ELECTRIC=RED, GAS/OIL=YELLOW, COMMUNICATION TV=ORANGE, WATER=BLUE, SEWER=GREEN, TEMPORARY SURVEY MARKINGS=MAGENTA, PROPOSED EXCAVATION=WHITE

40' 0' 40' 80'

GRAPHIC SCALE IN FEET
1" = 40'

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
05	01/24/2022	BJD	FOR MUNICIPAL RESUBMISSION
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02	06/02/2021	BJD	FOR MUNICIPAL RESUBMISSION
01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY | DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY
BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

STATE OF NEW JERSEY JEFFREY MARTELL No. GE47290 LICENSED PROFESSIONAL ENGINEER
JEFFREY MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
Digitally signed by Jeffrey Martell
Date: 2022.02.18 10:36:19-05'00'
STONEFIELD engineering & design

SCALE: 1" = 40' | PROJECT ID: PRI-200094

TITLE: LANDSCAPING PLAN

DRAWING: C-10

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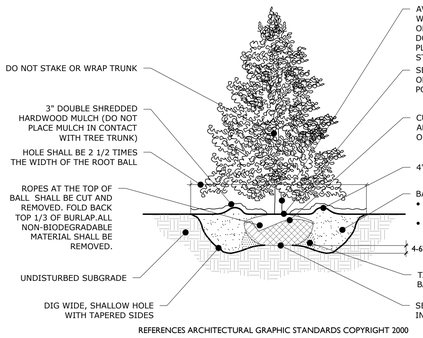

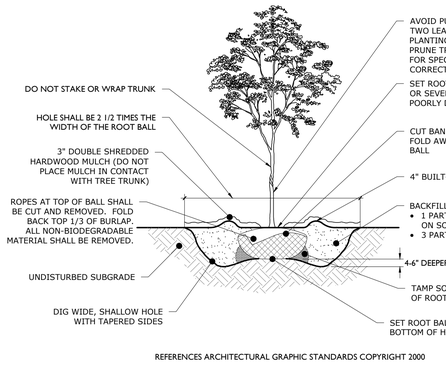

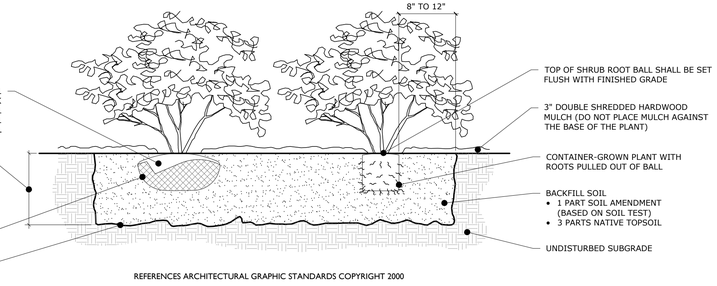

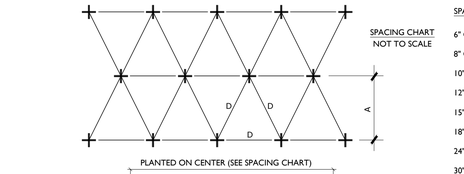

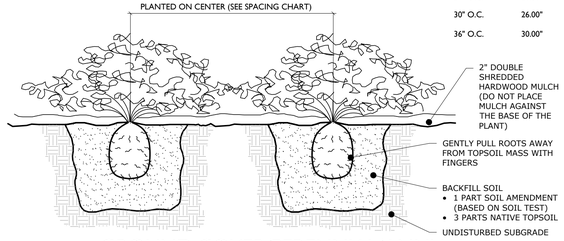

NOTES:

1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER
2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
3. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILDS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX

REFERENCES ARCHITECTURAL GRAPHIC STANDARDS COPYRIGHT 2000

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

1

NOTES:

1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
3. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX

REFERENCES ARCHITECTURAL GRAPHIC STANDARDS COPYRIGHT 2000

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

2

NOTES:

1. FOR THE CONTAINER-GROWN SHRUBS, USE FINGERS OR SMALL HAND TOOL TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE SHRUB ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL

REFERENCES ARCHITECTURAL GRAPHIC STANDARDS COPYRIGHT 2000

DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

NOT TO SCALE

3

NOTES:

1. THOROUGHLY SOAK THE GROUND COVER ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
2. SOIL AMENDMENTS:
   - MODIFY HEAVY CLAY OR SILT SOILDS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
   - MODIFY EXTREMELY SANDY SOILDS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX
3. ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT PER MANUFACTURER'S SPECIFICATIONS

SPACING CHART
NOT TO SCALE

SPACING "D"	ROW "A"
6" O.C.	5.20"
8" O.C.	6.93"
10" O.C.	8.66"
12" O.C.	10.40"
15" O.C	13.00"
18" O.C.	15.60"
24" O.C.	20.80"
30" O.C.	26.00"
36" O.C.	30.00"

GROUND COVER/PERENNIAL/ANNUAL PLANTING DETAIL

NOT TO SCALE

4

GENERAL LANDSCAPING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
2. WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL.
3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL, IF SO REQUESTED.
4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY.
5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS.) IN ADVANCE OF THE ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER, OR GOVERNING MUNICIPAL OFFICIAL.
6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

PROTECTION OF EXISTING VEGETATION NOTES:

1. BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIP-LINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
2. IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.
3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIP-LINE OF TREES TO REMAIN, THE WORK SHALL BE PERFORMED AS FOLLOWS:
   - TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
   - RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE, AND FILL NOT EXCEEDING 6 INCHES (6") IS REQUIRED, CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED. IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."
   - LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION, NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST. WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

SOIL PREPARATION AND MULCH NOTES:

1. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS.
2. BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEED SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS FOLLOWS:
   - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM.
   - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
3. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL OBTAINED FROM A WELL-DRAINED ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1").
4. TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGHT.
5. OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROJECT SITE.
6. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
7. UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBED AREA OF THE SITE.
8. LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS THE REQUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN.
9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE WATER.
11. DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR. GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF.
12. WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING.
13. SOIL SHALL BE LOOSENED WITH A BACKHOE OR OTHER LARGE COARSE-TILING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.
14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL.

`5. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:

MYCRO® TREE SAVER - A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS.

- DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3-OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL, EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES, AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL. APPLY WATER TO SOIL SATURATION.
- MYCOR® TREE SAVER® IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE.
- SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.
- FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.
- OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

HEALTHY START MACRO TABS 12-8-8

- FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS.
- TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT 1 TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

PLANT QUALITY AND HANDLING NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) OR LATEST REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
2. IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER COMMON NAMES.
3. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND, HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE.
4. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (1-1/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE REJECTED.
5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE.
6. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF.
7. ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO ENCOMPASS THE FIBROUS ROOT FEEDING SYSTEMS NECESSARY FOR THE HEALTHY DEVELOPMENT OF THE PLANT. NO PLANT SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HEELED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.
8. PLANTS TRANSPORTED TO THE PROJECT IN OPEN VEHICLES SHALL BE COVERED WITH TARPS OR OTHER SUITABLE COVERS SECURELY FASTENED TO THE BODY OF THE VEHICLE TO PREVENT INJURY TO THE PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
9. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING DETAILS.
10. LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN POSSIBLE. THE ROOT BALL SHALL BE KEPT MOIST AT ALL TIME AND COVERED WITH MOISTENED MULCH OR AGED WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTINGS SHALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE.
11. NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.
12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISEASED OR INJURED PLANTS SHALL BE REMOVED.
13. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO RELOCATE OR ENLARGE PLANTING PITS OR DELETE PLANT MATERIAL FROM THE CONTRACT.
14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8') ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2') ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR AGENCY.
15. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS:
PLANTS (MARCH 15 - DECEMBER 15)
LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1)
16. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPLANT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15):

ABIES CONCOLOR
ACER BUERGERIANUM
ACER FREEMANII
ACER RUBRUM
ACER SACCHARINUM
BETULA VARIETIES
CARPINUS VARIETIES
CEDRUS DEODARA
CELTIS VARIETIES
CERCIDIPHYLLUM VARIETIES
CERCIS CANADENSIS
CORNUS VARIETIES
CRATAEGUS VARIETIES
CORNUS VARIETIES
CRATAEGUS VARIETIES
CUPRESSOCYPARIS LEYLANDII
FAGUS VARIETIES
HALESIA VARIETIES
ILEX X FOSTERII
ILEX NELLIE STEVENS
ILEX OPACA
JUNIPERUS VIRGINIANA
KOELREUTERIA PANICULATA
LIQUIDAMBAR VARIETIES
LIRIODENDRON VARIETIES
MALUS IN LEAF
NYSSA SYLVATICA
OSTRYA VIRGINIANA
PINUS NIGRA
PLATANUS VARIETIES
POPULUS VARIETIES
PRUNUS VARIETIES
PYRUS VARIETIES
QUERCUS VARIETIES (NOT Q. PALUSTRIS)
SALIX WEEPING VARIETIES
SORBUS VARIETIES
TAXODIUM VARIETIES
TAXUX B REPANDENS
TILIA TOMENTOSA VARIETIES
ULMUS PARVIFOLIA VARIETIES
ZELKOVA VARIETIES

17. IF A PROPOSED PLANT IS UNATTAINABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.
18. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED AT THE END OF EACH WORK DAY. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.
19. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.
20. A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.
21. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS IF ORIGINALLY REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
22. MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DESTRUCTION OF THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS, AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO CLEAR THEM FROM MOWING DEBRIS.
23. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND MULCHING.
24. SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE CONTRACT SHALL BE ESTABLISHED.
25. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OR A WATERING TRUCK OR OTHER ACCEPTABLE MANNER.
26. THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL.
27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND ESTABLISHMENT.

PLANT MATERIAL GUARANTEE NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR (1 YR.) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE.
2. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE. THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS.
3. ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
4. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

LAWN (SEED OR SOD) NOTES:

1. SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS.
2. SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION."
3. REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEEDED OR LAID WITH SOD.
4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION."
5. PROTECT NEW LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS, EROSION, WASHOUT, SETTLEMENT OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
05	01/24/2022	BJD	FOR MUNICIPAL RESUBMISSION
04	07/23/2021	BJD	FOR MUNICIPAL RESUBMISSION
03	06/14/2021	BJD	FOR SCD RESUBMISSION
02	06/02/2021	BJD	FOR MUNICIPAL RESUBMISSION
01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY
BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

No. GE47290

JEFFREY A. MARTELL, P.E.
NEW JERSEY ... No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
Digitally signed by Jeffrey Martell
DN: CN=Jeffrey Martell, dnQualifier=A01410C0000017BC710DC920000B3EB, O=STONEFIELD ENGINEERING AND DESIGN LLC, C=US
Date: 2022.02.18 10:37:34-05'00'

STONEFIELD
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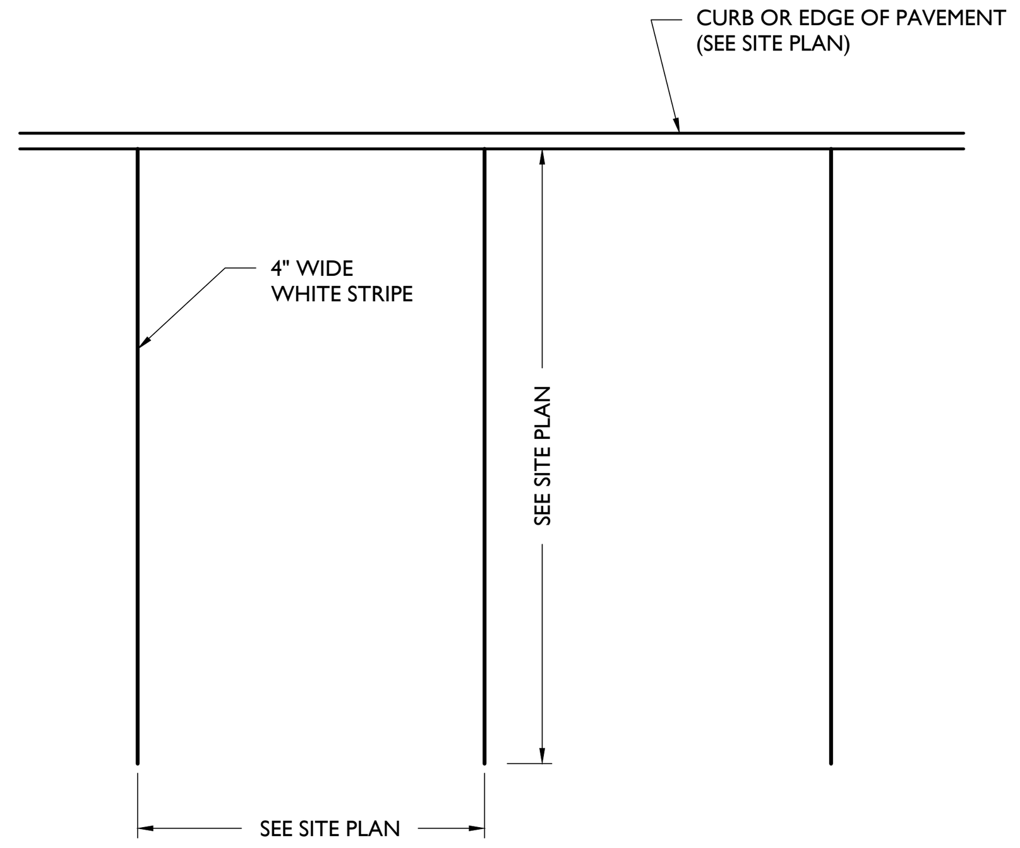
SCALE: AS SHOWN
PROJECT ID: PRI-200094

TITLE:
LANDSCAPING DETAILS

DRAWING:
C-11

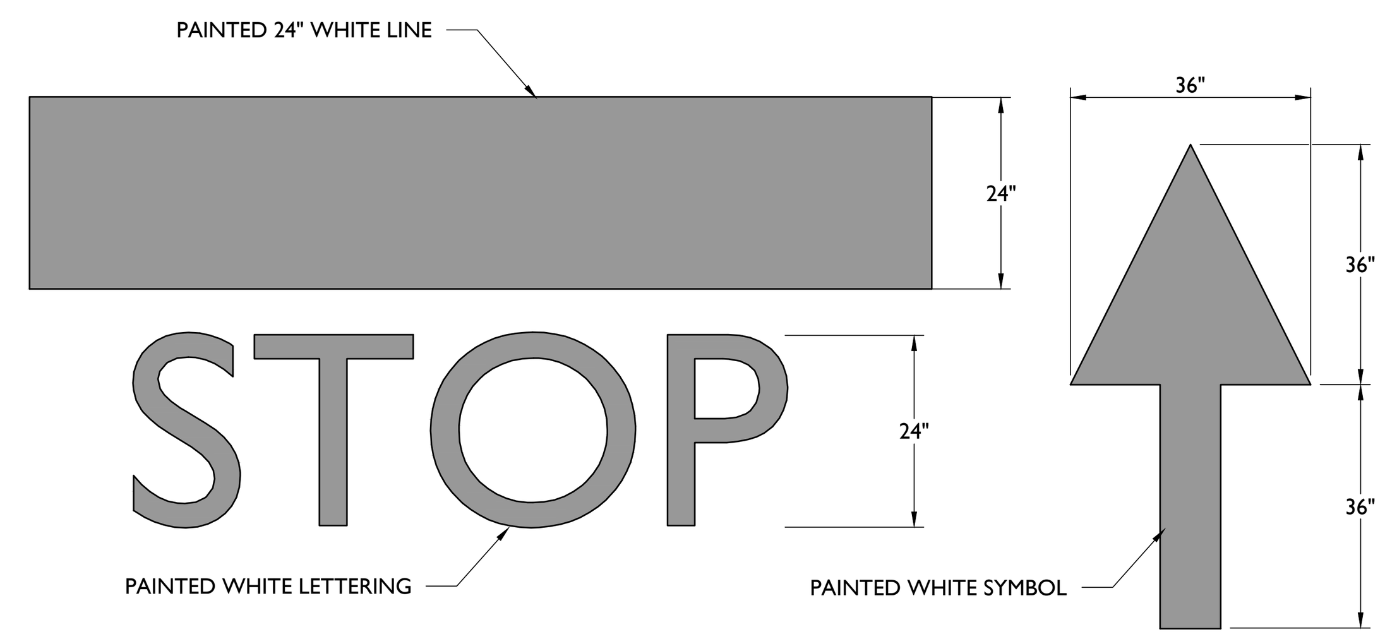
Z:\PRINCETON\PRI\2020\PRI-200094 ARCO MURRAY - 1613 ROUTE 27, FRANKLIN, NJ\CADD\PLOT\RDP-10-11-LAND.DWG



PARKING STALL MARKINGS

NOT TO SCALE

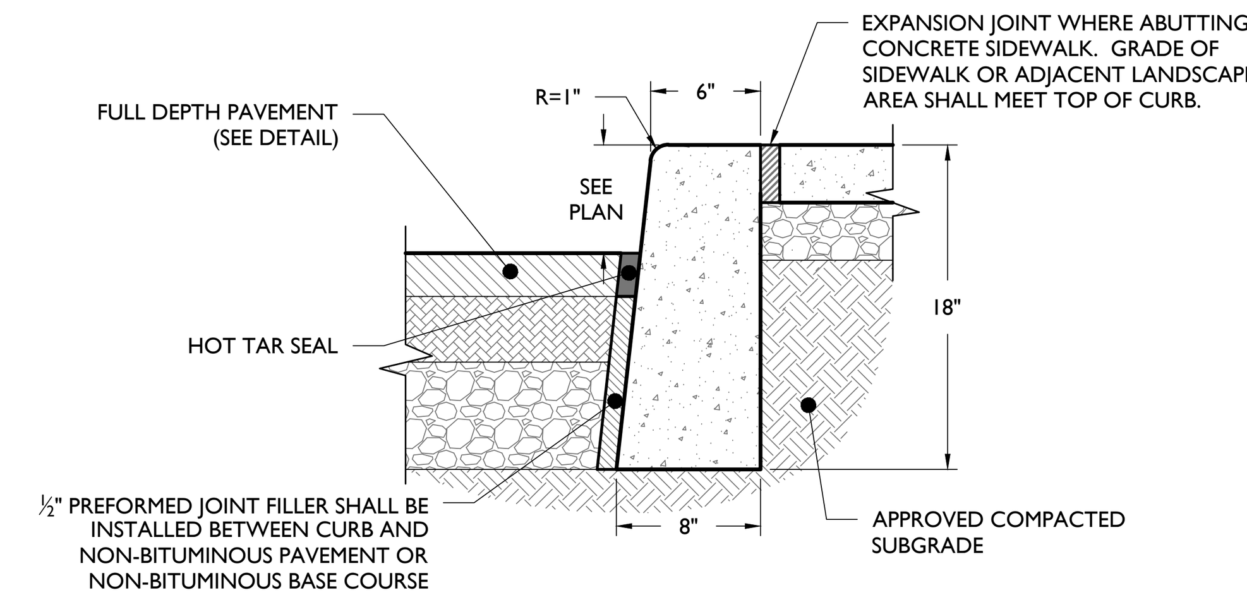
1



STOP BAR & ARROW DETAILS

NOT TO SCALE

2



CONCRETE CURB DETAIL

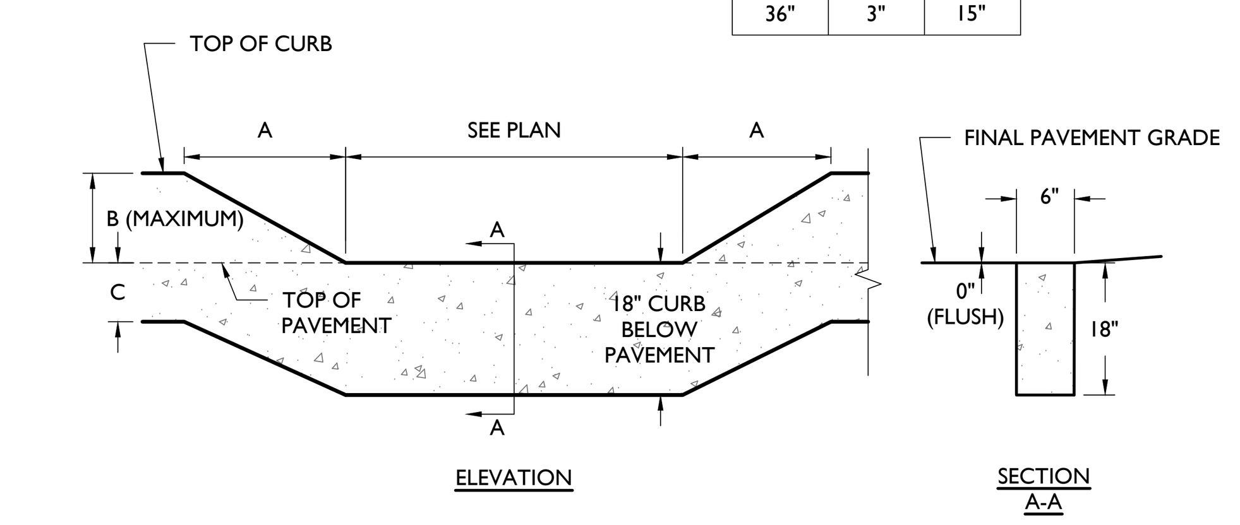
NOT TO SCALE

NOTES:
1. CONCRETE SHALL BE 3500 PSI AT 28 DAYS, AIR-ENTRAINED.
2. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ¼" FROM SURFACE.
3. HALF DEPTH CONTRACTION JOINTS SHALL BE PROVIDED AT 10 FOOT INTERVALS.
4. 18" CURB DEPTH SHALL BE MAINTAINED AT DEPRESSED OR FLUSH CURBED AREAS.

3

FLUSH CURB DIMENSIONS

A	B	C
72"	6"	12"
60"	5"	13"
48"	4"	14"
36"	3"	15"

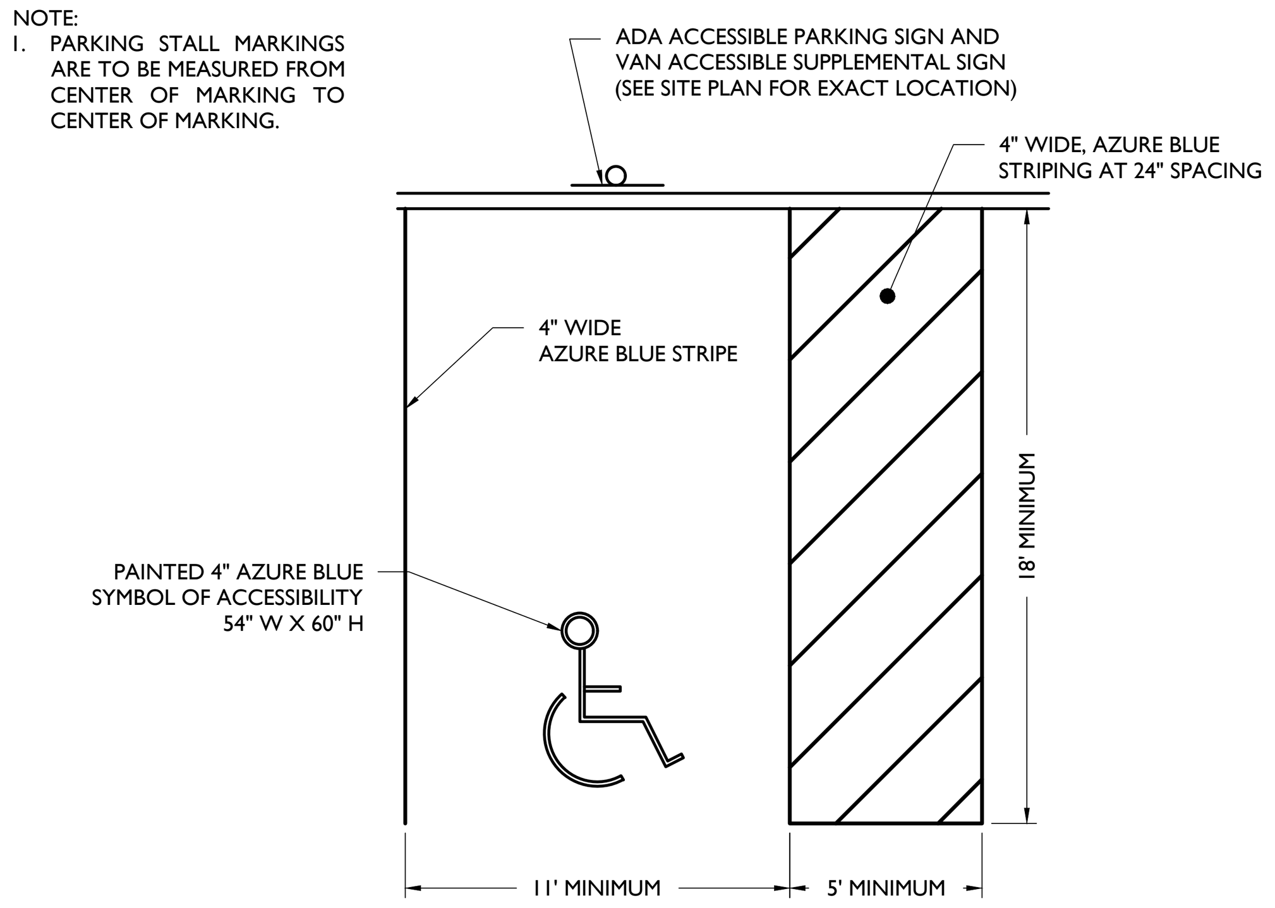


FLUSH CURB DETAIL

NOT TO SCALE

4

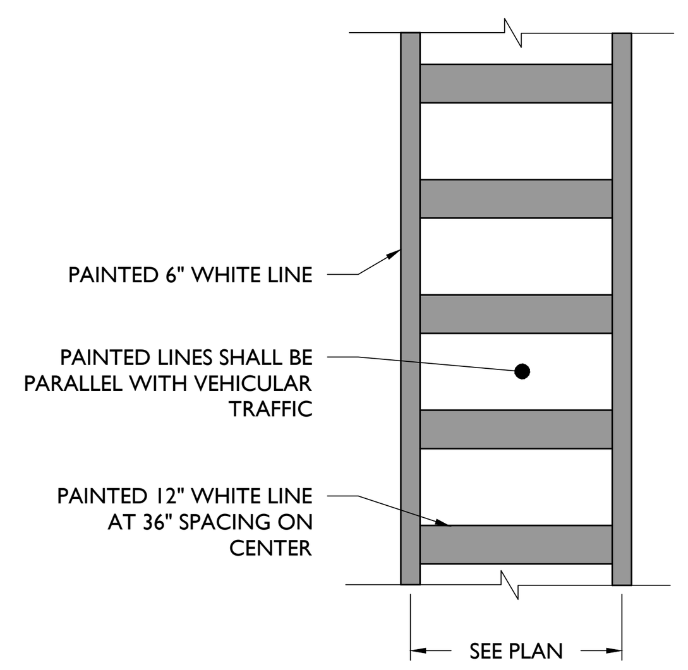
NOTE:
1. PARKING STALL MARKINGS ARE TO BE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING.



ACCESSIBLE PARKING STALL MARKINGS

NOT TO SCALE

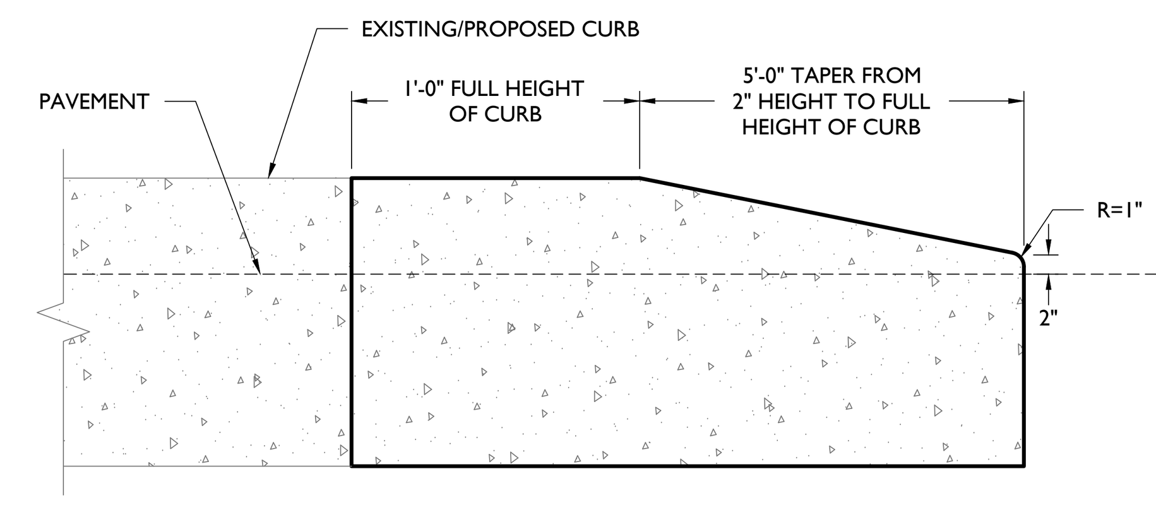
5



CROSSWALK DETAIL

NOT TO SCALE

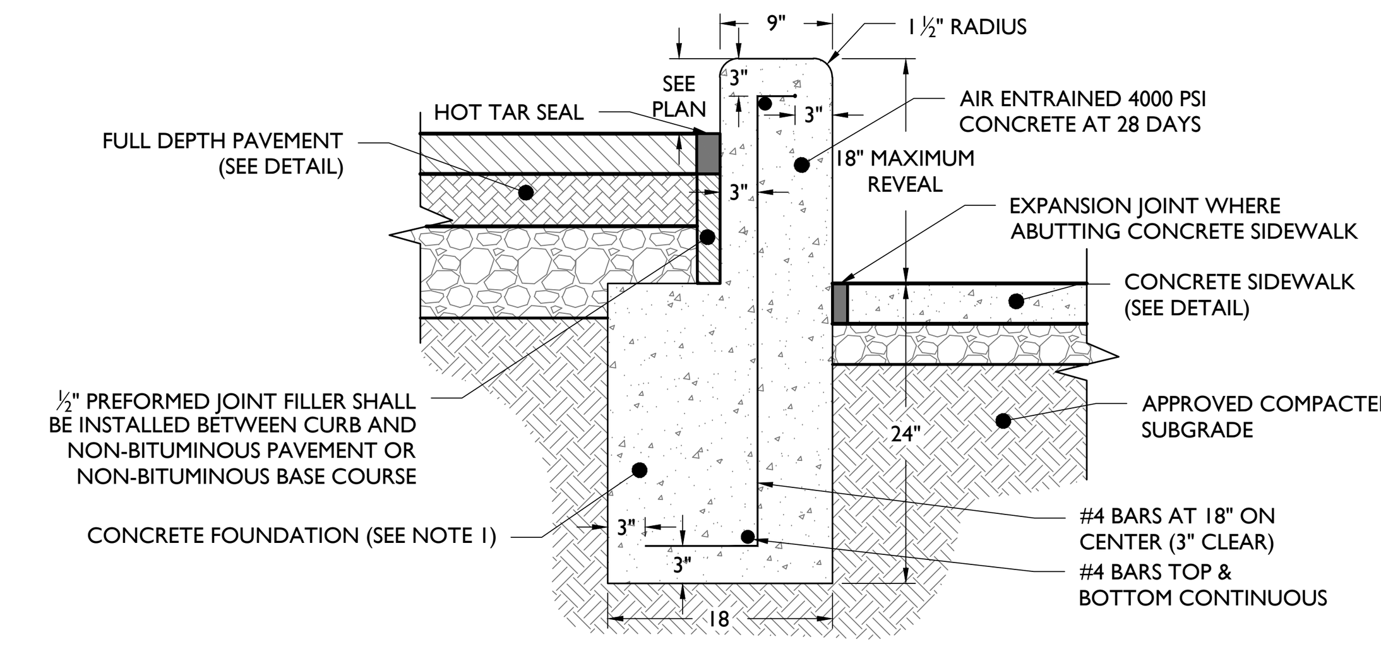
6



CURB TAPER DETAIL

NOT TO SCALE

7

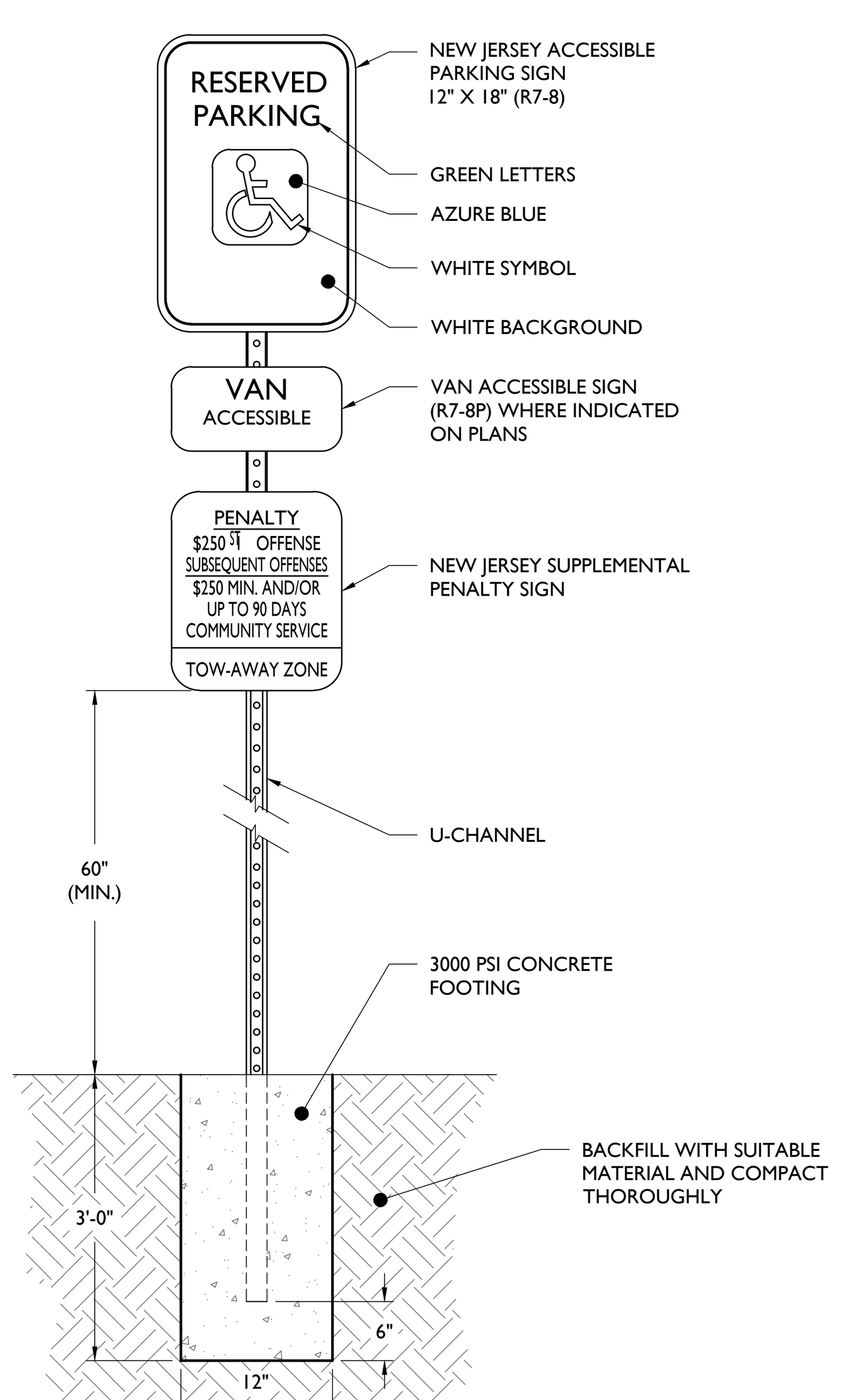


EXTENDED CONCRETE CURB DETAIL

NOT TO SCALE

NOTES:
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS, AIR-ENTRAINED.
2. ½" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 50 FOOT INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ¼" FROM SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.
3. 1" DEEP AND ½" WIDE TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT MID-POINT BETWEEN EXPANSION JOINTS, OR 30 FOOT MAX.

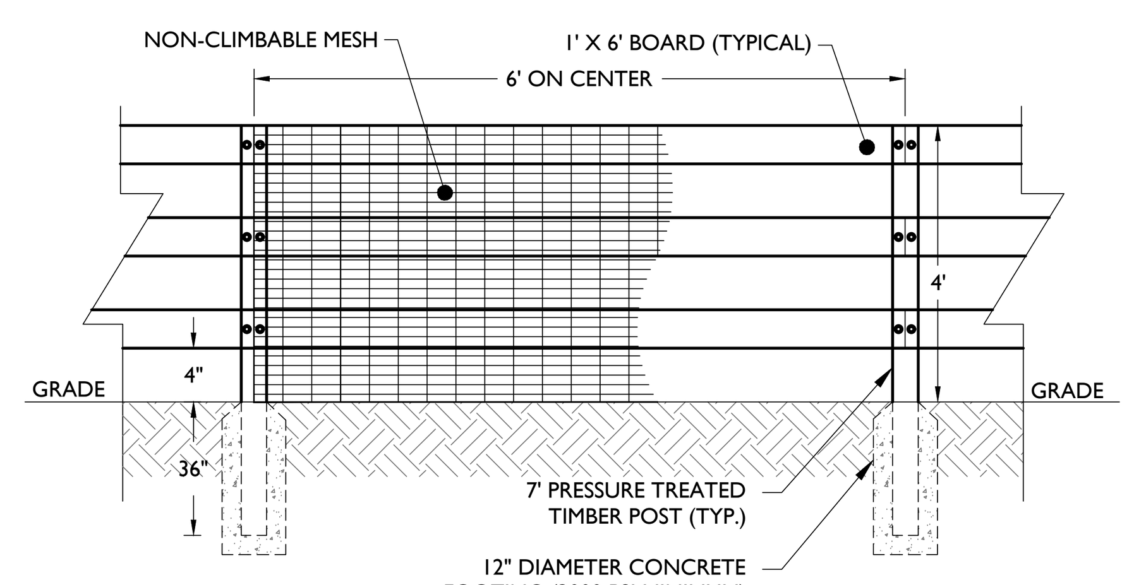
8



ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE

13

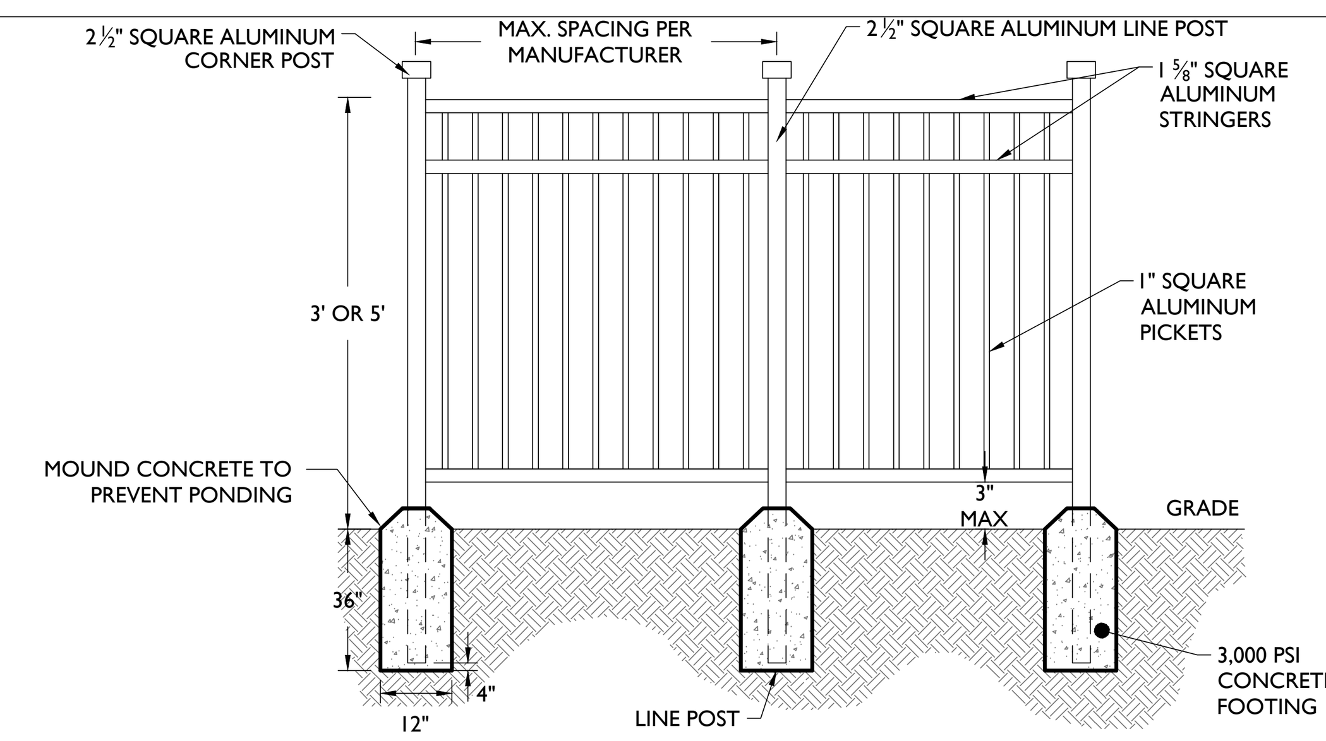


SPLIT RAIL BASIN FENCE DETAIL

NOT TO SCALE

NOTE:
1. ALL WOOD TO BE PRESSURE TREATED

10

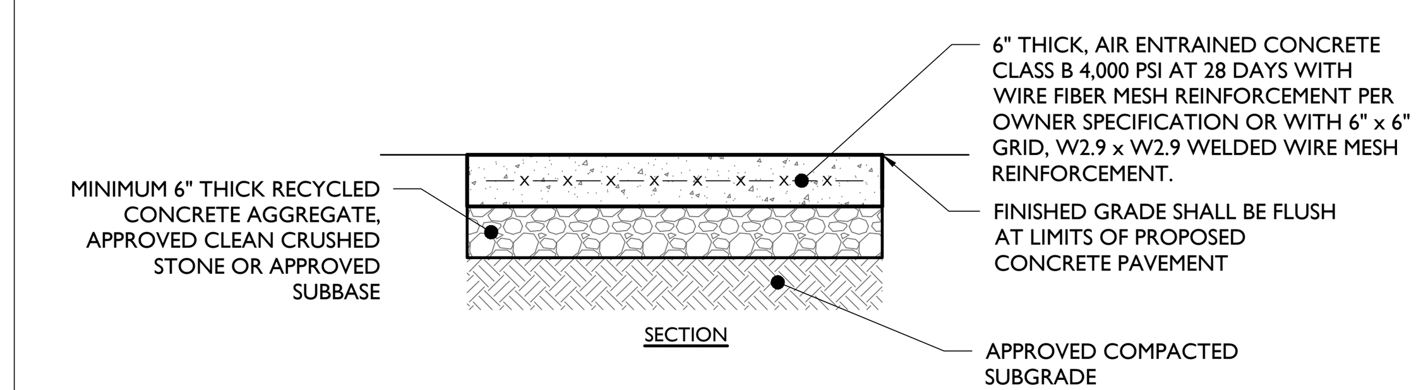


WROUGHT IRON FENCE

NOT TO SCALE

NOTES:
1. FENCE TO BE JERITH MANUFACTURING CO., ALUMINUM FENCE OR APPROVED EQUIVALENT.
2. CONTRACTOR TO PROVIDE ALL HARDWARE NECESSARY FOR FENCE CONSTRUCTION AND OPERATION, PER SITE DESIGN. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS.
3. FENCE TO BE INSTALLED FOLLOWING SITE GRADING.
4. FENCE TO BE INSTALLED ONE FOOT WITHIN PROPERTY LINE WHERE SHOWN ON PROPERTY LINE ON SITE PLAN.
5. VIBRATE OR TAMP BACKFILL FOR CONSOLIDATION SURROUNDING FENCE POSTS.

11

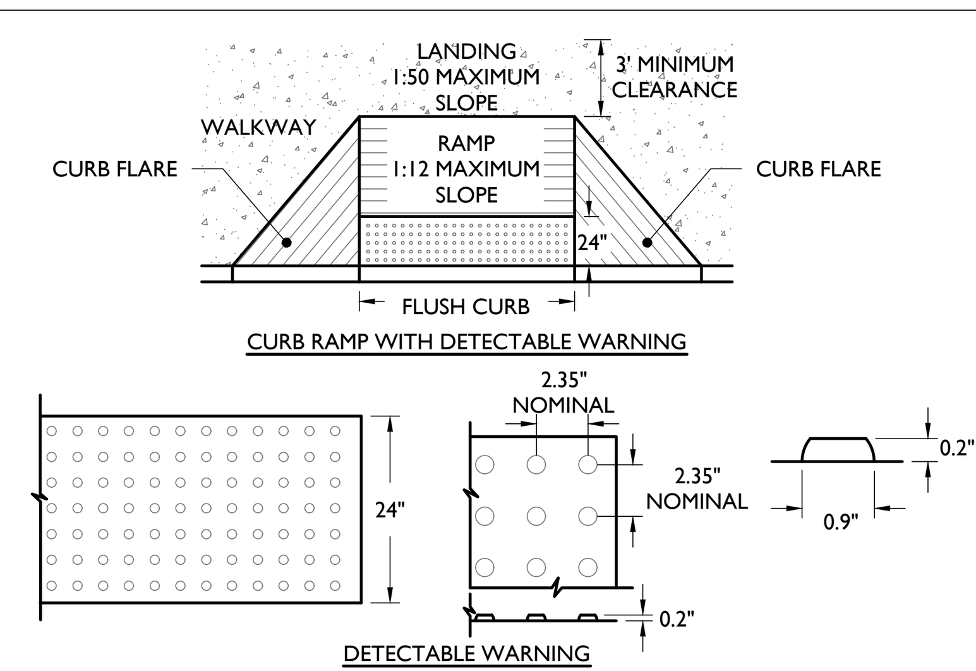


REINFORCED 6" CONCRETE PAVEMENT / MAT SECTION

NOT TO SCALE

NOTES:
1. ¼" EXPANSION JOINTS WITH WATER SEAL SHALL BE PROVIDED AT 60' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ¼" FROM THE SURFACE. LONGITUDINAL REBAR TO BE CUT AT EXPANSION JOINTS.
2. 1" DEEP BY ¼" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED BETWEEN EXPANSION JOINTS AT 15' INTERVALS MAX.
3. CONCRETE SHALL RECEIVE BROOM FINISH.
4. ALL EXPOSED CORNERS TO HAVE 12" CHAMFER.

12

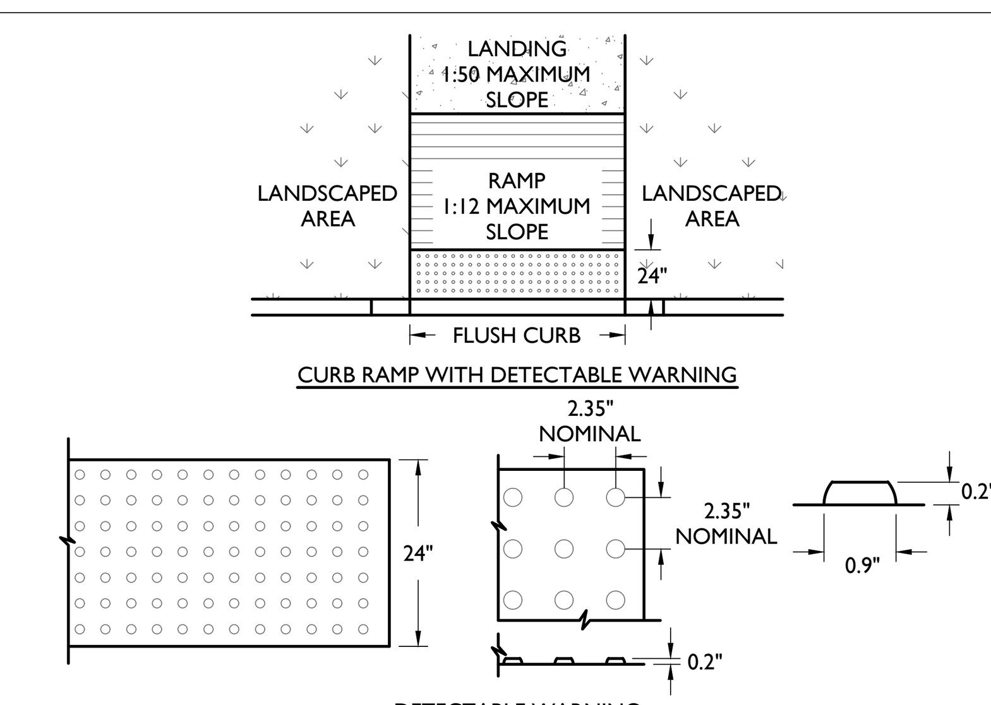


CURB RAMP WITH FLARES DETAIL

NOT TO SCALE

NOTES:
1. CROSS SLOPE ON RAMP SHALL NOT EXCEED 1:50 SLOPE.
2. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
3. VISUAL CONTRAST: THERE SHALL BE A MINIMUM OF 70% CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE.
4. DETECTABLE WARNING STRIP REQUIRED WHERE RAMP DIRECTS PEDESTRIAN TRAFFIC TOWARDS VEHICLE TRAVEL WAY. WARNING STRIP SHALL BE CAST-IN-PLACE.
5. WHERE A 60" X 60" LANDING EXISTS AT THE TOP OF RAMP, RAMP FLARE SHALL NOT EXCEED 1:10 SLOPE. WHERE LANDING IS NOT PROVIDED RAMP FLARE SHALL NOT EXCEED 1:12 SLOPE.
6. A FLUSH CURB SHALL HAVE A MINIMUM WIDTH OF 36". SEE PLAN FOR EXACT WIDTH.
7. RAMP SHALL HAVE A MAXIMUM RISE OF 6" WITHOUT A HANDRAIL.

14

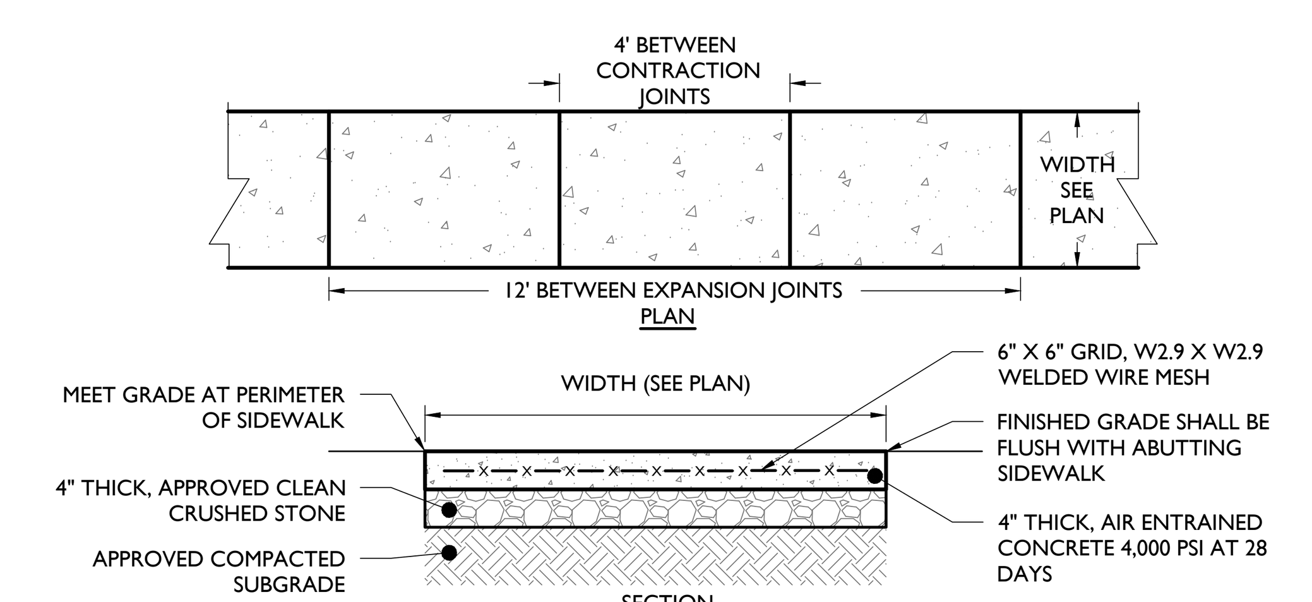


CURB RAMP DETAIL

NOT TO SCALE

NOTES:
1. CROSS SLOPE ON RAMP SHALL NOT EXCEED 2%
2. A FLUSH CURB SHALL HAVE A MINIMUM WIDTH OF 36". SEE PLAN FOR EXACT WIDTH.
3. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
4. VISUAL CONTRAST: THERE SHALL BE A MINIMUM OF 70% CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE.
5. DETECTABLE WARNING STRIP REQUIRED WHERE RAMP DIRECTS PEDESTRIAN TRAFFIC TOWARDS VEHICLE TRAVEL WAY. WARNING STRIP SHALL BE CAST-IN-PLACE.
6. RAMP SHALL HAVE A MAXIMUM RISE OF 6" WITHOUT A HANDRAIL

15



REINFORCED CONCRETE WALKWAY DETAIL

NOT TO SCALE

NOTES:
1. MAXIMUM CROSS SLOPE SHALL BE ¼" PER FOOT.
2. ¼" EXPANSION JOINTS SHALL BE PROVIDED AT 12' INTERVALS WITH PRE-MOLDED, BITUMINOUS JOINT FILLER, RECESSED ¼" FROM THE SURFACE.
3. 1" DEEP BY ¼" WIDE, TOOLED CONTRACTION JOINTS SHALL BE PROVIDED AT 4' INTERVALS.
4. EXPANSION JOIN SHALL BE PROVIDED WHERE ADJACENT TO A BUILDING.

16

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
05	01/24/2022	BJD	FOR MUNICIPAL RESUBMISSION
04	07/23/2021	BJD	FOR MUNICIPAL RESUBMISSION
03	06/14/2021	BJD	FOR SCD RESUBMISSION
02	06/02/2021	BJD	FOR MUNICIPAL RESUBMISSION
01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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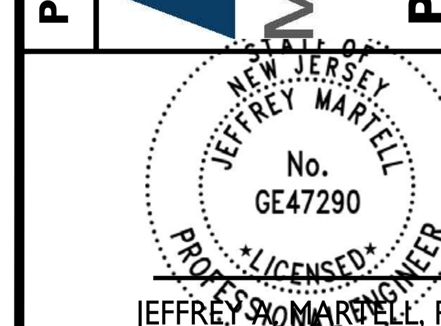


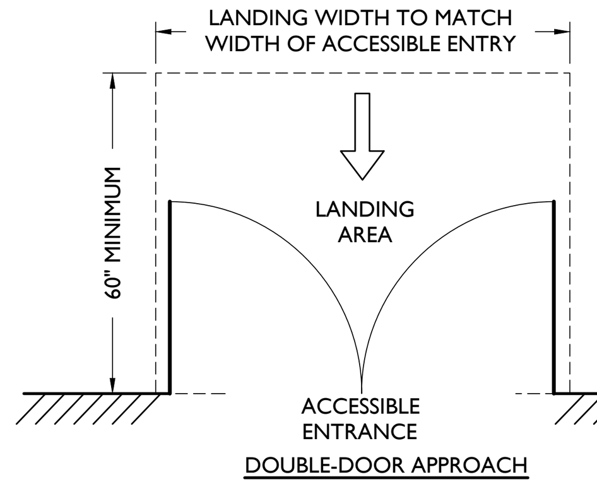
JEFFREY S. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell

STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: PRI-200094

TITLE: **CONSTRUCTION DETAILS**

DRAWING: **C-12**

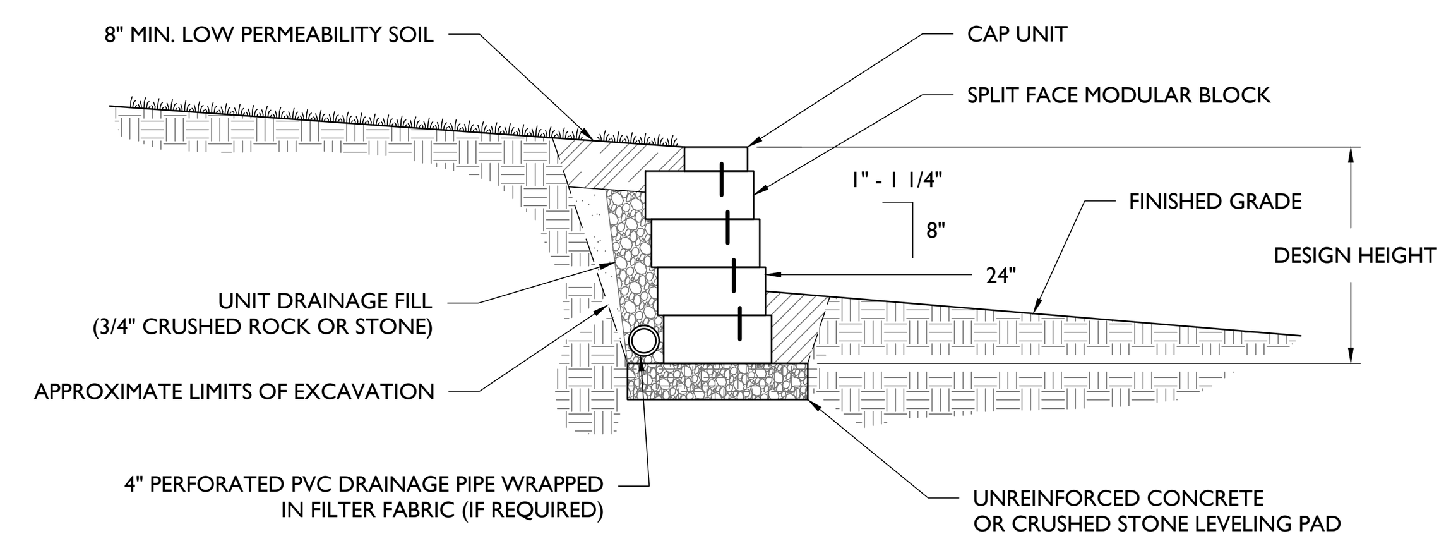


ACCESSIBLE ENTRANCE LANDING DETAIL

NOT TO SCALE

NOTES:
1. MAXIMUM SLOPE ON LANDING SHALL BE 1:50 IN ALL DIRECTIONS
2. DIMENSIONS SHOWN HERE ARE THE MINIMUM DIMENSIONS REQUIRED FOR AN ADA COMPLIANT LANDING AT THE ACCESSIBLE ENTRANCE. REFER TO SITE PLAN FOR SITE SPECIFIC DIMENSIONS THAT MAY SPECIFY A LARGER LANDING AREA.
3. CONTRACTOR SHALL CONTACT THE ENGINEER BEFORE CONSTRUCTION IF THE ACCESSIBLE ENTRANCE ON SITE DOES NOT MATCH THE SCENARIO SHOWN ABOVE.

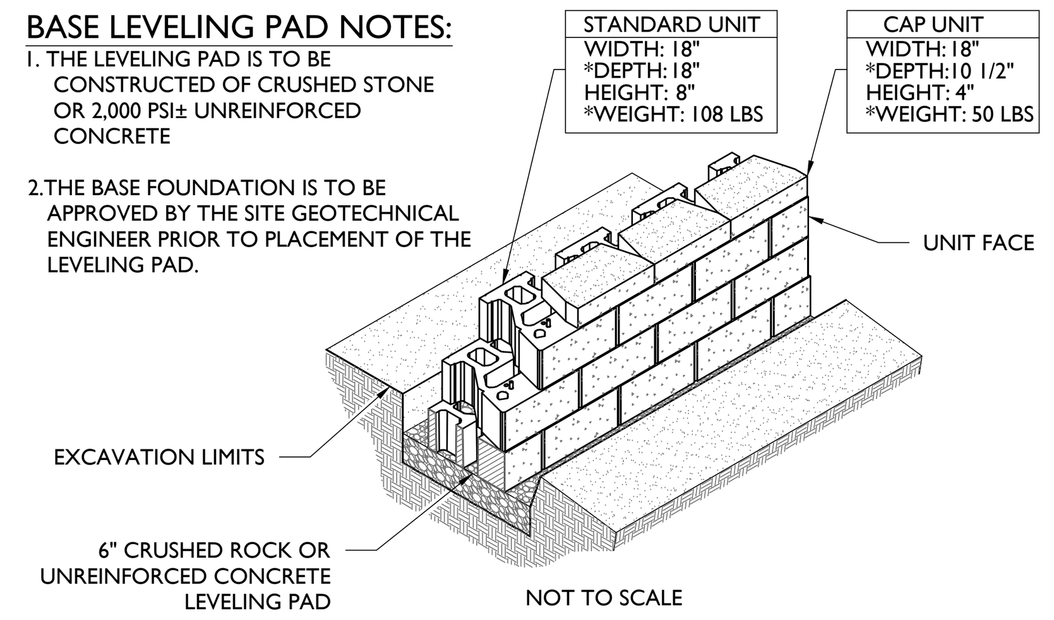
1



TYPICAL GRAVITY WALL SECTION

STANDARD UNIT - 1" SETBACK

BASE LEVELING PAD NOTES:
1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2,000 PSI± UNREINFORCED CONCRETE
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.



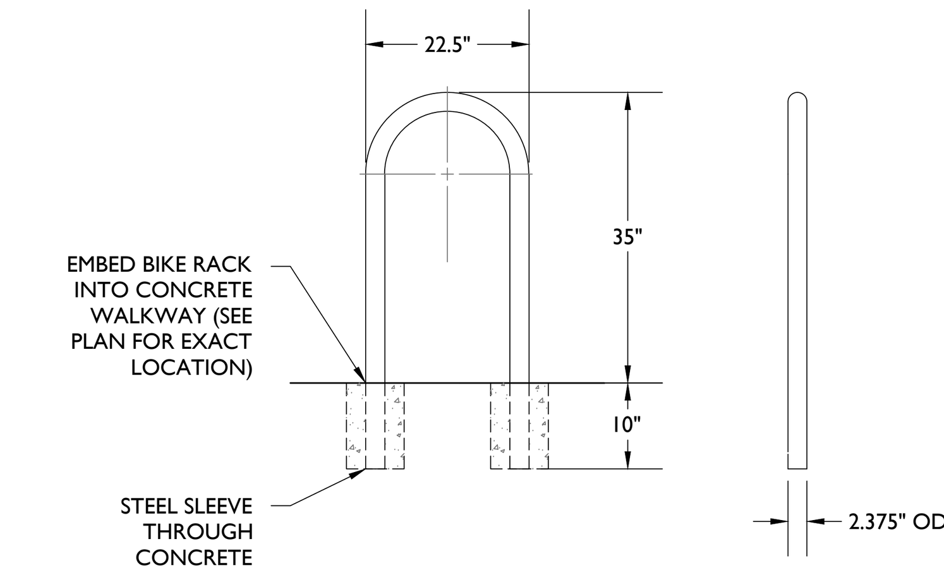
STANDARD UNIT/BASE PAD ISOMETRIC SECTION VIEW
*DIMENSIONS & WEIGHT MAY VARY BY REGION

BLOCK WALL DETAIL

NOT TO SCALE

NOTES:
1. RETAINING WALL DESIGN PLANS TO BE PREPARED BY LICENSED PROFESSIONAL IN THE STATE OF NEW JERSEY.
2. KEYSTONE WALL SYSTEM, OR APPROVED EQUIVALENT, TO BE CONSTRUCTED.

2

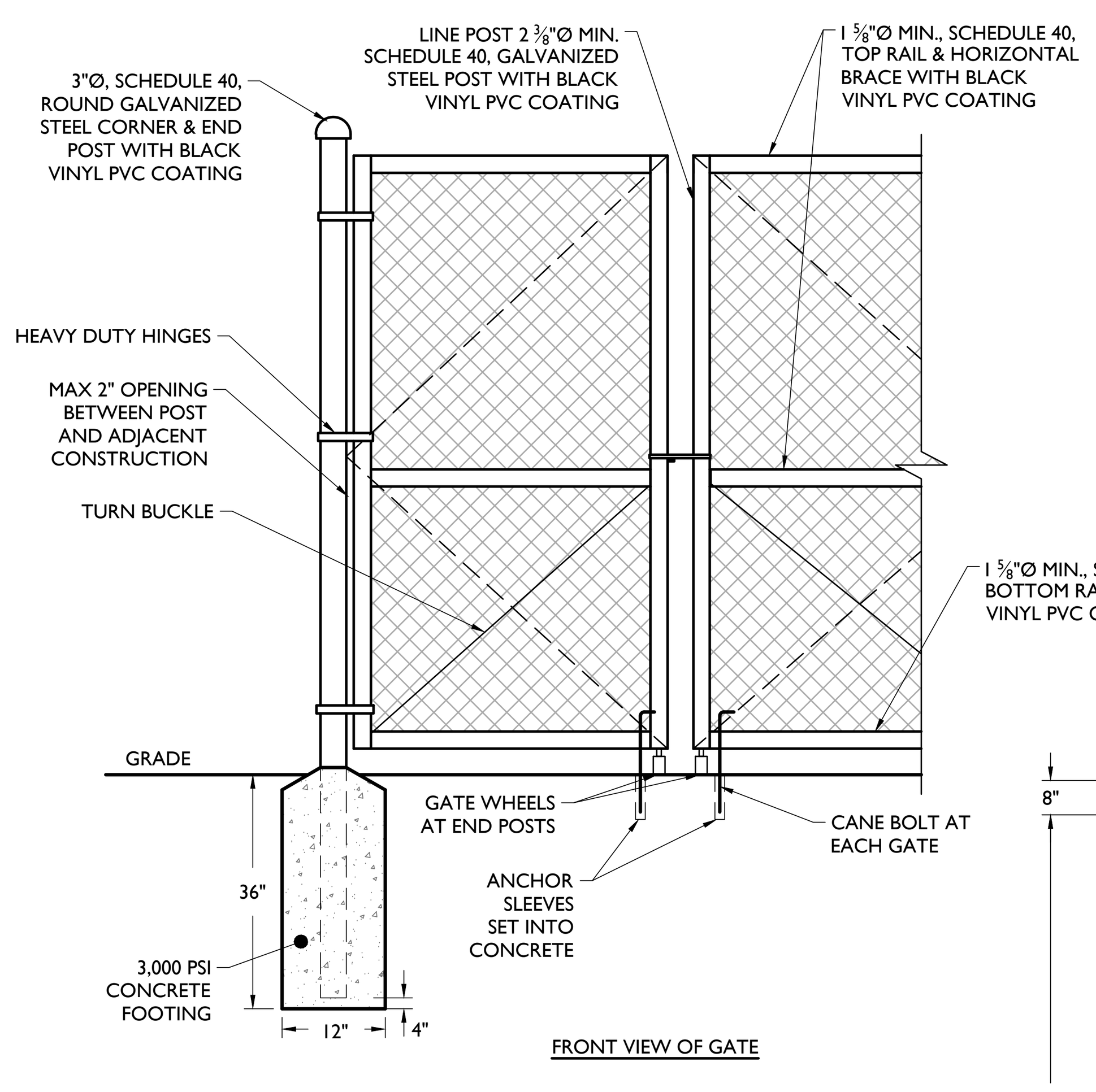


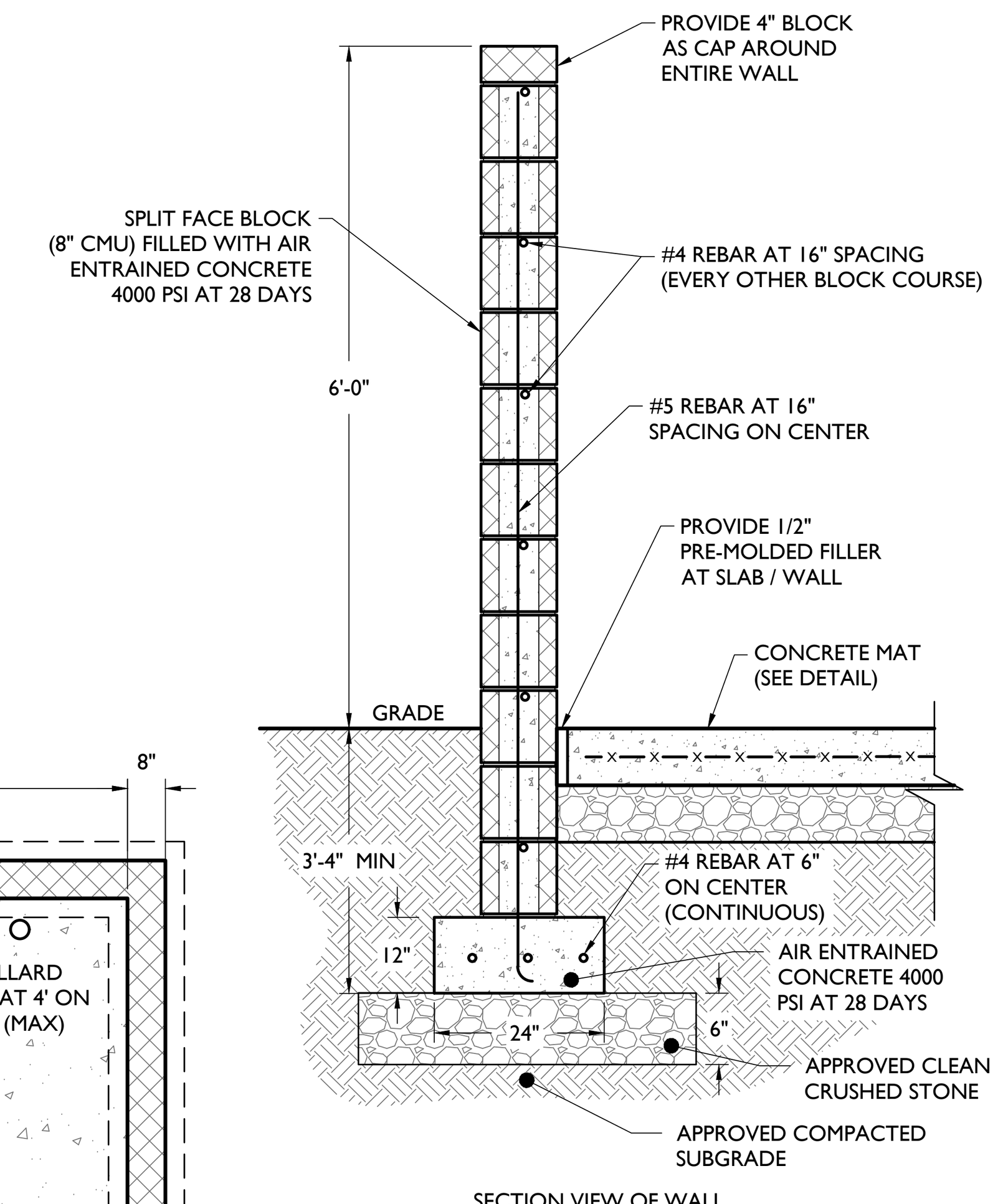
HOOP RACK HD IN GROUND MOUNTED BIKE RACK DETAIL

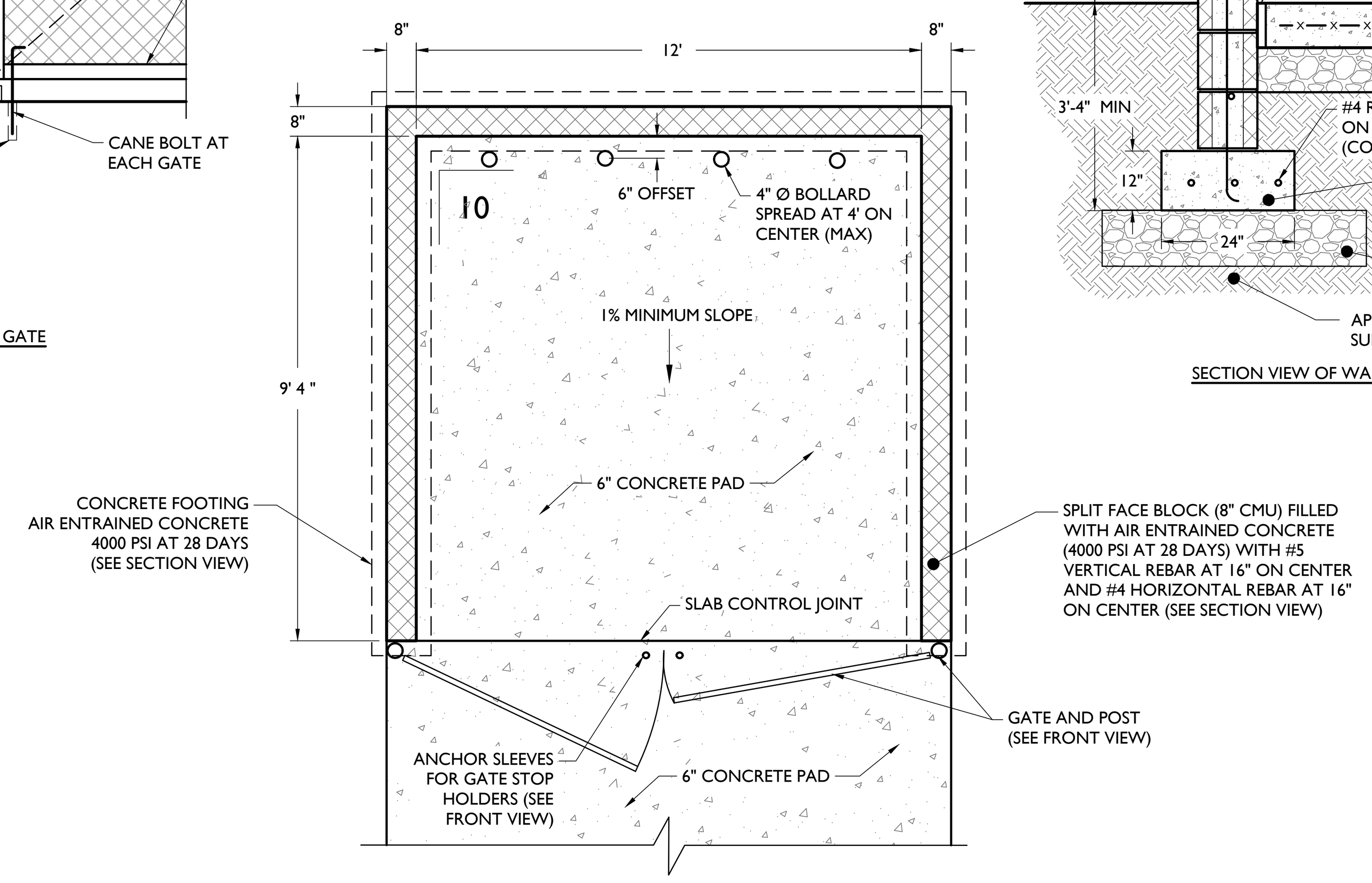
NOT TO SCALE

NOTES:
1. BIKE RACK TO BE MANUFACTURED BY DERO BIKE RACKS OR APPROVED EQUAL.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

3





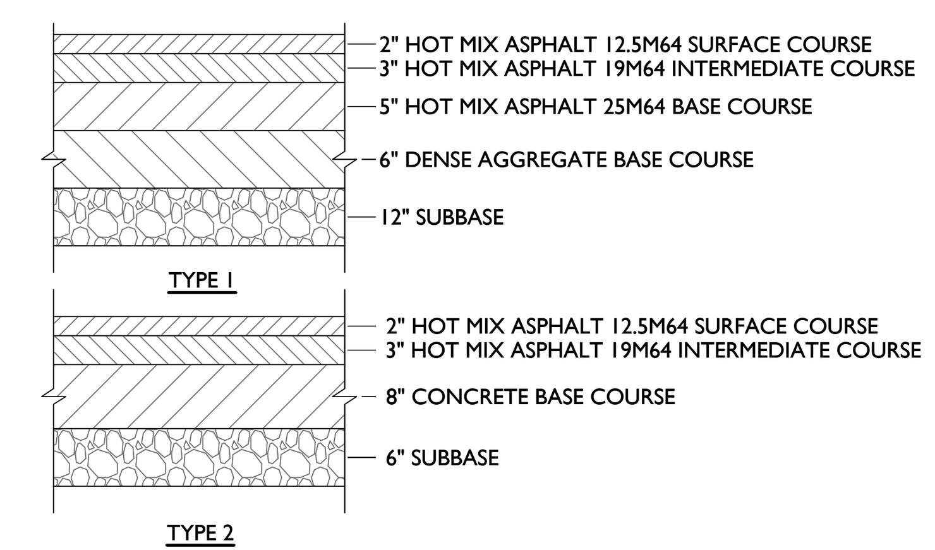


NOTE:
BLOCK COLOR TO MATCH BUILDING OR AS SPECIFIED BY OWNER

TRASH / RECYCLE ENCLOSURE DETAIL

NOT TO SCALE

4



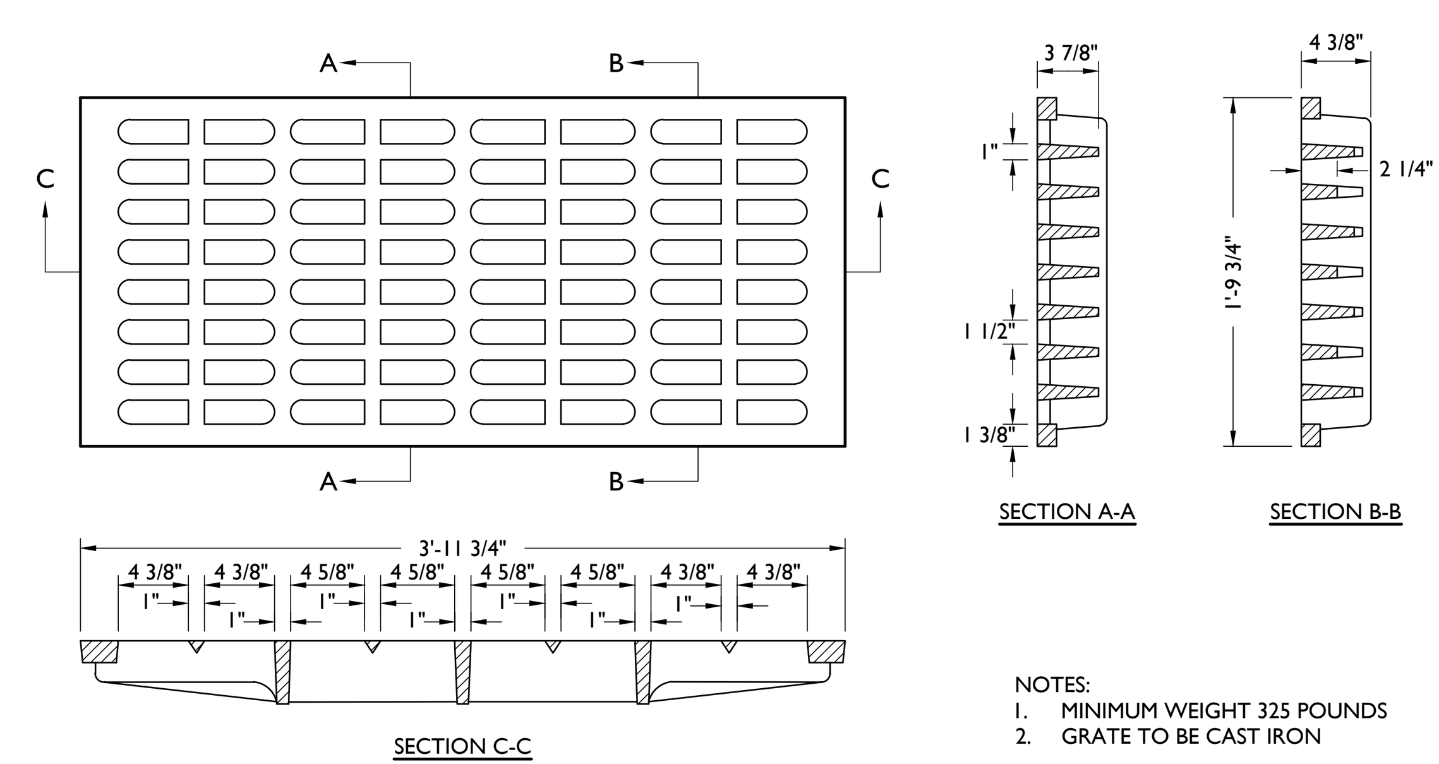
NJDOT PAVEMENT SECTION AND REPAIR STRIP DETAIL

(FOR USE WITHIN NJDOT ROW)

NOT TO SCALE

NOTES:
1. FOR AREAS 5.0 FEET OR MORE IN WIDTH, USE TYPE 1.
2. FOR AREAS LESS THAN 5.0 FEET IN WIDTH WHEN PROPER ASPHALT COMPACTION IS NOT POSSIBLE, USE TYPE 2.
3. IF PAVEMENT CONSTRUCTION ENCROACHES ON EXISTING TRAVEL LANES, THE ENTIRE LANE SHALL BE MILLED AND RESURFACED.
4. FOR MILLING AND RESURFACING, USE HOT MIX ASPHALT 12.5 ME SURFACE COURSE, 2" THICK.
5. SAW CUT PAVEMENT PRIOR TO EXCAVATION.
6. UNDERCUT SOFT SUBGRADE AREAS AND REPLACE WITH ADDITIONAL DENSE GRADED AGGREGATE BASE COARSE.
7. UNIFORMLY SPRAY TACK COAT WHEN PLACING HOT MIX ASPHALT ON PAVED SURFACE.
8. USE POLYMERIZED JOINT ADHESIVE FOR LONGITUDINAL JOINT OF THE NEW SURFACE COARSE WITH EXISTING HOT MIX ASPHALT, CURB, OR ANY VERTICAL SURFACE ALONG THE NEW SURFACE.
9. EXISTING CONCRETE PAVEMENT SHOULD BE REPAIRED IN KIND FOR FULL WIDTH OF LANE IN ACCORDANCE WITH THE STANDARD DETAIL CD-453.
10. DENSE GRADED AGGREGATE BASE COARSE AND SUBBASE SHOULD EXTEND A MINIMUM OF 3" BEYOND THE OUTER EDGE OF THE PROPOSED CURB.
11. REPAIR ANY ASPHALT PAVEMENTS, WHICH EXHIBIT HIGH SEVERITY CRACKING, POTHOLES, OR OTHER DAMAGE IN ACCORDANCE WITH 401.03.01.D OF 2007 NJDOT SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION (ITEM NO. 401021M).
12. IF ANY PAVEMENT CONSTRUCTION (WIDENING, NEW/RESETTING CURB ETC.) ENCROACH AN EXISTING TRAVEL LANE, THEN MILL 2" OF EXISTING PAVEMENT AND RESURFACE WITH 2" THICK HOT MIX ASPHALT 12.5ME SURFACE COURSE THE FULL WIDTH OF THAT TRAVEL LANE ALONG NEW CONSTRUCTION WITHOUT ANY JOINTS.
13. UNDERCUT SOFT SUBGRADE AREAS AND REPLACE WITH ADDITIONAL SUBBASE WHERE THE WATER TABLE IS NOT ENCOUNTERED WITHIN THE DEPTH OF EXCAVATION.
14. SHOULD THE EXISTING CORE THICKNESS SHOW ASPHALT DEPTH LESS THAN 8", THIS PAVEMENT SECTION SHALL BE USED.
15. CONTRACTOR TO EXCAVATE AND REPLACE ANY UNSTABLE MATERIAL WITH SUBBASE.

5

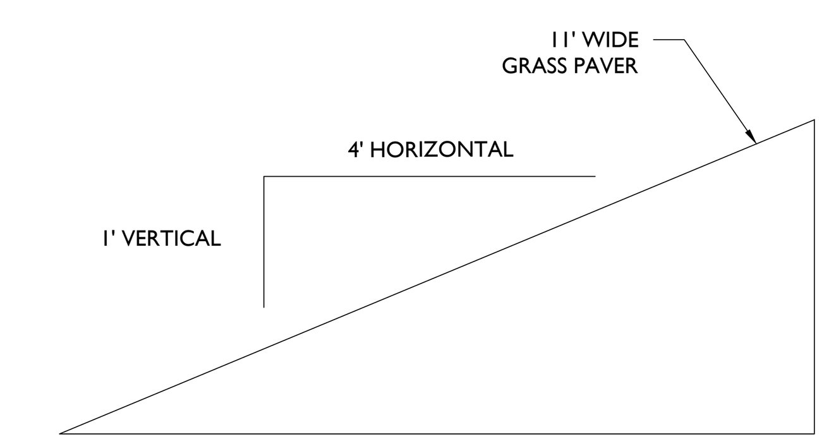


NOTES:
1. MINIMUM WEIGHT 325 POUNDS
2. GRATE TO BE CAST IRON

BICYCLE SAFE GRATE

NOT TO SCALE

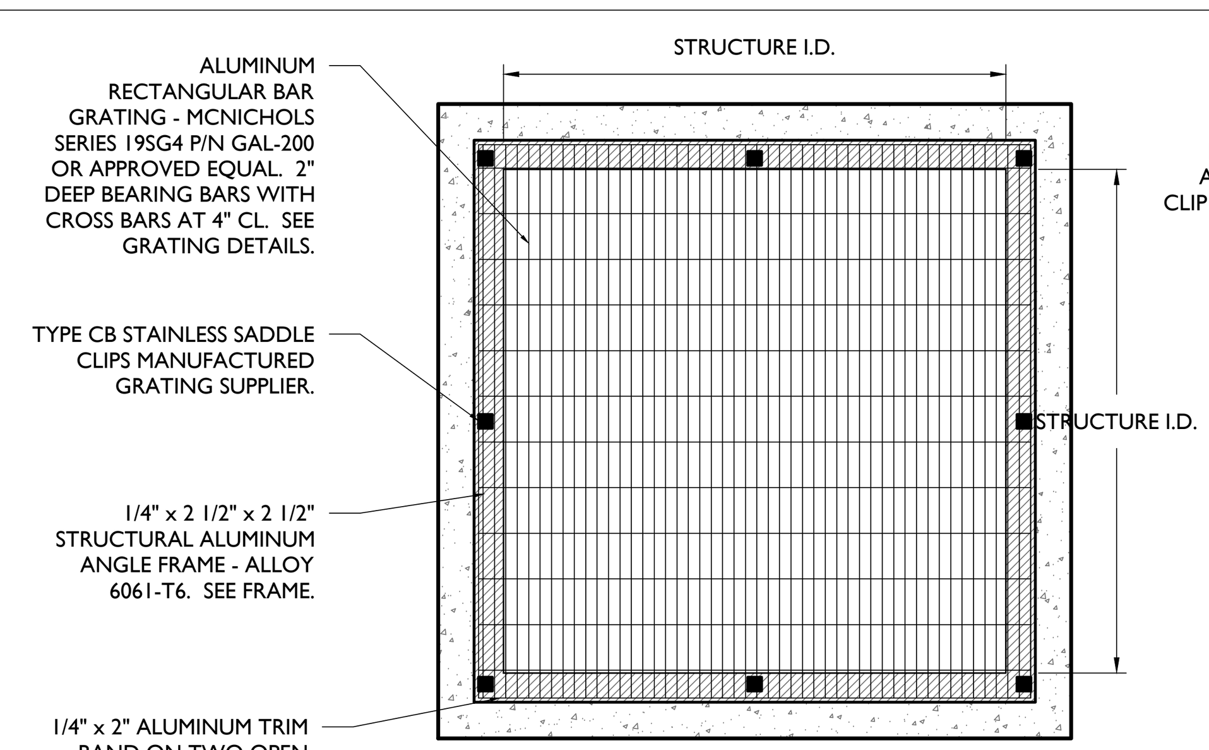
6



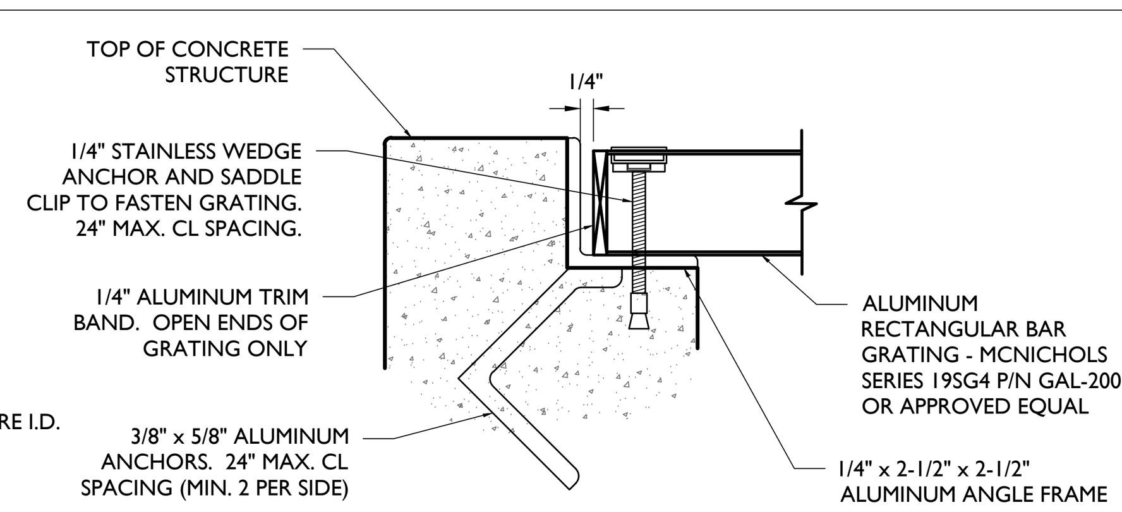
ABOVE GROUND BASIN MAINTENANCE PATH DETAIL

NOT TO SCALE

7

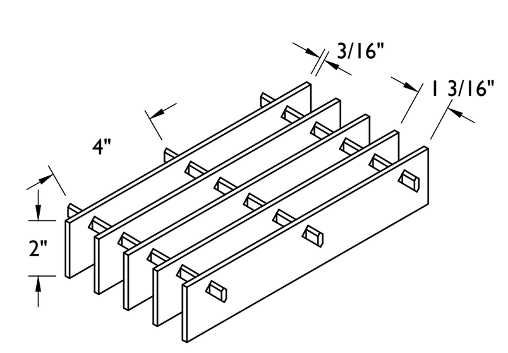


PLAN VIEW



FRAME EMBEDMENT DETAIL

FLAT TRASH RACK DIMENSIONS		
STRUCT	WIDTH	HEIGHT
OS1	48"	20"
OS2	24"	24"



GRATE DETAIL

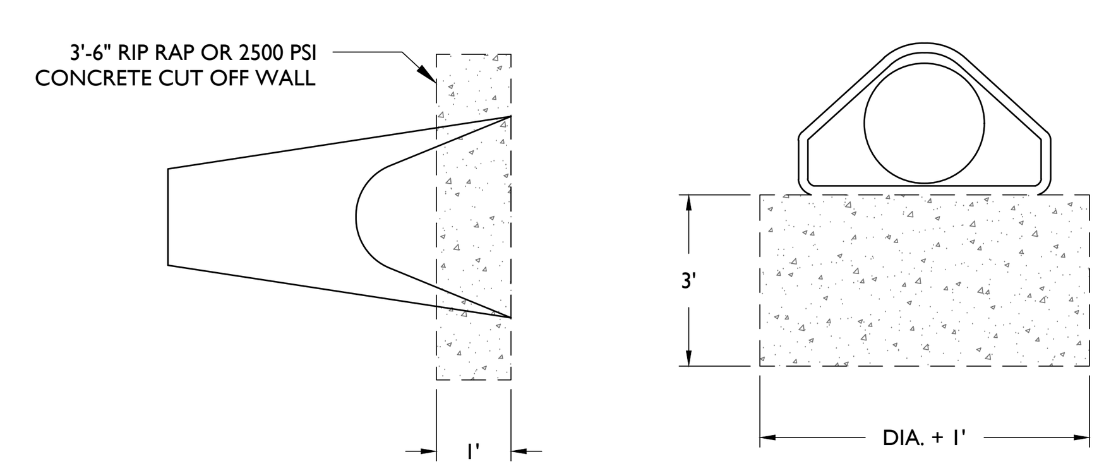
(SOURCE: EFFLUENT DESIGN & FABRICATION, LLC)

NOTES:
1. ALL ALUMINUM TO BE ALLOY 6061-T6.
2. FRAME ANCHORS FOR CONCRETE SHALL BE WELDED TO UNDERSIDE OF FRAME. FRAME TO BE CAST IN CONCRETE.
3. ALL FASTENERS TO BE STAINLESS STEEL TYPE 308 OR 304.
4. 1/4" x 3 1/4" WEDGE ANCHORS MAY BE SUBSTITUTED WITH 1/4" x 2 1/2" STAINLESS SELF-TAPPING TEK SCREWS IF INSTALLING CONTRACTOR PREFERS.

FLAT TRASH RACK DETAIL

NOT TO SCALE

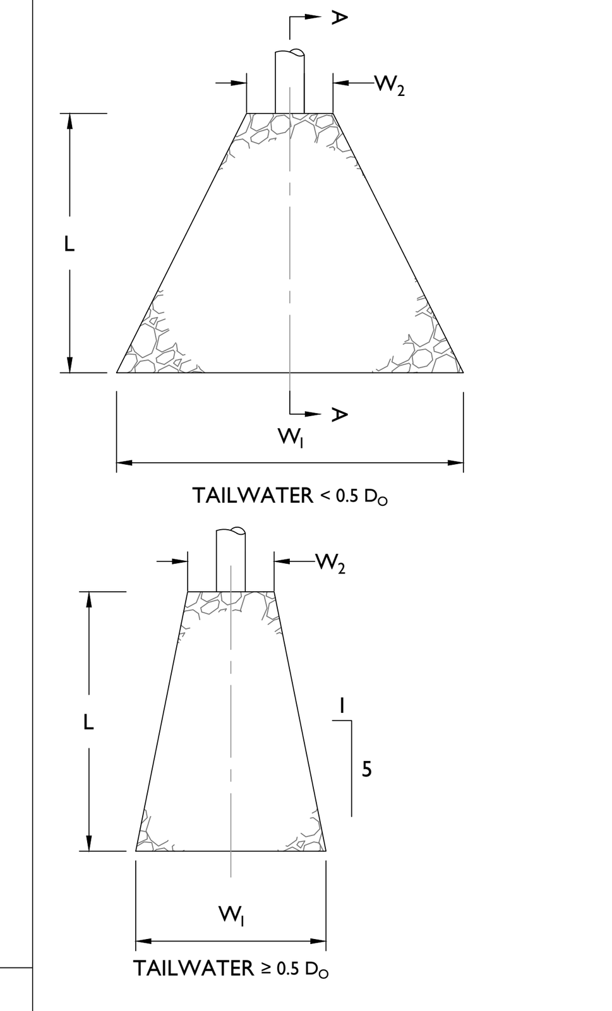
8



FLARED END SECTION DETAIL

NOT TO SCALE

9



RIP-RAP SIZING CHART					
FES #	L (ft)	W_1 (ft)	W_2 (ft)	D_{50} (in)	Th* (in)
1	15.00	19.00	5.00	6.00	12.00
2	15.00	19.00	5.00	6.00	12.00
3	4.00	6.00	2.00	6.00	12.00

(*) = MINIMUM APRON THICKNESS SHALL BE TWO TIMES THE D_{50} SIZE FOR THE APRON.

NOTES:
1. APRON @ CHANNEL BOTTOM GRADE
2. SIDE SLOPE RANGE FROM 1:1 TO 2:1
3. RIPRAP SHALL BE COMPOSED OF A WELL-GRADED MIXTURE OF STONE SIZE SO THAT 50% OF THE PIECES, BY WEIGHT, SHALL BE LARGER THAN THE d50 SIZE.
4. BASKET WIRE TO BE GALVANIZED STEEL, MESH OPENING SHALL NOT EXCEED 4.5" OR HAVE AN AREA GREATER THAN 10 SQ.IN

RIP-RAP PAD

NOT TO SCALE

10

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
05	01/24/2022	BJD	FOR MUNICIPAL RESUBMISSION
04	07/23/2021	BJD	FOR MUNICIPAL RESUBMISSION
03	06/14/2021	BJD	FOR SCD RESUBMISSION
02	06/02/2021	BJD	FOR MUNICIPAL RESUBMISSION
01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY | DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY
BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

STATE OF NEW JERSEY
JEFFREY MARTELL
No. GE47290
LICENSED
PROFESSIONAL ENGINEER
JEFFREY A. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
Digitally signed by Jeffrey Martell
DN: CN=Jeffrey Martell, dnQualifier=A01410C0000017BC710DC920000B3EE, O=STONEFIELD ENGINEERING AND DESIGN LLC, C=US
Date: 2022.02.18 10:38:31-05'00'

STONEFIELD engineering & design

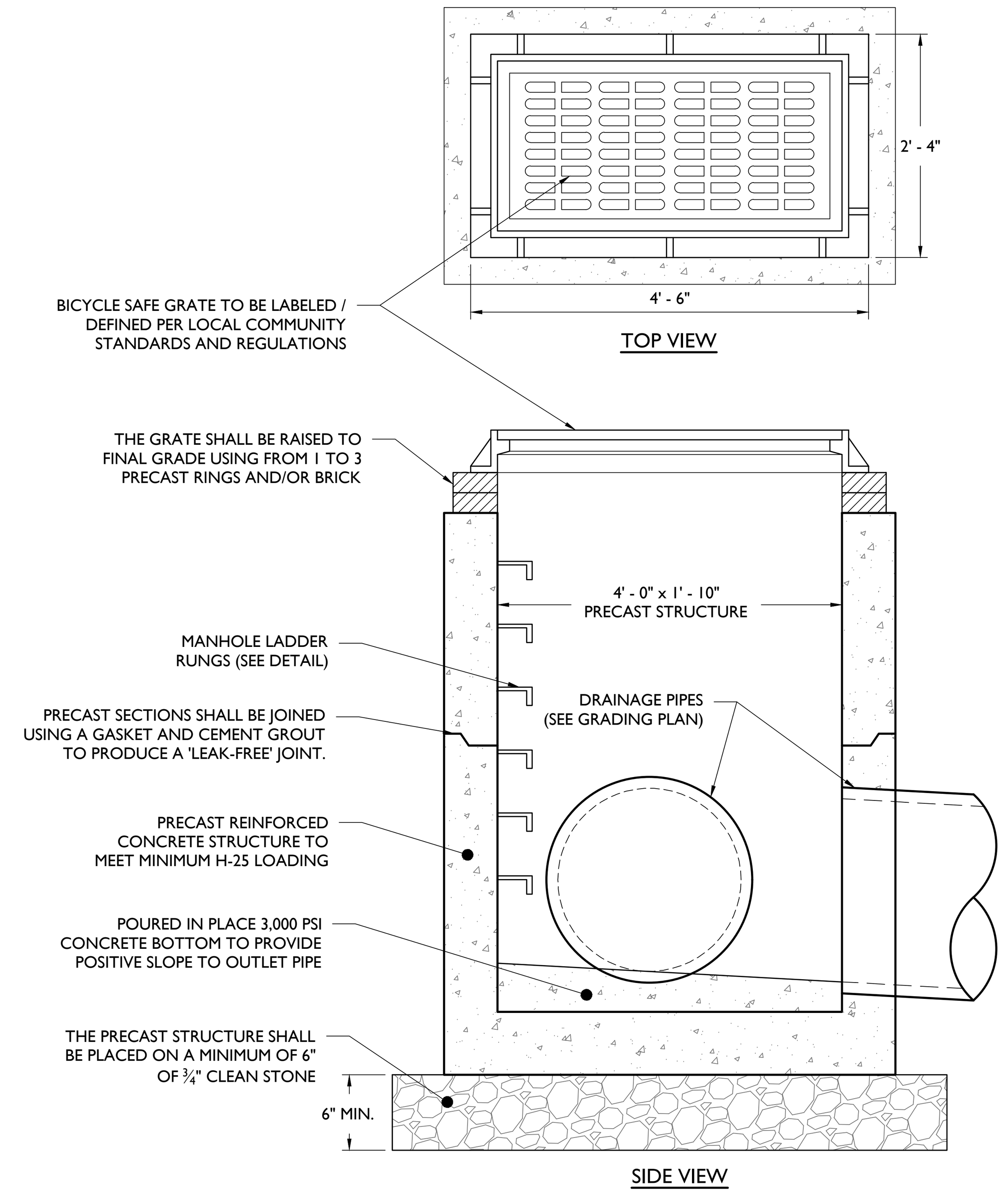
SCALE: AS SHOWN | PROJECT ID: PRI-200094

TITLE:
CONSTRUCTION DETAILS

DRAWING:
C-13

Z:\PRINCETON\PRI\2020\PRI-200094 ARCO MURRAY - 1613 ROUTE 27, FRANKLIN, NJ\CADD\PLOT\PRI-13-DETL.DWG

NOTES:
1. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
2. FRAME AND GRATE TO BE CAST-IRON AND SUPPORT MINIMUM H-25 LOADING.
3. ALL JOINTS TO BE WATER-TIGHT.
4. SUBGRADE BENEATH STRUCTURE SHALL BE LEVELED AND COMPACTED AS NECESSARY PRIOR TO INSTALLING STRUCTURE.

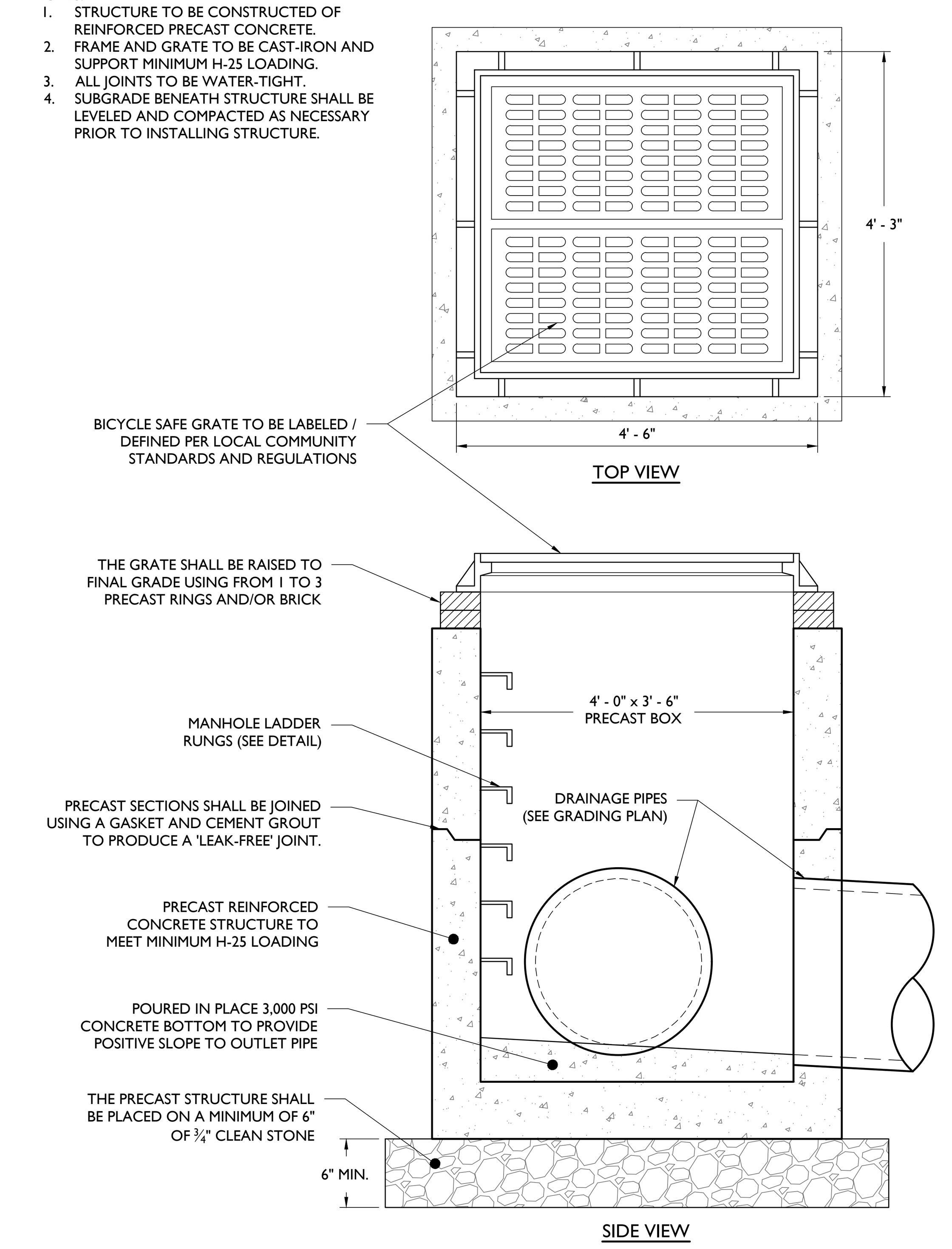


TYPE 'A' STORM INLET DETAIL

NOT TO SCALE

1

NOTES:
1. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
2. FRAME AND GRATE TO BE CAST-IRON AND SUPPORT MINIMUM H-25 LOADING.
3. ALL JOINTS TO BE WATER-TIGHT.
4. SUBGRADE BENEATH STRUCTURE SHALL BE LEVELED AND COMPACTED AS NECESSARY PRIOR TO INSTALLING STRUCTURE.

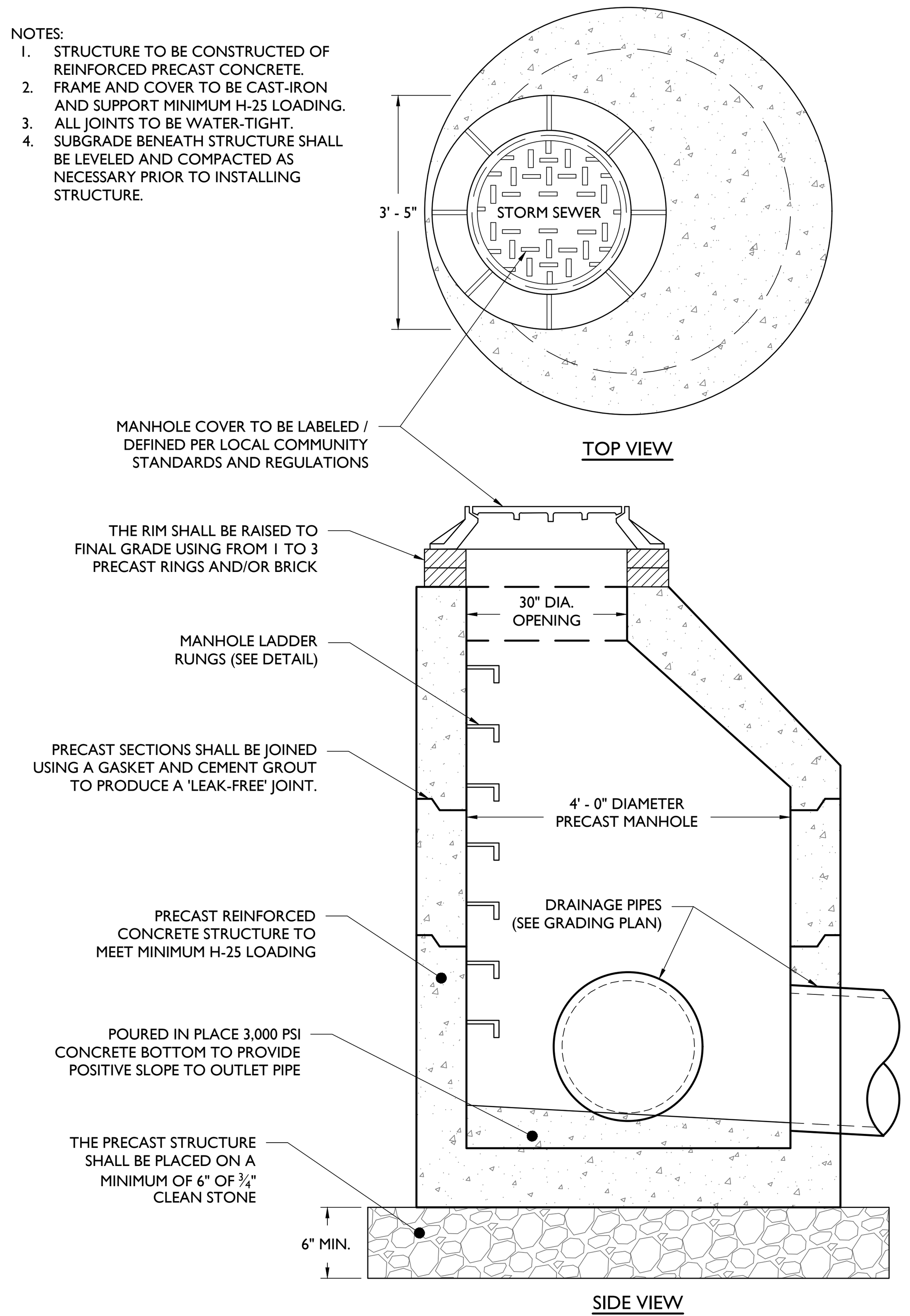


TYPE 'E' STORM INLET DETAIL

NOT TO SCALE

2

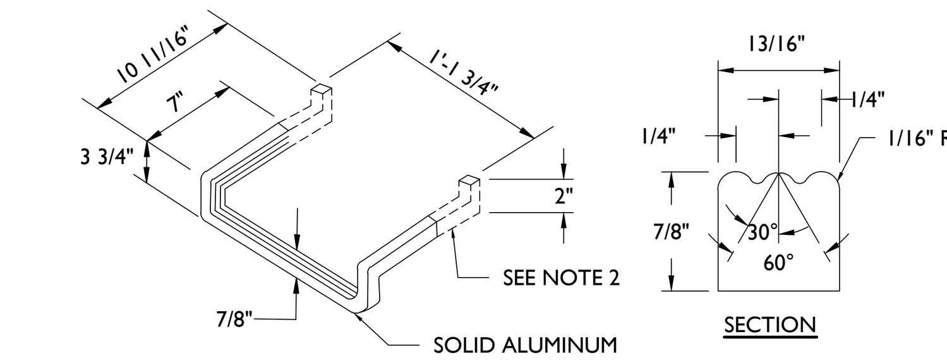
NOTES:
1. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
2. FRAME AND COVER TO BE CAST-IRON AND SUPPORT MINIMUM H-25 LOADING.
3. ALL JOINTS TO BE WATER-TIGHT.
4. SUBGRADE BENEATH STRUCTURE SHALL BE LEVELED AND COMPACTED AS NECESSARY PRIOR TO INSTALLING STRUCTURE.



STORM MANHOLE DETAIL

NOT TO SCALE

3

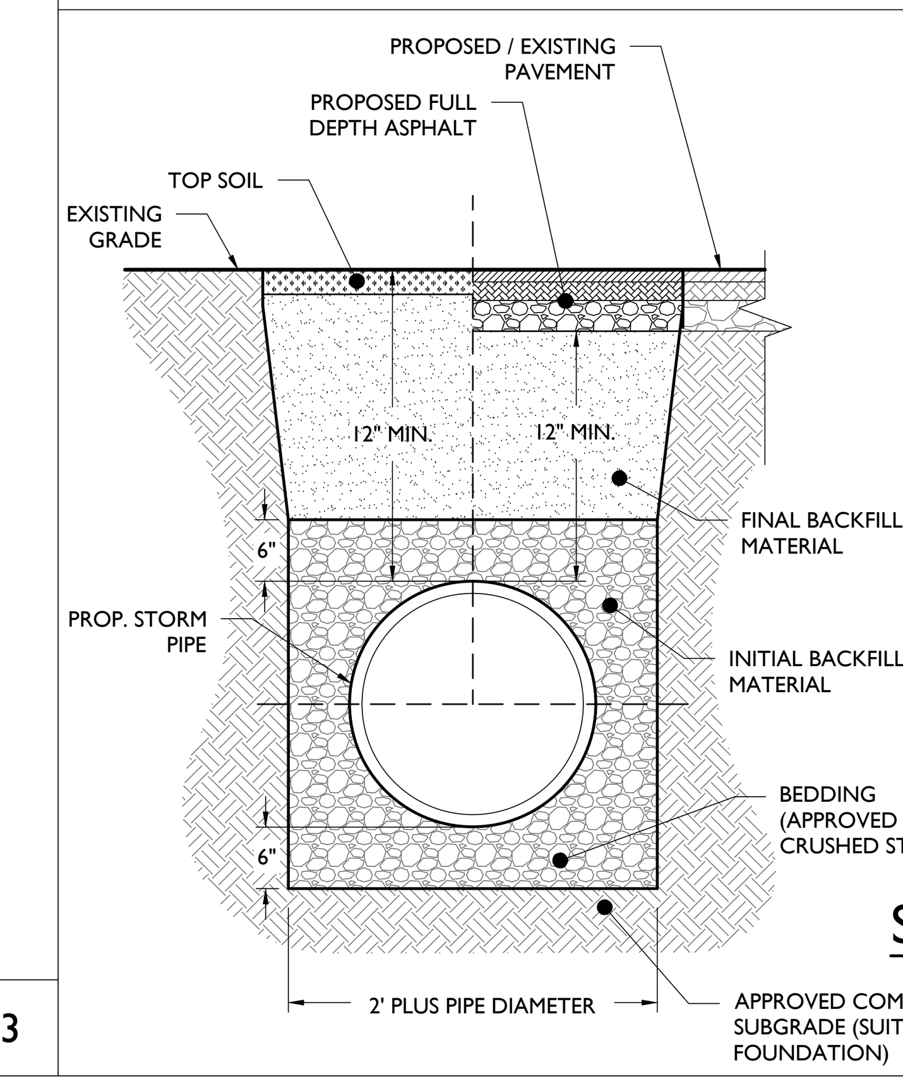


NOTES:
1. ALUMINUM STEP SHALL BE EXTRUDED ALUMINUM 6061-T6 ALLOW DROP FRONT DESIGN OR APPROVED EQUAL.
2. THE PORTION TO BE IMBEDDED IN THE CONCRETE SHALL BE COATED WITH COAL TAR PITCH OR OTHER APPROVED MATERIAL AND SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARD.
3. LADDER RUNGS SHALL BE ALIGNED AND INSTALLED BETWEEN ALL PRECAST MANHOLE SECTIONS.

MANHOLE STEP

NOT TO SCALE

4

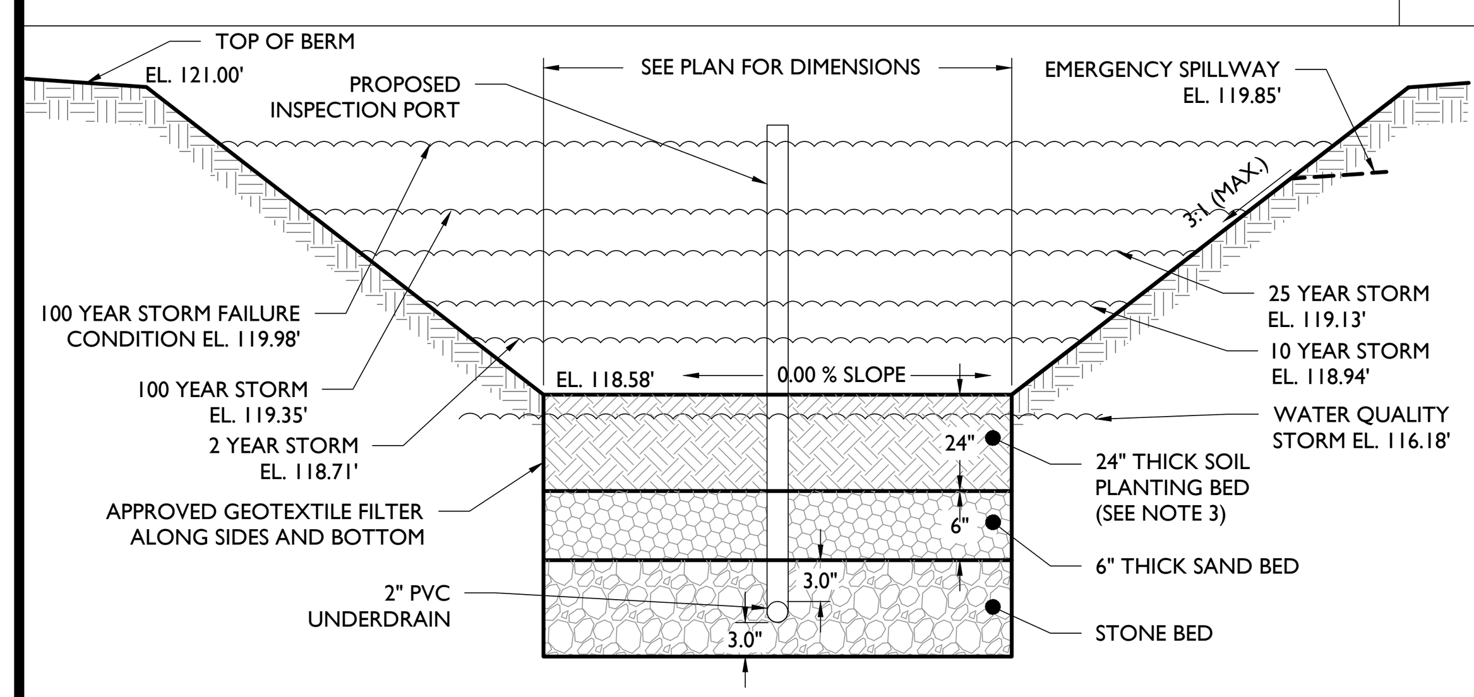


NOTES:
1. ALL PIPE SYSTEM INSTALLATIONS SHALL MEET ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
2. ALL HDPE PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS" (LATEST EDITION).
3. ALL RCP PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C76-15, "STANDARD SPECIFICATION FOR REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE" (LATEST EDITION).
4. FOR NON HDPE OR RCP PIPE INSTALLATIONS, CONTRACTOR SHALL INSTALL PIPE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
5. WHERE THE TRENCH BOTTOM IS UNSTABLE, CONTRACTOR SHALL PROVIDE SUITABLE BACKFILL MATERIAL AS REQUIRED BY ENGINEER OR PER GEOTECH RECOMMENDATIONS.
6. MINIMUM COVER IN TRAFFIC AREAS IS 12" UP TO 48" DIAMETER PIPE AND 24" FOR 54" - 60" DIAMETER PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT.
7. CONTRACTOR SHALL INSTALL SUITABLE MATERIAL FOR INITIAL AND FINAL BACKFILL. BACKFILL COMPACTION SHOULD MEET ALL APPLICABLE STANDARDS AND SPECIFICATIONS.

STORM TRENCH DETAIL

NOT TO SCALE

5



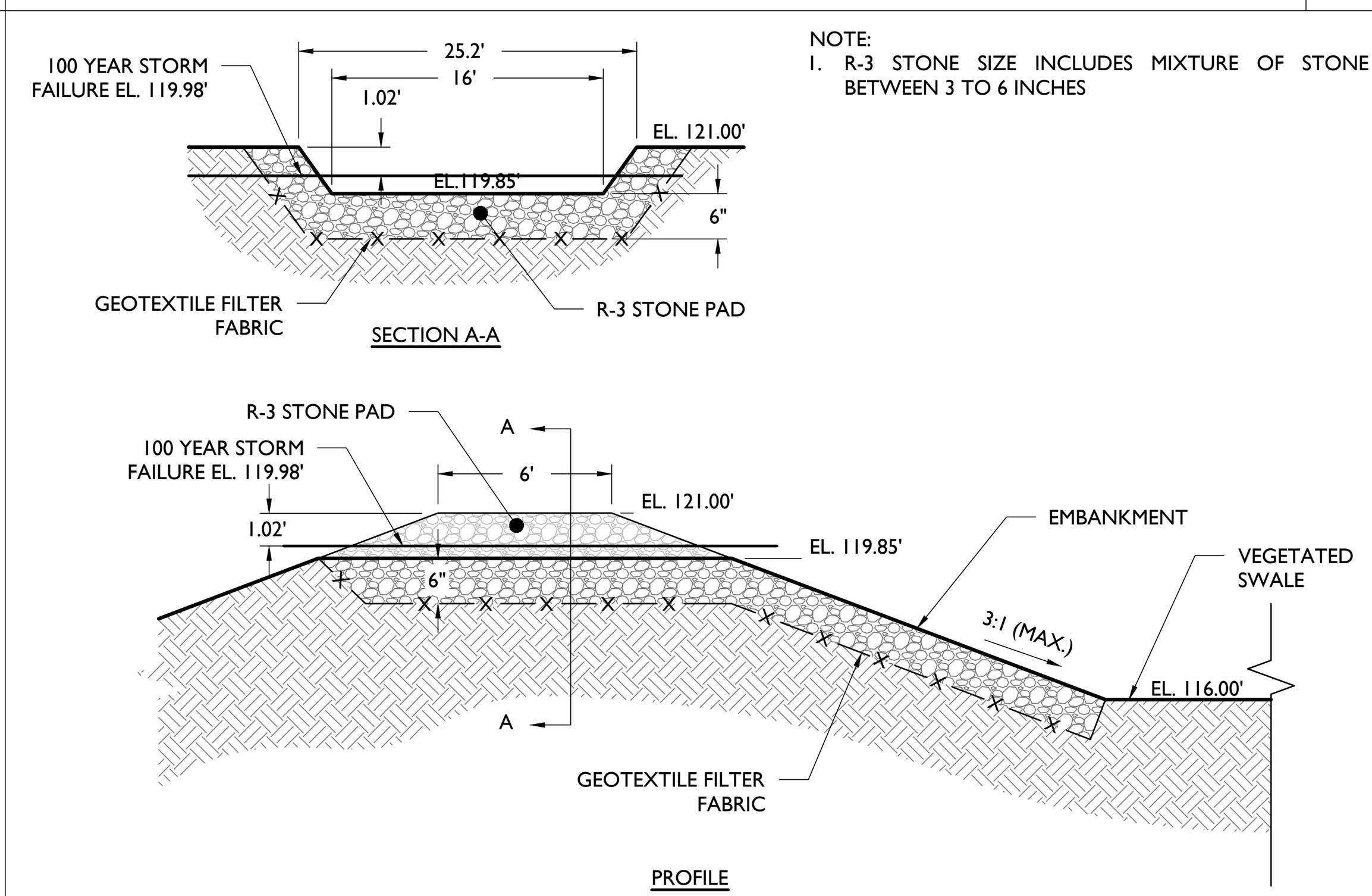
BIORETENTION SYSTEM (B-1) DETAIL

NOT TO SCALE

NOTES:
1. BASIN CONSTRUCTION MUST NOT COMPACT SOILS BELOW BASIN BOTTOM.
2. BIORETENTION AREA CONSTRUCTION MUST NOT COMPACT SOILS BELLOW SOIL BED BOTTOM.
3. THE PLANTING SOIL BED SHALL CONSIST OF THE FOLLOWING MIX: 85%-95% SANDS WITH <25% OF THE SANDS CLASSIFIED AS FINE OR VERY FINE, <15% SILT AND CLAY WITH 2%-5% CLAY CONTENT. THE MIX SHALL BE AMENDED WITH 5%-7% ORGANICS. pH LEVELS SHALL RANGE FROM 5.5 TO 6.5. THE SOIL MIX MUST BE CERTIFIED BY EITHER THE VENDOR OR A LICENSED PROFESSIONAL ENGINEER DURING ONSITE MIXING.
4. THE PLANTING SOIL BED SHALL BE PLACED IN 12" TO 18" LIFTS.
5. REFER TO THE LANDSCAPING PLANS FOR BIORETENTION AREA PLANTINGS.
6. PROPOSED INSPECTION PORT SHALL EXTEND 1.5' ABOVE THE SURFACE OF THE SOIL BED AND MUST BE COVERED IN SUCH A WAY TO PREVENT MIGRATION OF MATERIAL INTO STRUCTURE.
7. INSPECTION PORT MUST BE MARKED WITH MAXIMUM DESIGN STORM ELEVATION OF 119.35'.

6

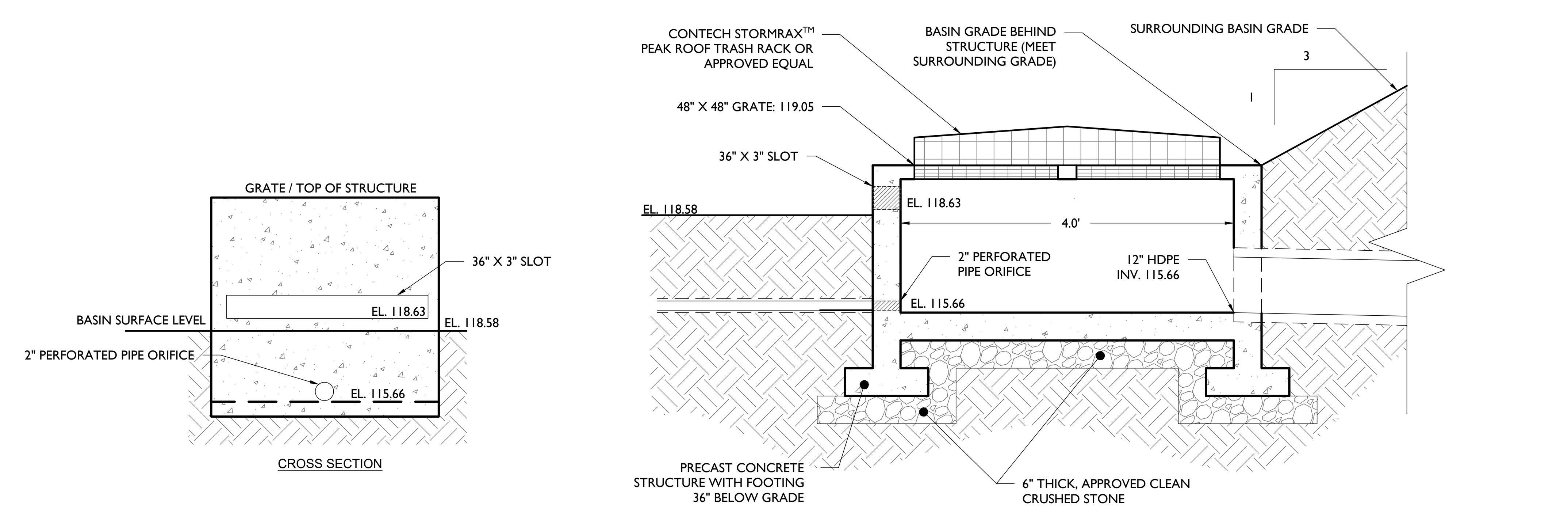
NOTE:
1. R-3 STONE SIZE INCLUDES MIXTURE OF STONE BETWEEN 3 TO 6 INCHES



EMERGENCY SPILLWAY DETAIL (BASIN B-1)

NOT TO SCALE

7

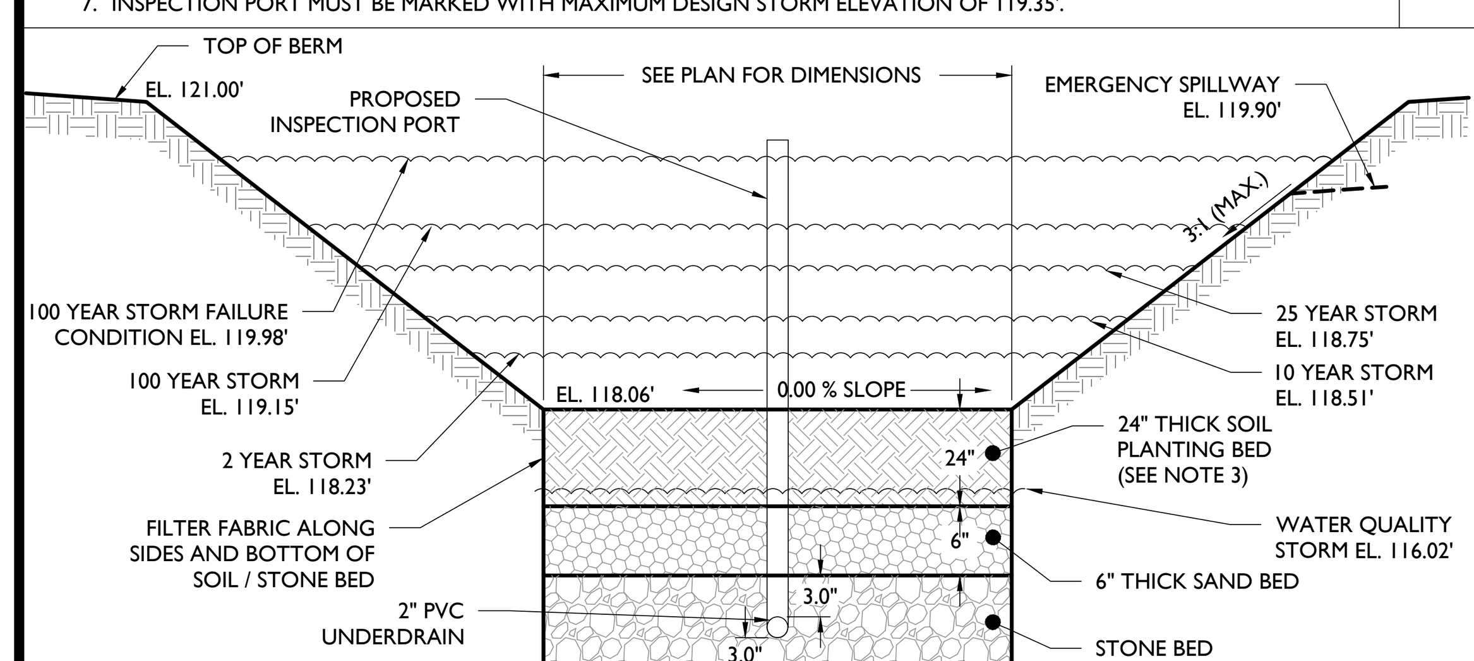


NOTE:
1. STRUCTURE SHALL SUPPORT H25 LOADING.
2. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
3. ALL JOINTS TO BE WATER-TIGHT.
4. TRASH RACKS CONSTRUCTED OF NON-CORROSIVE MATERIALS TO BE PROVIDED

ABOVE-GROUND OUTLET STRUCTURE (OS-5) DETAIL

NOT TO SCALE

8



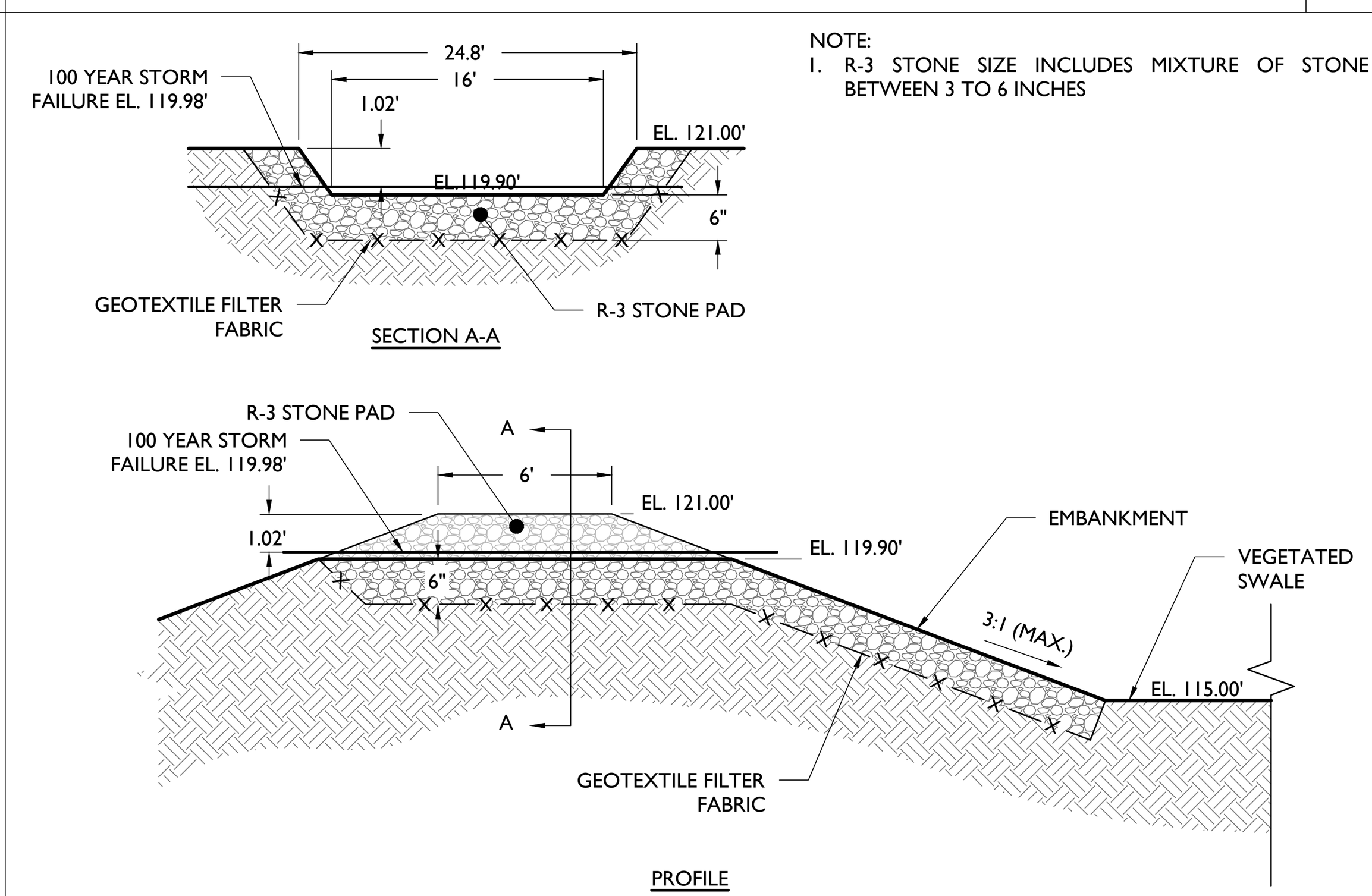
BIORETENTION SYSTEM (B-2) DETAIL

NOT TO SCALE

NOTES:
1. BASIN CONSTRUCTION MUST NOT COMPACT SOILS BELOW BASIN BOTTOM.
2. BIORETENTION AREA CONSTRUCTION MUST NOT COMPACT SOILS BELLOW SOIL BED BOTTOM.
3. THE PLANTING SOIL BED SHALL CONSIST OF THE FOLLOWING MIX: 85%-95% SANDS WITH <25% OF THE SANDS CLASSIFIED AS FINE OR VERY FINE, <15% SILT AND CLAY WITH 2%-5% CLAY CONTENT. THE MIX SHALL BE AMENDED WITH 5%-7% ORGANICS. pH LEVELS SHALL RANGE FROM 5.5 TO 6.5. THE SOIL MIX MUST BE CERTIFIED BY EITHER THE VENDOR OR A LICENSED PROFESSIONAL ENGINEER DURING ONSITE MIXING.
4. THE PLANTING SOIL BED SHALL BE PLACED IN 12" TO 18" LIFTS.
5. REFER TO THE LANDSCAPING PLANS FOR BIORETENTION AREA PLANTINGS.
6. PROPOSED INSPECTION PORT SHALL EXTEND 1.5' ABOVE THE SURFACE OF THE SOIL BED AND MUST BE COVERED IN SUCH A WAY TO PREVENT MIGRATION OF MATERIAL INTO STRUCTURE.
7. INSPECTION PORT MUST BE MARKED WITH MAXIMUM DESIGN STORM ELEVATION OF 119.15'.

9

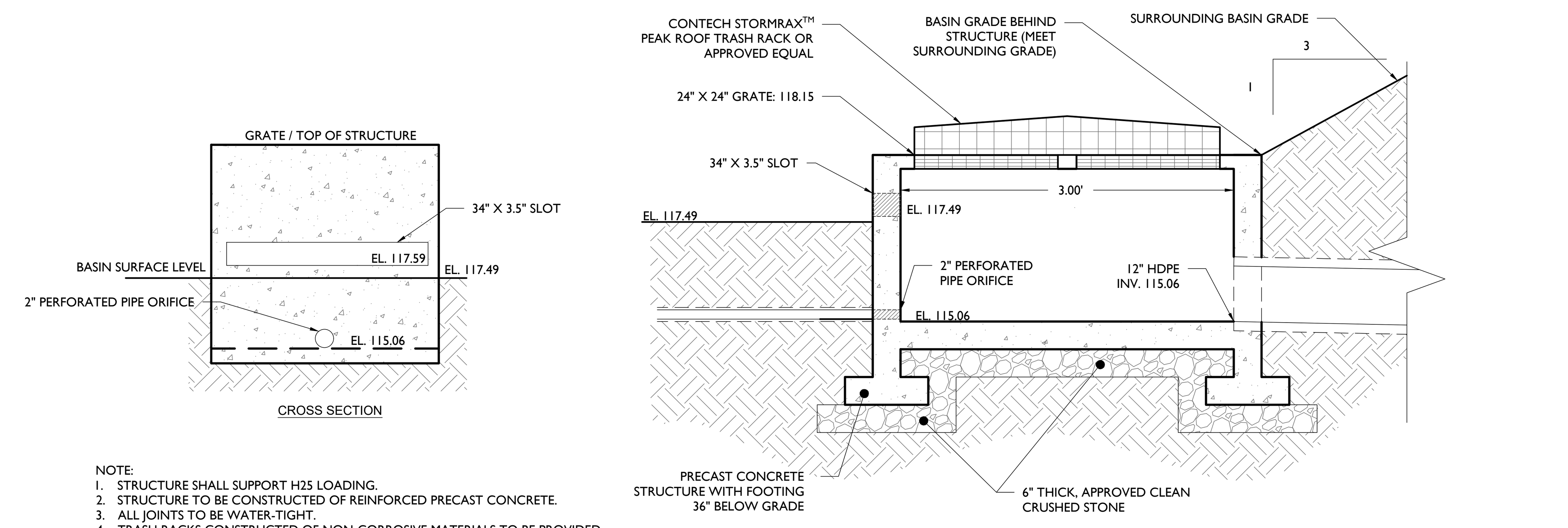
NOTE:
1. R-3 STONE SIZE INCLUDES MIXTURE OF STONE BETWEEN 3 TO 6 INCHES



EMERGENCY SPILLWAY DETAIL (BASIN B-2)

NOT TO SCALE

10



NOTE:
1. STRUCTURE SHALL SUPPORT H25 LOADING.
2. STRUCTURE TO BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE.
3. ALL JOINTS TO BE WATER-TIGHT.
4. TRASH RACKS CONSTRUCTED OF NON-CORROSIVE MATERIALS TO BE PROVIDED

ABOVE-GROUND OUTLET STRUCTURE (OS-6) DETAIL

NOT TO SCALE

11

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
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01	03/12/2021	BJD	FOR AGENCY SUBMISSION

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STATE OF NEW JERSEY · JEFFREY MARTELL · No. GE47290 · LICENSED · PROFESSIONAL ENGINEER
JEFFREY S. MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
STONEFIELD engineering & design

SCALE: AS SHOWN | PROJECT ID: PRI-200094

TITLE:
CONSTRUCTION DETAILS

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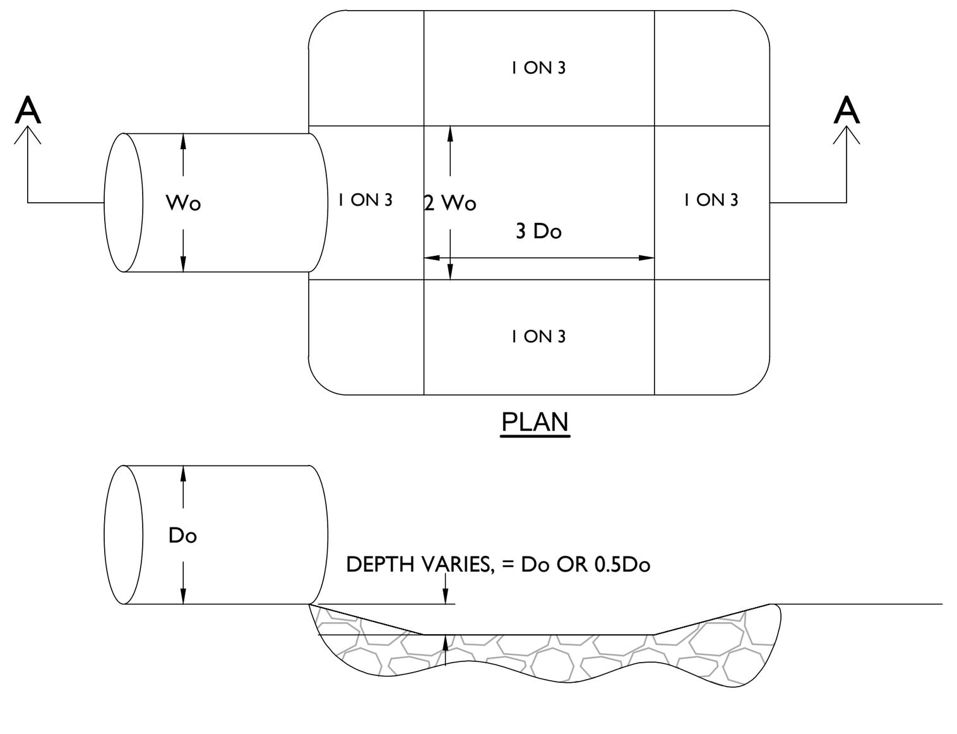
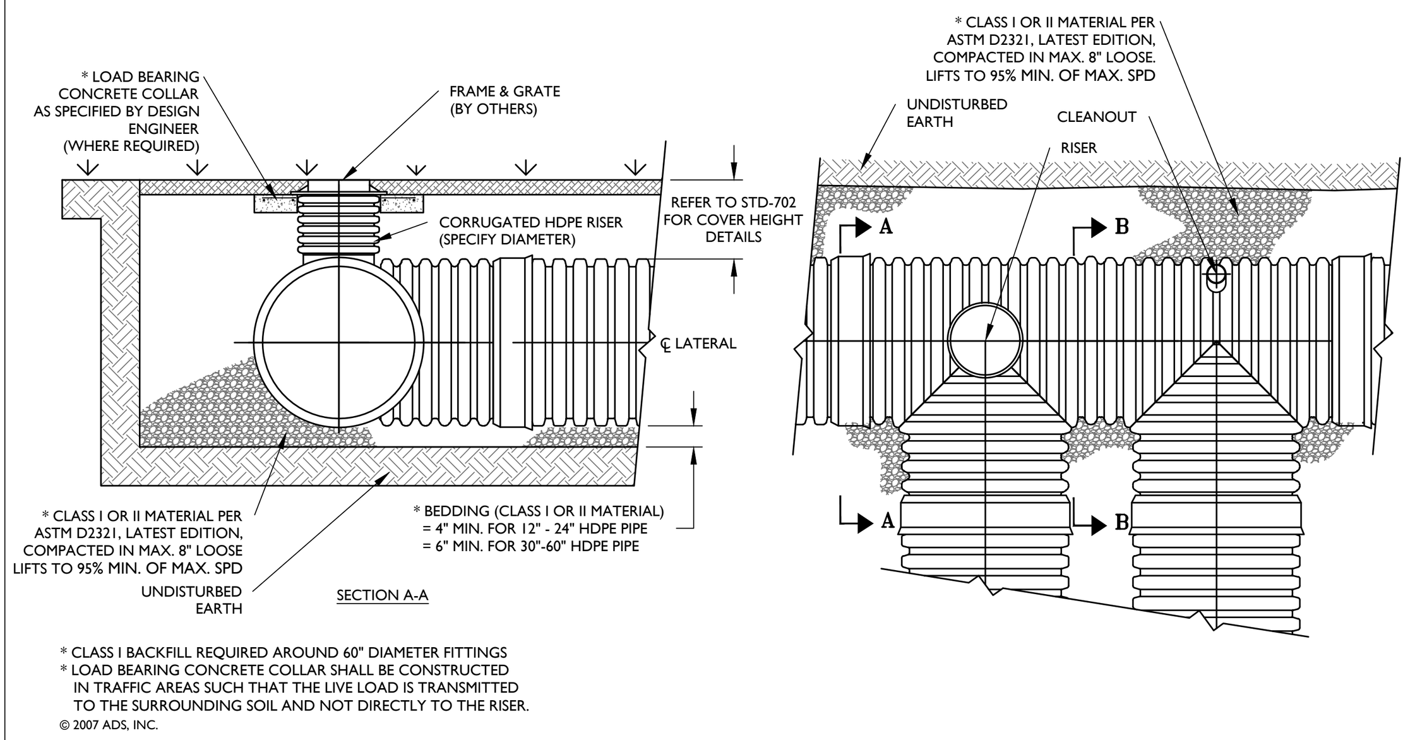
C-14



PREFORMED SCOUR HOLE

NOT TO SCALE

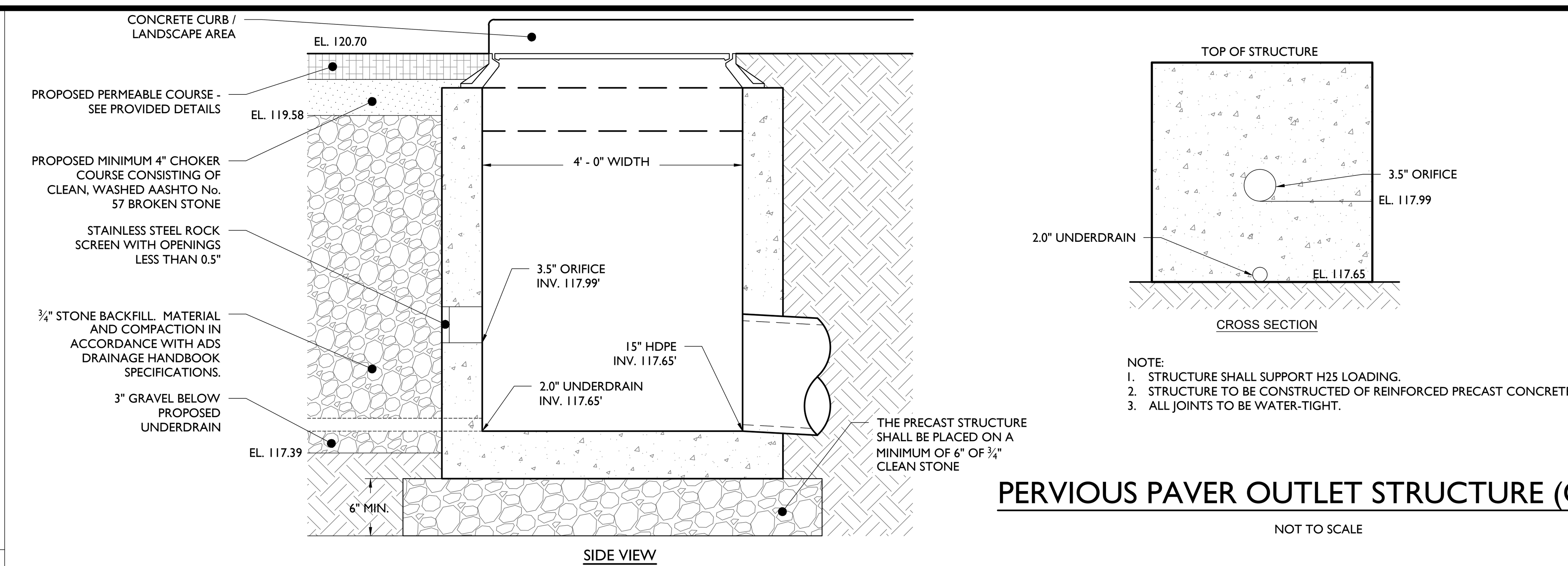
1



ADS TYPICAL RISER/CLEAN-OUT DETAIL

NOT TO SCALE

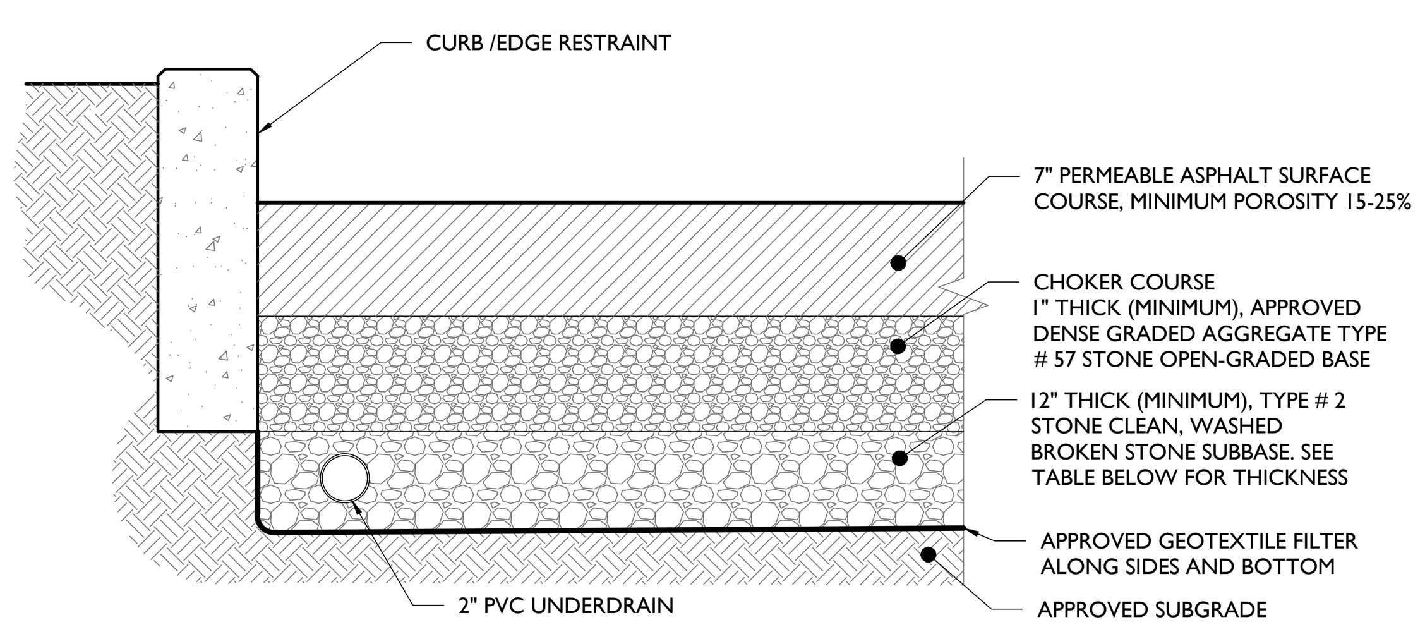
2



PERVIOUS PAVER OUTLET STRUCTURE (OS-1)

NOT TO SCALE

3



PERMEABLE ASPHALT DETAIL

NOT TO SCALE

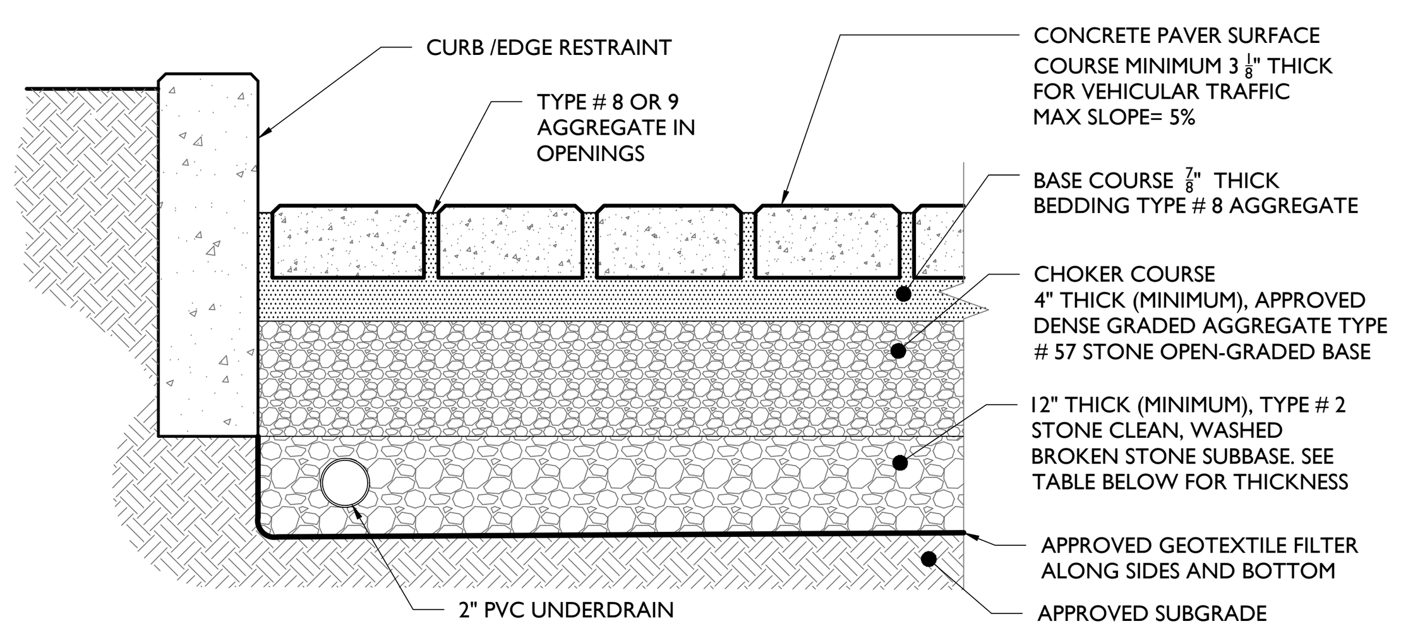
NOTES:

1. PERMEABLE PAVEMENT MUST BE IN ACCORDANCE WITH NJ STORMWATER BEST MANAGEMENT PRACTICES MANUAL, CHAPTER 9.6 & PER THE DESIGN STANDARDS OUTLINED IN THE WHTIESTONE POROUS PAVEMENT DESIGN RECOMMENDATIONS DATED JANUARY 25, 2022.
2. FILTER FABRIC IS REQUIRED ALONG THE SIDES AND BOTTOM OF THE SYSTEM TO PREVENT MITIGATION OF FINES FROM THE SURROUNDING SOIL.
3. THE STORAGE BED IN THIS TYPE OF SYSTEM CONSISTS OF AN AGGREGATE LAYER AND AN UNDERDRAIN, WHICH IS A NETWORK OF PIPES THAT COLLECT RUNOFF AND TRANSPORT IT TO THE OUTFLOW SECTION OF THE SYSTEM.
   - 3.1. THE AGGREGATE LAYER MUST HAVE SUFFICIENT DEPTH TO PROVIDE AT LEAST 3 INCHES OF AGGREGATE ABOVE AND BELOW THE PIPE NETWORK. IT MUST CONSIST OF CLEAN, WASHED, OPEN-GRADED AASHTO NO. 2 BROKEN STONE.
   - 3.2. WITHIN THE AGGREGATE LAYER, THE NETWORK OF PIPES MUST BE ABLE TO WITHSTAND THE DESIGN LOADS.
   - 3.3. THE MANIFOLD OR OTHER MECHANISMS USED TO COLLECT FLOW FROM THE PERMEABLE PAVEMENT SYSTEM MUST BE NON-PERFORATED.
   - 3.4. ALL JOINTS MUST BE SECURE AND WATERTIGHT.
   - 3.5. THE CAPACITY OF THE UNDERDRAIN MUST BE SUFFICIENT TO ALLOW THE SYSTEM TO DRAIN WITHIN 72 HOURS.
4. THE SEASONAL HIGH WATER TABLE (SHWT) OR BEDROCK MUST BE AT LEAST 1 FOOT BELOW THE BOTTOM OF THE STORAGE BED. CONTRACTOR SHALL REMOVE BEDROCK TO MEET MINIMUM SEPARATION REQUIREMENT OF 1.0 FT. BLASTING SHALL BE COMPETED PER LOCAL, COUNTY, STATE, & FEDERAL REGULATIONS, IF REQUIRED.
5. AT LEAST ONE INSPECTION PORT, WITH A REMOVABLE CAP, MUST BE PROVIDED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE PERFORATED SECTION OF THE NETWORK OF PIPES AND BE FLUSH WITH THE SURFACE OF THE SURFACE LAYER AND EACH LOCATION DENOTED IN THE MAINTENANCE PLAN. EACH INSPECTION PORT MUST BE PLACED AT LEAST 3 FEET FROM ANY EDGE. THE SIZE OF THE INSPECTION PORT MUST BE LARGE ENOUGH TO ALLOW FOR MAINTENANCE ACTIVITIES. ADDITIONALLY, EACH INSPECTION PORT MUST EXTEND DOWN 4 TO 6 INCHES INTO THE SUBSOIL.
6. THE CHOKER COURSE THICKNESS IS 2 INCHES.
7. STORAGE BED AGGREGATE MUST BE CLEAN, WASHED AND OPEN-GRADED AASHTO NO. 2 BROKEN STONE.
8. POST-CONSTRUCTION TESTING OF THE PERMEABLE PAVEMENT SURFACE COURSE IS REQUIRED AND MUST CONFORM TO THE METHODS OF ASTM C1781: STANDARD TEST METHOD FOR SURFACE INFILTRATION RATE OF PERMEABLE PAVEMENT SYSTEMS.
9. PERMEABLE PAVEMENT MAY ACCEPT ADDITIONAL INFLOW FROM A MAXIMUM AREA OF 3 TIMES THE AREA OF THE PERMEABLE PAVEMENT SYSTEM.
10. THE POROSITY OF PERMEABLE ASPHALT SURFACE COURSE MUST BE 15-25%.
11. THE BINDER USED IN THE SURFACE COURSE MUST BE PERFORMANCE GRADED FOR THE TYPE OF USE; THEREFORE, THE ASPHALT PLANT MUST ALSO BE ADVISED OF THE TYPE OF SURFACE COURSE SPECIFIED IN ORDER TO USE THE CORRECT BINDER FOR THE INSTALLATION. FOR PARKING LOTS, POLYMER MODIFIED BINDER PG64E-22 MUST BE SPECIFIED AS IT HAS BEEN SHOWN TO MINIMIZE SCUFFING CAUSED BY AUTOMOBILES WITH POWER STEERING.
12. THE POROSITY OF ANY PERMEABLE ASPHALT BASE COURSE MUST BE GREATER THAN OR EQUAL TO 25%.
13. MINIMUM AIR TEMPERATURE FOR PAVING: 50°F.
14. INSTALLATION OF PERMEABLE ASPHALT REQUIRES DIFFERENT TEMPERATURE GUIDELINES, AS FOLLOWS, THAN THAT THOSE OF IMPERIOUS ASPHALT:
   - 14.1. ASPHALT BASE COURSE: 200 - 245°F
   - 14.2. FINISH ROLLING BASE COURSE: 140 - 150° F
   - 14.3. ASPHALT SURFACE COURSE: 200 - 220°F AND
   - 14.4. FINISH ROLLING SURFACE COURSE: 110 - 150°F
15. VEHICULAR USE IS PROHIBITED FOR AT LEAST 48 HOURS ONCE THE PAVEMENT INSTALLATION IS COMPLETE.
16. STORAGE BED AGGREGATE MUST BE CLEAN, WASHED AND OPEN-GRADED AASHTO NO.2 BROKEN STONE.
17. POST-CONSTRUCTION TESTING OF THE PERMEABLE ASPHALT SURFACE COURSE IS REQUIRED AND MUST CONFORM TO THE METHODS OF EITHER ASTM C1701: STANDARD TEST METHOD FOR INFILTRATION RATE OF IN-PLACE PERVIOUS CONCRETE OR ASTM C1781: STANDARD TEST METHOD FOR SURFACE INFILTRATION RATE OF PERMEABLE UNIT PAVEMENT SYSTEMS. AT LEAST THREE LOCATIONS MUST BE USED FOR THE TEST, AND THEY SHOULD BE SPACED EVENLY ACROSS THE PERVIOUS PAVING SYSTEM. FAILURE TO ACHIEVE THE MINIMUM DESIGN INFILTRATION RATE OF THE SURFACE COURSE AT ONE OR MORE LOCATION INDICATES THE SYSTEM CANNOT BE PUT IN SERVICE UNTIL THE SYSTEM IS CORRECTED TO YIELD ALL PASSING VALUES. UNLIKE THE TEST METHODOLOGY OUTLINED IN THE ASTM STANDARDS, THE TEST RESULTS MUST NOT BE AVERAGED. THE MAINTENANCE PLAN MUST INCLUDE A LOG FOR RECORDING EACH LOCATION AND ITS TEST RESULT FOR FUTURE REFERENCE.

PERVIOUS ASPHALT SUMMARY TABLE

PAVER SECTION I.D.	BOTTOM OF STONE ELEV.	TOP OF STONE ELEV.	WQDS ELEVATION	100-YEAR STORM ELEV.
PV-3	119.28'	121.08'	119.83'	120.78'
PV-4	119.06'	120.56'	119.54'	120.22'

4



PERMEABLE INTERLOCKING PAVER DETAIL

NOT TO SCALE

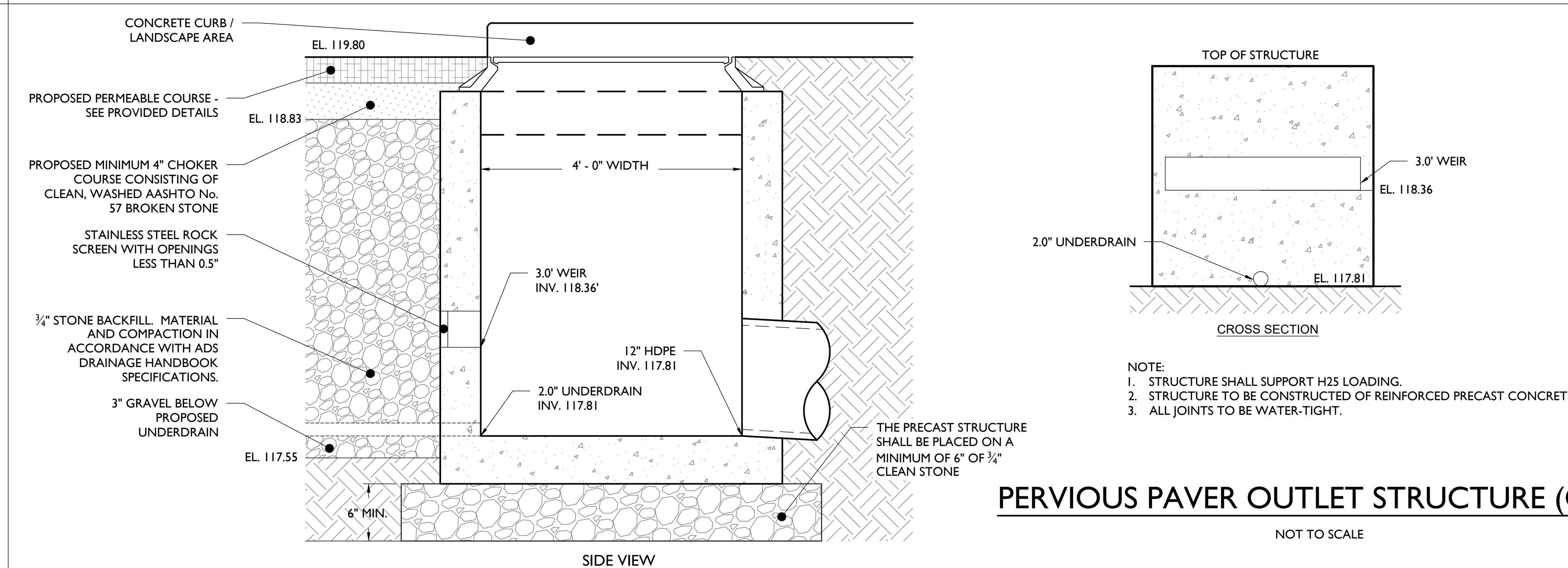
NOTES:

1. PERVIOUS PAVER MUST BE IN ACCORDANCE WITH NJ STORMWATER BEST MANAGEMENT PRACTICES MANUAL, CHAPTER 9.7
2. FILTER FABRIC IS REQUIRED ALONG THE SIDES AND BOTTOM OF THE SYSTEM TO PREVENT MITIGATION OF FINES FROM THE SURROUNDING SOIL.
3. THE STORAGE BED IN THIS TYPE OF SYSTEM CONSISTS OF AN AGGREGATE LAYER AND AN UNDERDRAIN, WHICH IS A NETWORK OF PIPES THAT COLLECT RUNOFF AND TRANSPORT IT TO THE OUTFLOW SECTION OF THE SYSTEM.
   - 3.1. THE AGGREGATE LAYER MUST HAVE SUFFICIENT DEPTH TO PROVIDE AT LEAST 3 INCHES OF AGGREGATE ABOVE AND BELOW THE PIPE NETWORK. IT MUST CONSIST OF CLEAN, WASHED, OPEN-GRADED AASHTO NO. 2 BROKEN STONE.
   - 3.2. WITHIN THE AGGREGATE LAYER, THE NETWORK OF PIPES MUST BE ABLE TO WITHSTAND THE DESIGN LOADS.
   - 3.3. THE MANIFOLD OR OTHER MECHANISMS USED TO COLLECT FLOW FROM THE PERVIOUS PAVING SYSTEM MUST BE NON-PERFORATED.
   - 3.4. ALL JOINTS MUST BE SECURE AND WATERTIGHT.
   - 3.5. THE CAPACITY OF THE UNDERDRAIN MUST BE SUFFICIENT TO ALLOW THE SYSTEM TO DRAIN WITHIN 72 HOURS.
4. THE SEASONAL HIGH WATER TABLE (SHWT) OR BEDROCK MUST BE AT LEAST 1 FOOT BELOW THE BOTTOM OF THE STORAGE BED.
5. AT LEAST ONE INSPECTION PORT, WITH A REMOVABLE CAP, MUST BE PROVIDED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE PERFORATED SECTION OF THE NETWORK OF PIPES AND BE FLUSH WITH THE SURFACE OF THE SURFACE LAYER AND EACH LOCATION DENOTED IN THE MAINTENANCE PLAN. EACH INSPECTION PORT MUST BE PLACED AT LEAST 3 FEET FROM ANY EDGE. THE SIZE OF THE INSPECTION PORT MUST BE LARGE ENOUGH TO ALLOW FOR MAINTENANCE ACTIVITIES. ADDITIONALLY, EACH INSPECTION PORT MUST EXTEND DOWN TO THE UNDERDRAIN PIPE NETWORK.
6. CONCRETE PAVERS MUST CONFORM TO ASTM C936 AND HAVE A MINIMUM THICKNESS OF 3.125 INCHES WHEN SUBJECT TO VEHICULAR TRAFFIC,
7. IF THE PROPOSED EDGE RESTRAINT IS FLUSH CURB, THE SUBGRADE OR BASE MATERIAL UNDER THE CURB PORTION ONLY MUST BE COMPACTED.
8. PAVER UNITS MUST BE INSTALLED OVER A BEDDING COURSE CONSISTING OF CLEAN, WASHED OPEN-GRADED AASHTO NO. 8 BROKEN STONE.
9. THE MINIMUM CHOKER COURSE THICKNESS IS 4 INCHES.
10. STORAGE BED AGGREGATE MUST BE CLEAN, WASHED AND OPEN-GRADED AASHTO NO. 2 BROKEN STONE.
11. POST-CONSTRUCTION TESTING OF THE PERMEABLE INTERLOCKING PAVER UNIT SURFACE COURSE IS REQUIRED AND MUST CONFORM TO THE METHODS OF ASTM C1781: STANDARD TEST METHOD FOR SURFACE INFILTRATION RATE OF PERMEABLE UNIT PAVEMENT SYSTEMS.

PERVIOUS PAVER SUMMARY TABLE

PAVER SECTION I.D.	BOTTOM OF STONE ELEV.	TOP OF STONE ELEV.	WQDS ELEVATION	100-YEAR STORM ELEV.
PV-1	117.65'	119.58'	117.98'	119.19'
PV-2	117.81'	118.83'	118.35'	118.56'

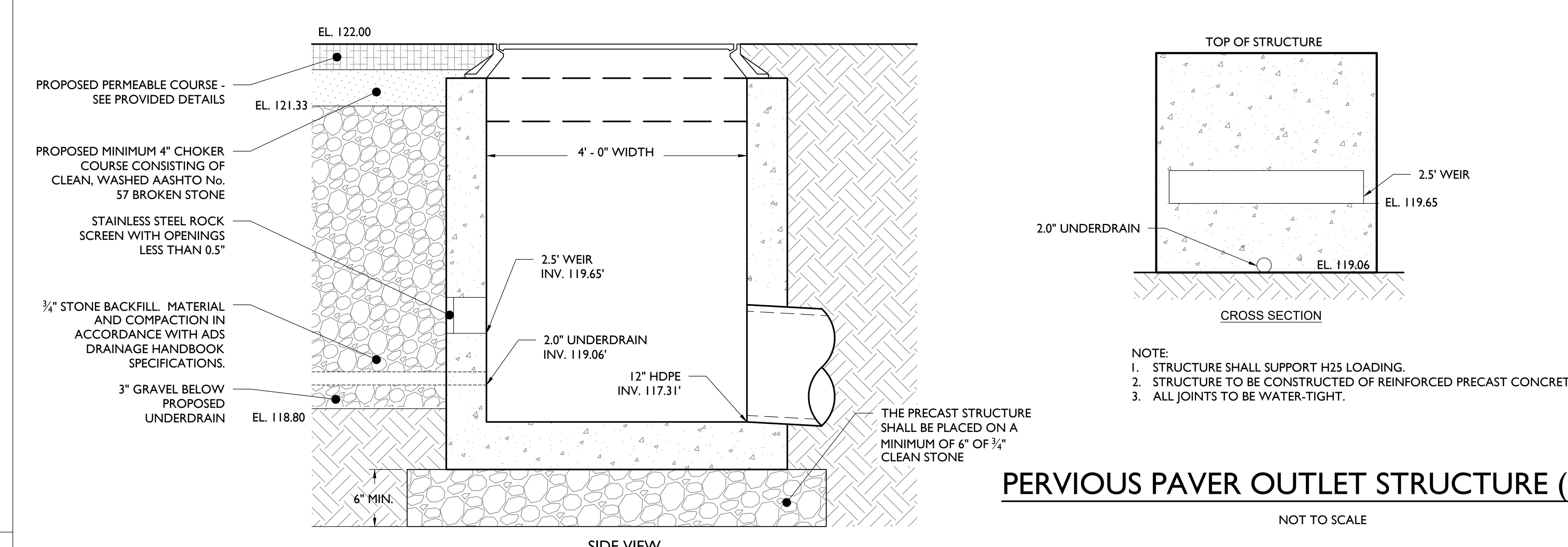
5



PERVIOUS PAVER OUTLET STRUCTURE (OS-2)

NOT TO SCALE

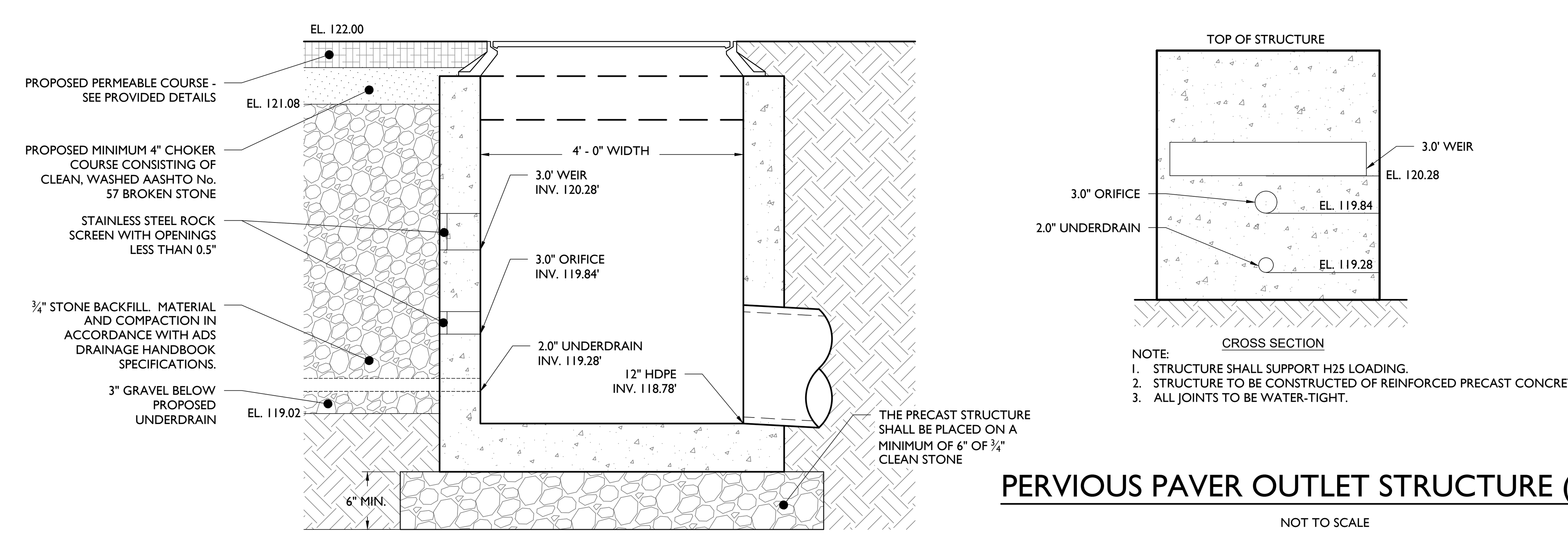
6



PERVIOUS PAVER OUTLET STRUCTURE (OS-4)

NOT TO SCALE

7



PERVIOUS PAVER OUTLET STRUCTURE (OS-3)

NOT TO SCALE

8

ISSUE	DATE	BY	DESCRIPTION
06	02/18/2022	BJD	FOR MUNICIPAL, DRCC & SCD RESUBMISSION
05	01/24/2022	BJD	FOR MUNICIPAL RESUBMISSION
04	07/23/2021	BJD	FOR MUNICIPAL RESUBMISSION
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02	06/02/2021	BJD	FOR MUNICIPAL RESUBMISSION
01	03/12/2021	AHM	FOR AGENCY SUBMISSION

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PRELIMINARY & FINAL MAJOR SITE PLAN

ARCO MURRAY DESIGN BUILD

PROPOSED SELF-STORAGE FACILITY

BLOCK 85, LOT 58 & 59.02
1613 LINCOLN HIGHWAY (NJ ROUTE 27)
TOWNSHIP OF FRANKLIN
SOMERSET COUNTY, NEW JERSEY

JEFFREY MARTELL, P.E.
NEW JERSEY LICENSE No. 47290
LICENSED PROFESSIONAL ENGINEER
Jeffrey Martell
STONEFIELD
engineering & design

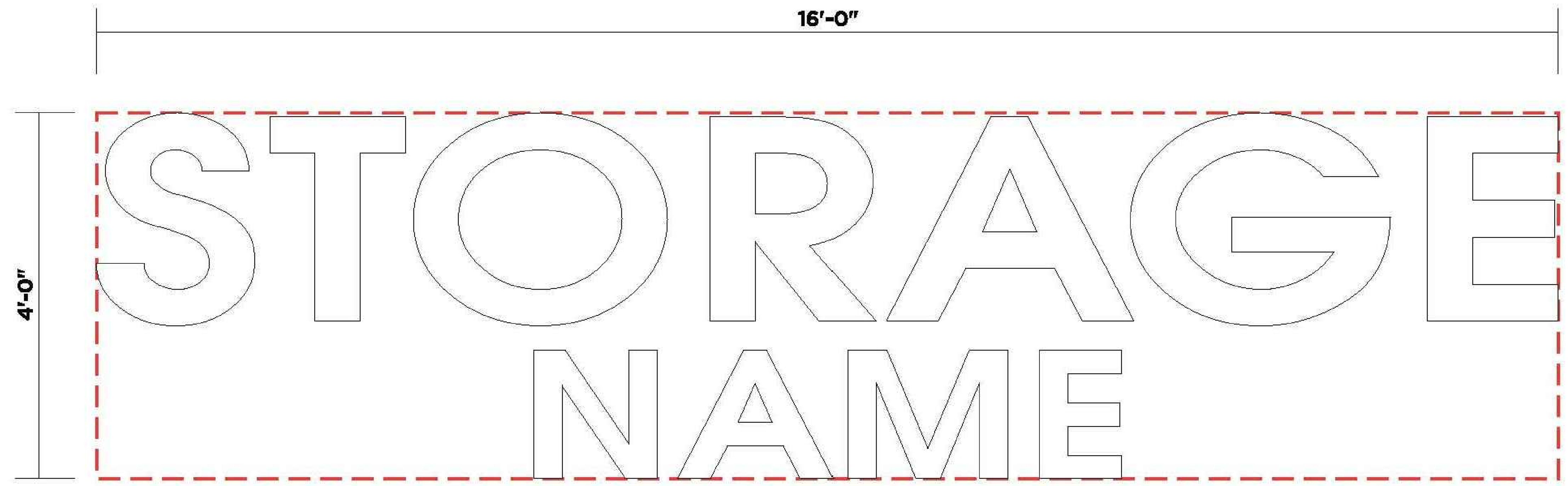
SCALE: AS SHOWN PROJECT ID: PRI-200094

TITLE:

CONSTRUCTION DETAILS

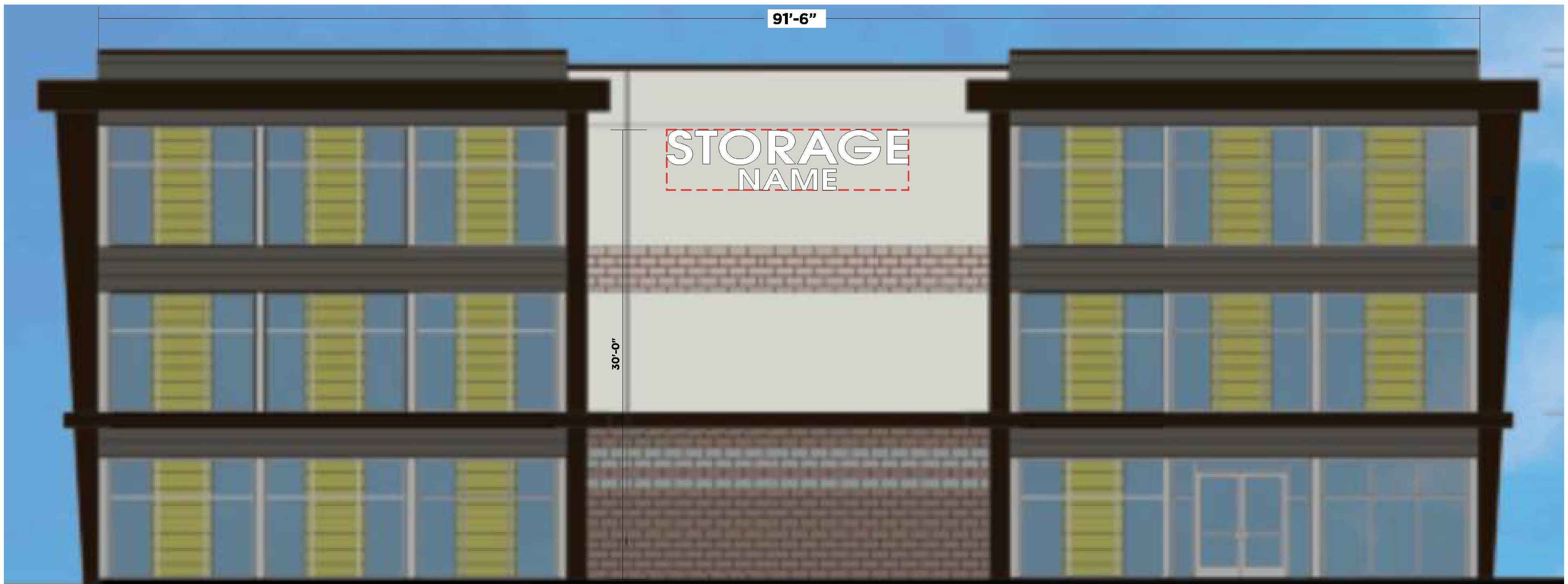
DRAWING:

C-15



A MAIN STORAGE SIGN - *64 Sq.Ft.*

- Illuminated Pan Channel Letters - Style and Colors TBD
- Mounted Flush To Building



EAST ELEVATION

BUILDING SIGN DETAILS

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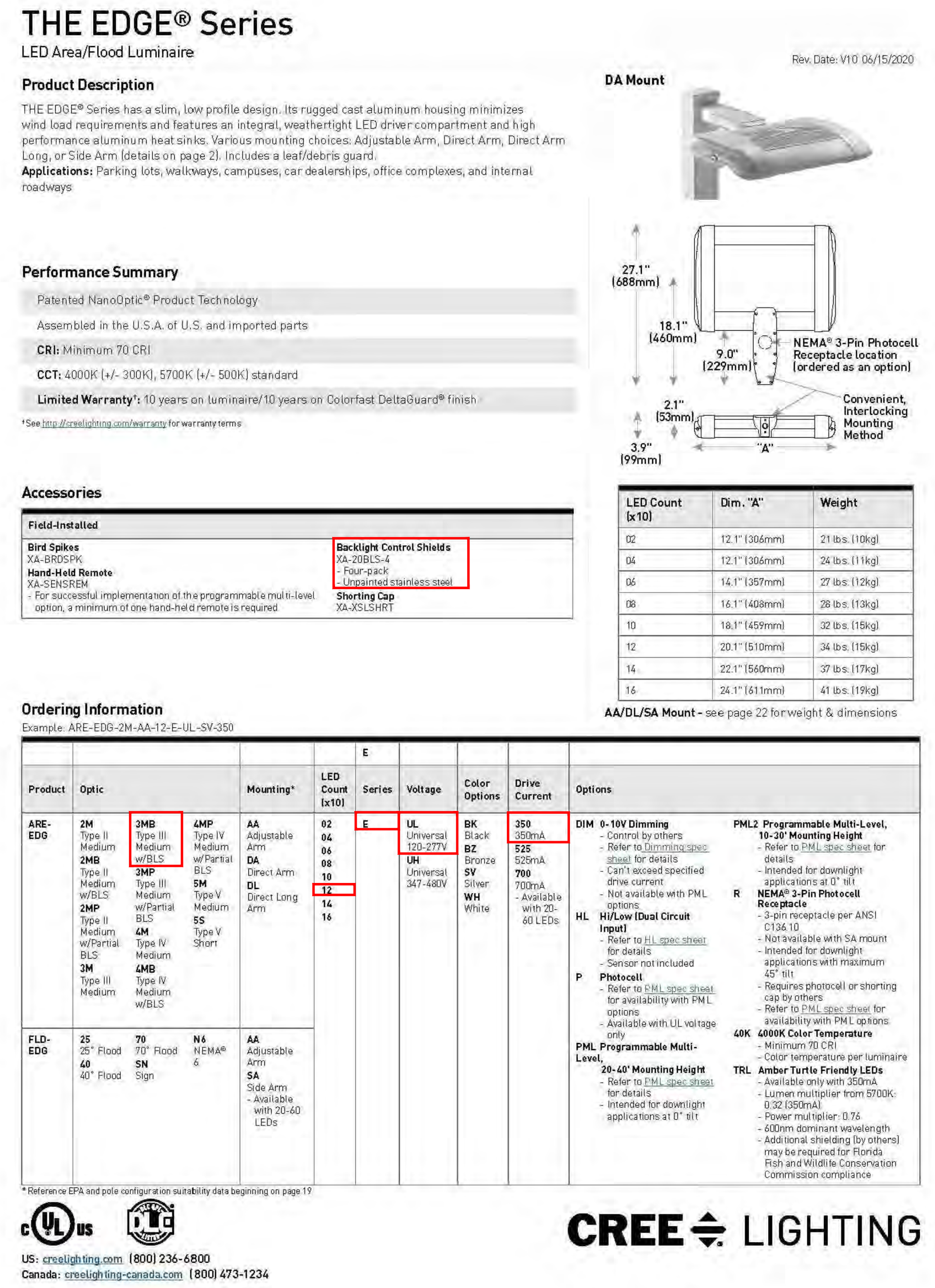
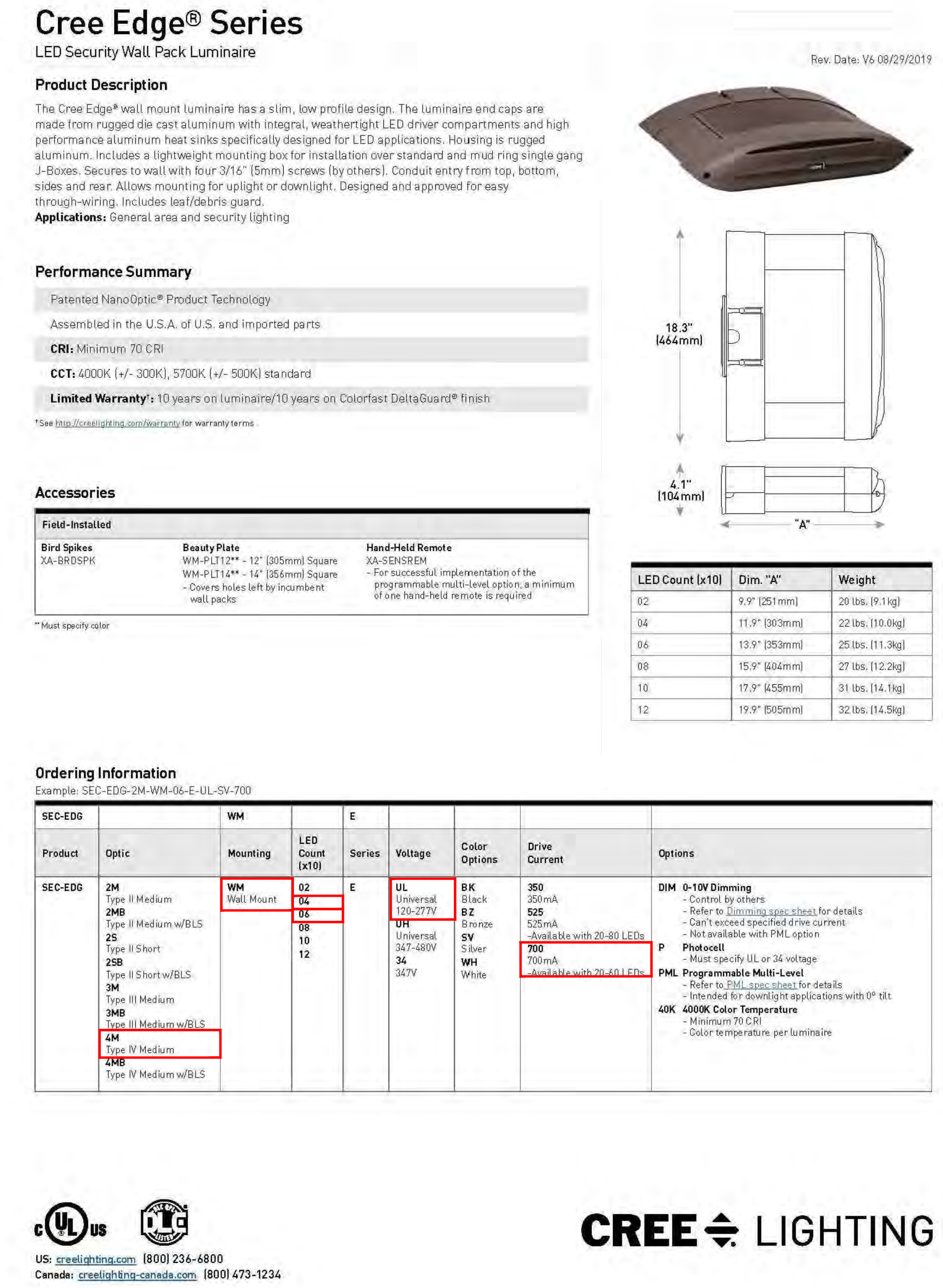


AREA LIGHT FIXTURE 'A' SPECIFICATIONS

NOT TO SCALE

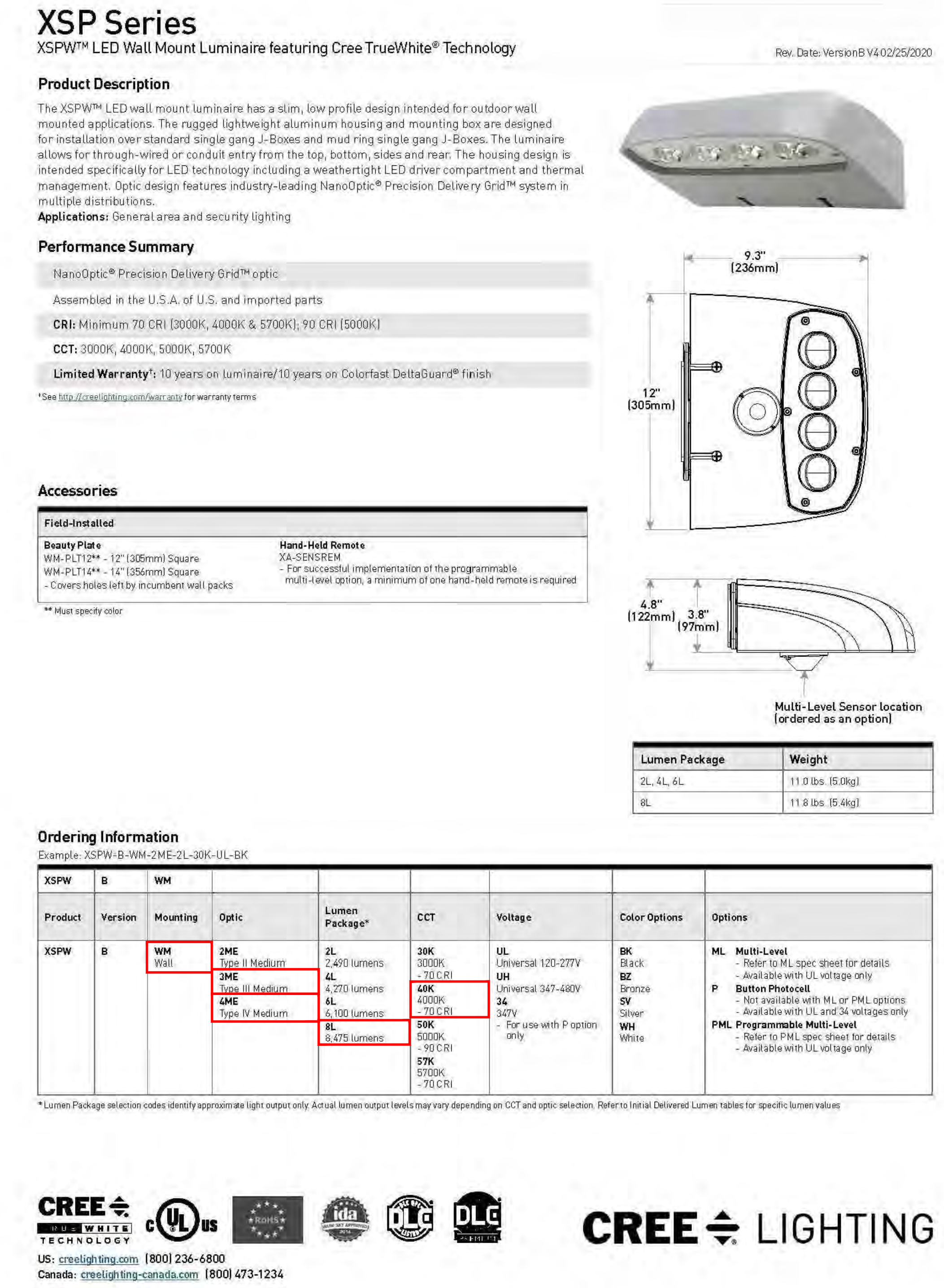
1



WALL MOUNTED LIGHT FIXTURE 'B' & 'C' SPECIFICATIONS

NOT TO SCALE

2



WALL MOUNTED LIGHT FIXTURE 'D' & 'E' SPECIFICATIONS

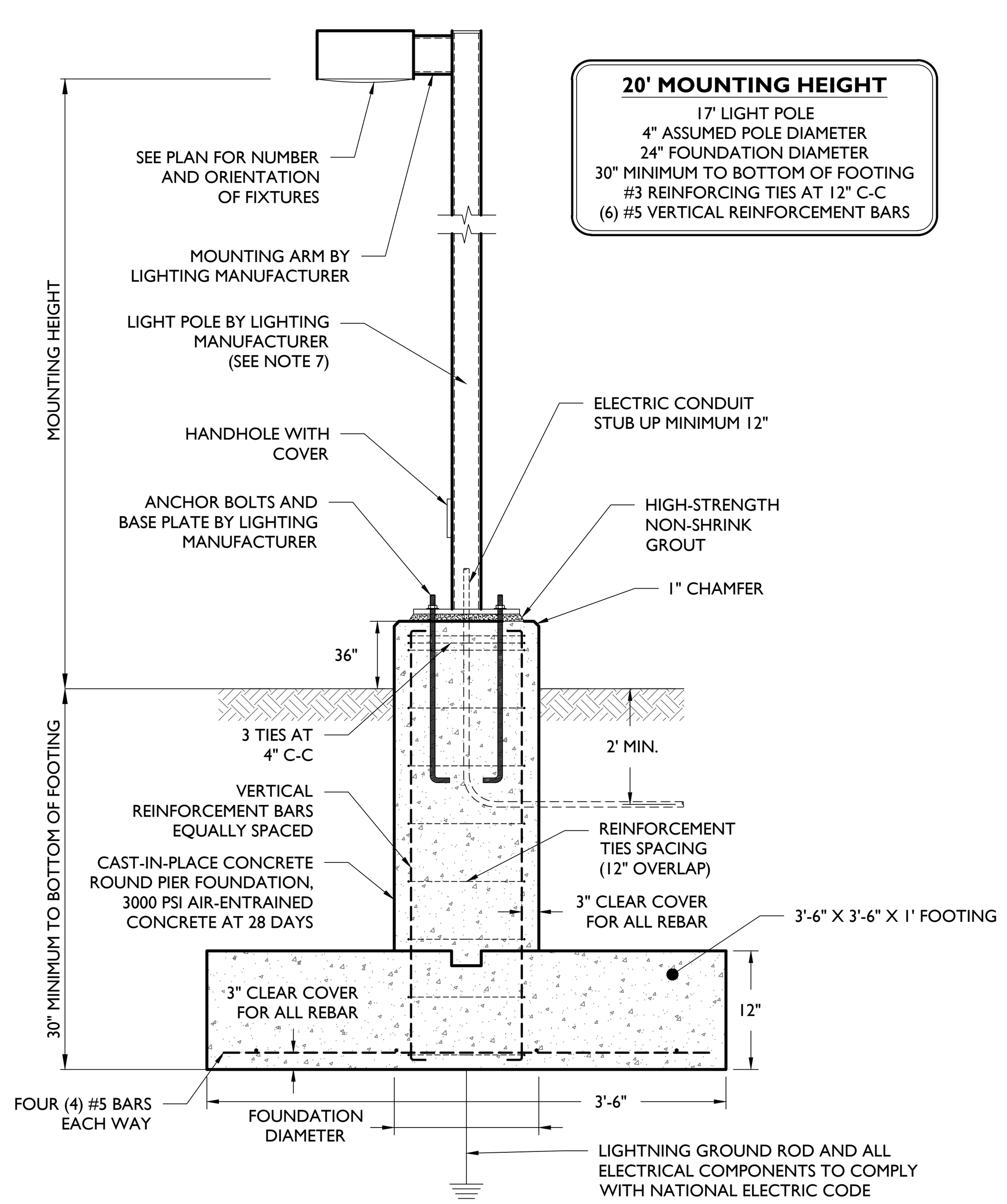
NOT TO SCALE

3

CANOPY MOUNTED LIGHT FIXTURE 'F' SPECIFICATIONS

NOT TO SCALE

4

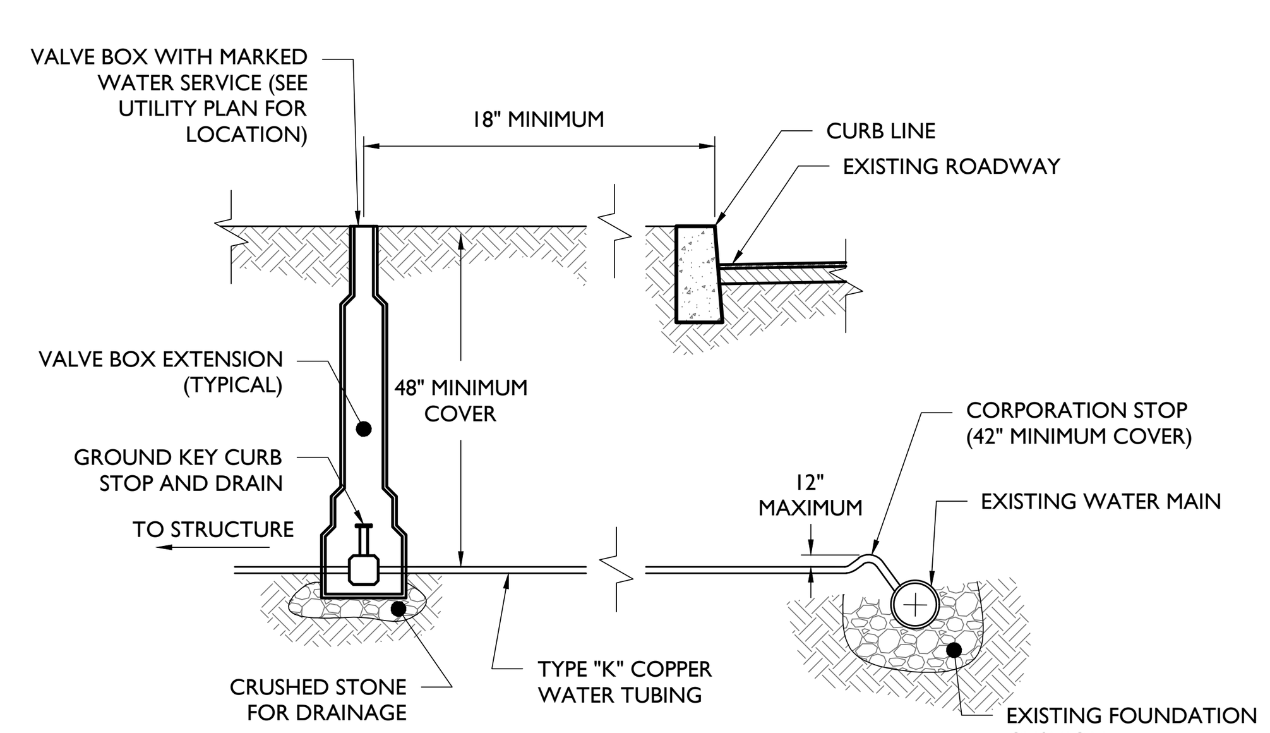


LIGHT POLE WITH SHALLOW FOUNDATION INSTALLATION DETAIL

NOT TO SCALE

NOTES:
1. MINIMUM SOIL BEARING PRESSURE OF 1500 PSF, SOIL FRICTION ANGLE OF 30 DEGREES, AND SOIL DRY UNIT WEIGHT OF 120 PCF SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED PROFESSIONAL.
2. CAST-IN-PLACE CONCRETE SHALL BE CONSOLIDATED USING VIBRATOR.
3. ALL REBAR TO BE NEW GRADE 60 STEEL.
4. PRE-CAST PIERS ACCEPTABLE UPON WRITTEN APPROVAL OF SHOP DRAWING BY ENGINEER.
5. CONCRETE TO BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO INSTALLING LIGHT POLE. POURED CONCRETE MIX REQUIRED TO OBTAIN 80% OF DESIGN STRENGTH PRIOR TO INSTALLING LIGHT POLE.
6. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" (WITHIN 1" TOLERANCE).
7. POLE SHALL BE RATED FOR 10 MPH HIGHER THAN MAXIMUM WIND SPEED 33FT ABOVE GROUND FOR THE AREA BASED ON ANSI/ASCE 7-93.
8. POUR TO BE TERMINATED AT A FORM.
9. WORK SHALL CONFORM TO ACI BEST PRACTICES FOR APPROPRIATE TEMPERATURE AND WEATHER CONDITIONS.
10. CONTRACTOR TO TEMPORARILY SUPPORT ADJACENT SOIL AND STRUCTURES DURING EXCAVATION IF REQUIRED.

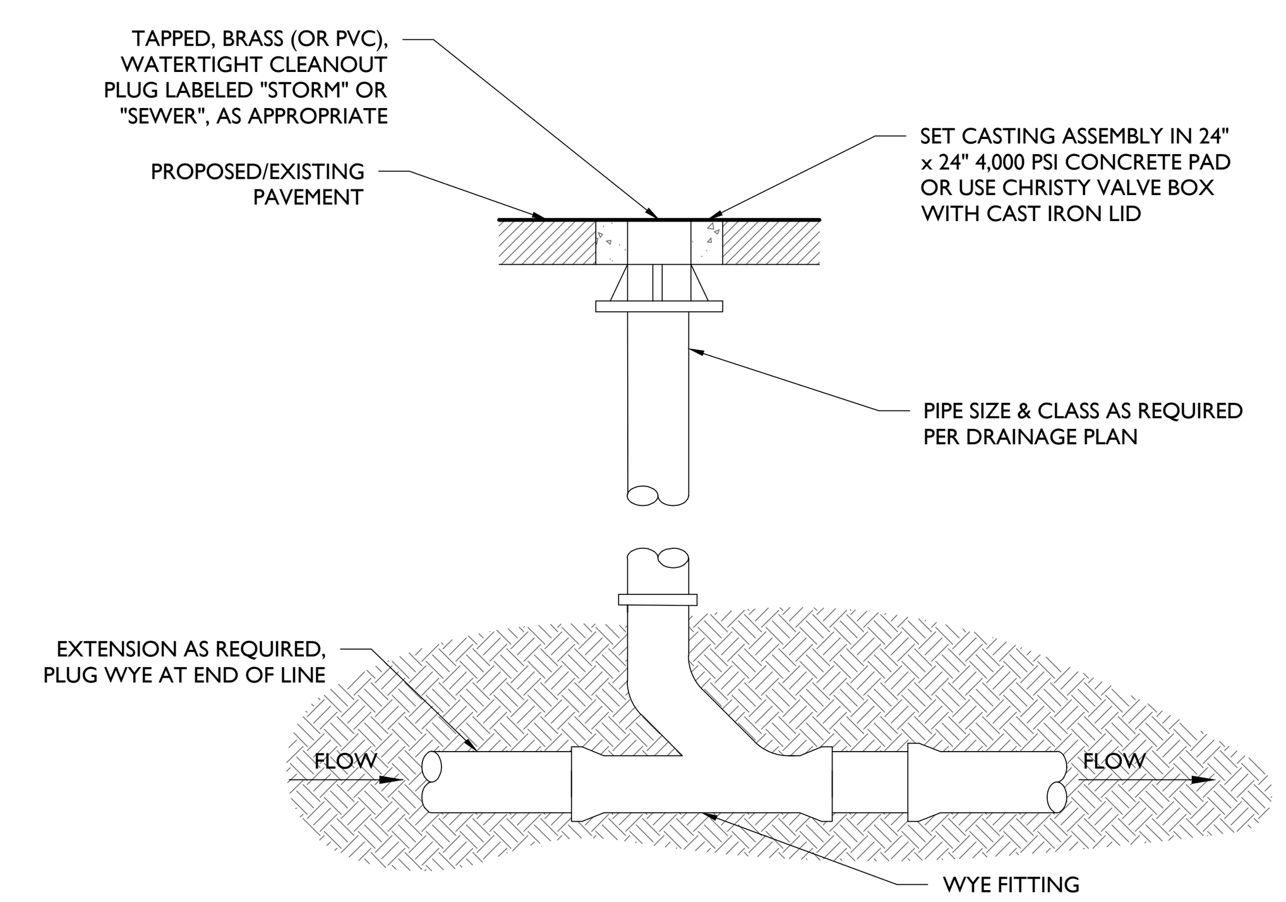
5



WATER CONNECTION DETAIL

NOT TO SCALE

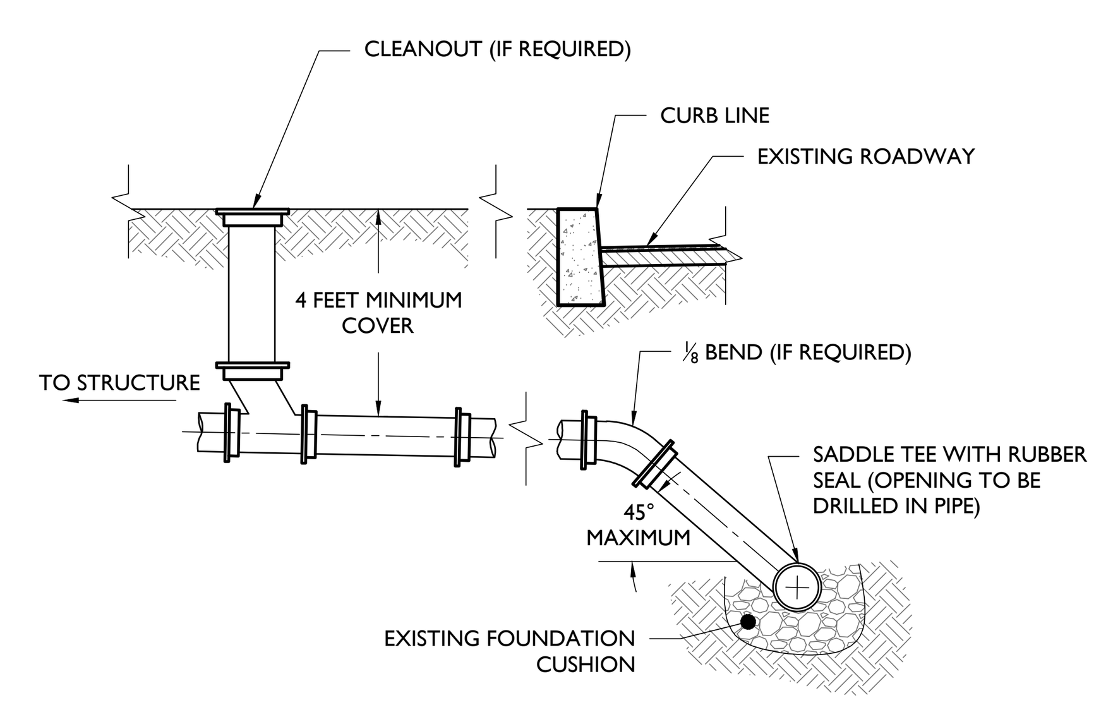
6



HARDSCAPE CLEAN-OUT

NOT TO SCALE

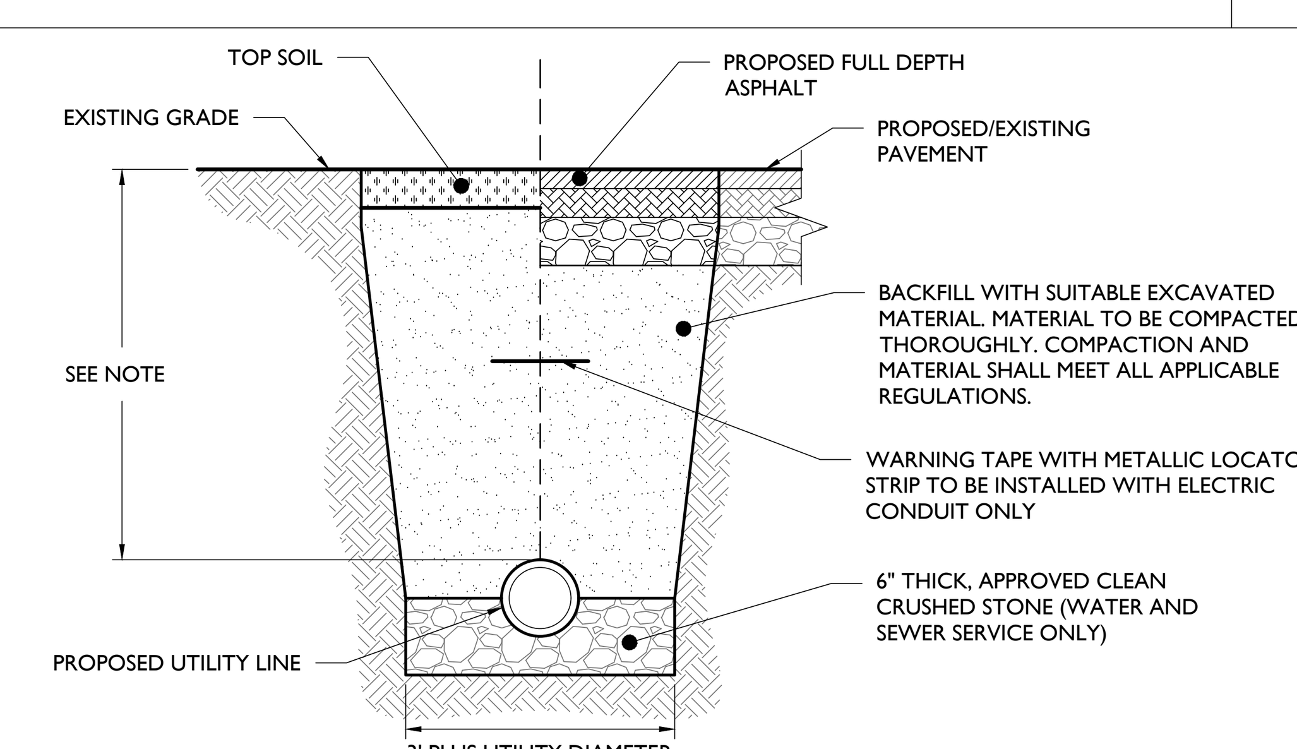
7



SEWER CONNECTION DETAIL

NOT TO SCALE

8



UTILITY TRENCH DETAIL

NOT TO SCALE

NOTE:
MINIMUM PIPE COVER SHALL BE AS FOLLOW:
- ELECTRIC SERVICE - PER APPLICABLE UTILITY AUTHORITY
- GAS SERVICE - PER APPLICABLE UTILITY AUTHORITY
- SEWER SERVICE - 36" MINIMUM
- WATER SERVICE - 48" MINIMUM

9

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