STORMWATER MANAGEMENT REPORT

FOR

CROWN VILLAGE

LOT 1, BLOCK 112, LOT 1, BLOCK 160

TOWNSHIP OF IRVINGTON

LOT 1, BLOCK 4002, LOT 1, BLOCK 4001

CITY OF NEWARK

ESSEX COUNTY, NEW JERSEY

PREPARED BY:

Harbor Consultants Inc
Engineers, Planners, Surveyors
320 North Avenue East
Cranford NJ 07016
908-276-2715

♦

PREPARED FOR:

Crown Village
27 Prince Street
Elizabeth, NJ 07208

Project No. 2019173

December 10, 2019

Victor Vinegra, PE, PLS
N.J. License No. 34460

This statement provides storm water management and drainage information related to a proposed site plan, prepared by Harbor Consultants, Inc., within the Township of Irvington & City of Newark in Essex County, New Jersey.

The properties in question is identified as Lot 1 in Block 112 and Lot 1 in Block 160 in the Township of Irvington which contains 107,036 S.F. or 2.46 acres and Lot 1, Block 4002 and Lot 1, Block 4001 which contains 238,418 S.F. or 5.47 acres. The existing site was previously the Pabst Brewery that which has been demolished and vacant and the Applicant proposes to construct two (2) multi-family/commercial buildings.

This report will address the design of the stormwater collection and conveyance. RSIS standards was used to determine the peak runoff.

The discharges for the respective storm events are summarized below:

Determine The Net Increase In Runoff From Site:
(Rational Formula used as basis of computation – due to smallness of overall project site)

"C" before: Existing Site

Comp.	Area (sf)	%	Coeff.	Fract.
Open Space Area (Good)	71,465	20.68%	0.51	0.105
Impervious Area	273.989	79.31 %	0.99	0.785
Total:	345,454	100.0%	"C" compos. =	0.891

"C" after: Proposed Site

Comp.	Area (sf)	%	Coeff.	Fract.
Open Space Area (Good)	60,525	17.52%	0.51	0.089
Impervious Area	284,929	82.48%	0.99	0.817
Total:	345,454	100.0%	"C" compos. =	0.906

Total Site Area= 345,454 s.f. 7.931 Acres

i = 4.3 in/hr.	(2 yr storm) Based on New Jersey D.E.P. Rainfall Intensity Curves
i = 5.8 in./hr.	(10 yr storm) Based on New Jersey D.E.P. Rainfall Intensity Curves
i = 6.8 in/hr.	(25 yr storm) Based on New Jersey D.E.P. Rainfall Intensity Curves
i = 7.2 in./hr.	(50 yr storm) Based on New Jersey D.E.P. Rainfall Intensity Curves
i = 8.0 in/hr.	(100 yr storm) Based on New Jersey D.E.P. Rainfall Intensity Curves

Rational Formula

Q = ACi A = Area (acres) C = Coverage Factor i = Rainfall Intensity (in/hr)

Determine Increase in Runoff (2 yr storm)

"Q" before = "C" comp. x i x Area = 30.37 CFS

"Q" after "C" comp. x i x Area = 30.89 CFS

Net Increase in Runoff due to Site Development (before system)

"Q" net = 0.51 CFS

Determine Increase in Runoff (10 yr storm)

"Q" before = "C" comp. x i x Area = 40.97 CFS

"Q" after = "C" comp. x i x Area = 41.67 CFS

Net Increase in Runoff due to Site Development (before system)

"Q" net = 0.70 CFS

Determine Increase in Runoff (25 yr storm)

"Q" before = "C" comp. x i x Area = 48.03 CFS

"Q" after = "C" comp. x i x Area = 48.85 CFS

Net Increase in Runoff due to Site Development (before system)

"Q" net = 0.820 CFS

Determine Increase in Runoff (50 yr storm)

"Q" before = "C" comp. x i x Area = 50.86 CFS

"Q" after = "C" comp. x i x Area = 51.73 CFS

Net Increase in Runoff due to Site Development (before system)

"Q" net = 0.868 CFS

Determine Increase in Runoff (100 yr storm)

"Q" before = "C" comp. x i x Area = 56.51 CFS

"Q" after = "C" comp. x i x Area = 57.47 CFS

Net Increase in Runoff due to Site Development (before system)

"Q" net = 0.964 CFS

CONCLUSION

Due to the minor increases in runoff for the entire site for the 2, 10, 25, 50 & 100 year storms, a formal drainage system is not proposed.

PRELIMINARY & FINAL SITE PLAN
CROWN VILLAGE

429 & 444 GROVE ST (IRVINGTON) & 552 & 572-588 SOUTH ORANGE AVE (NEWARK)

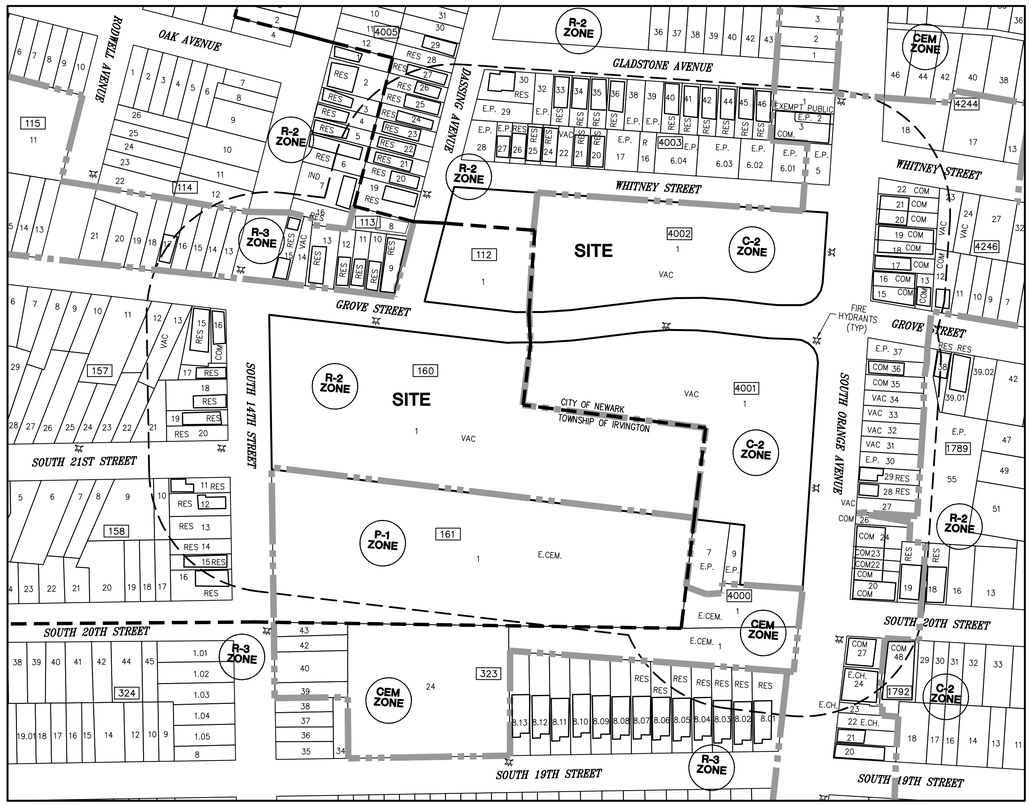
LOT 1, BLOCK 112, LOT 1, BLOCK 160 (IRVINGTON), LOT 1, BLOCK 4002, LOT 1, BLOCK 4001 (NEWARK)

TAX MAP SHEETS # 21 & 31 (IRVINGTON) & 64 (NEWARK)

TOWNSHIP OF IRVINGTON & CITY OF NEWARK ESSEX COUNTY NEW JERSEY

LIST PROPERTY OWNERS & UTILITIES 200 FEET

BLOCK & LOT	PROPERTY LOCATION	OWNER/MAIL ADDRESS		
Block 113, Lot 2	453 14TH AVE.	DAVIS, LARRY	50 HINSDALE PLACE	NEWARK, NJ 07104
Block 113, Lot 3	449 14TH AVE.	MOSS-MCCLAM, DAWN	449 14TH AVE.	IRVINGTON, NJ 07111
Block 113, Lot 4	447 14TH AVE.	JACKSON, ARTHUR & ERNESTINE	445 14TH AVE.	IRVINGTON, NJ 07111
Block 113, Lot 5	443 14TH AVE.	LOUIS, OLIVER	443 14TH AVE.	IRVINGTON, NJ 07111
Block 113, Lot 6	441 14TH AVE.	MAGNY, ROSEMOND	441 14TH AVE.	IRVINGTON, NJ 07111
Block 113, Lot 7	433-439 14TH AVE.	ARTHUR, PAUL	433-439 14TH AVE	IRVINGTON, NJ 07111
Block 113, Lot 9	437 GROVE ST.	UTTARA,APARNA &UTTARA,SRIDHAR	66 ROOSEVELT AVENUE	WEST ORANGE, NEW JERSEY 07052
Block 113, Lot 10	439 GROVE ST.	TOWNSHIP OF IRVINGTON	1 CIVIC SQUARE	IRVINGTON, NJ 07111
Block 113, Lot 11	441 GROVE ST.	UTTARA, APARNA	66 ROOSEVELT AVENUE	W.ORANGE, NEW JERSEY 07052
Block 113, Lot 12	443 GROVE ST.	LEWIS,MARCELL&HOLSTON-LEWIS,ANDREA	443 GROVE STREET	IRVINGTON, NEW JERSEY 07111
Block 113, Lot 13	445 GROVE ST.	SASHI HOMES, LLC.	1115 INMAN AVENUE #179	EDISON, NJ 000000000
Block 113, Lot 14	449 GROVE ST.	449 GROVE STREET, LLC	P.O.BOX 3134	WEEHAWKIN, NEW JERSEY 07086
Block 113, Lot 15	451 GROVE ST.	GOLDEN SUN MANAGEMENT LLC,	714 BROADWAY STE #5	PATERSON, NEW JERSEY 07514
Block 114, Lot 12	432 14TH AVE.	BIRT, AMANDA L	1541 WILLIAMSBRIDGE RD	BRONX, NY 10462
Block 114, Lot 13	459 GROVE ST.	EBRON,WILLIAM E LOUISE	459 GROVE STREET	IRVINGTON, NEW JERSEY 07111
Block 114, Lot 14	461 GROVE ST.	M.S. MOMO & ASSOCIATES, LLC	153 ELM STREET 2ND FLR	ORANGE, NEW JERSEY 07050
Block 114, Lot 15	463 GROVE ST.	NEWARK PROPERTY OWNER 2, LLC.	145 SPRING STREET FL #3	NEW YORK, NY 000000000
Block 114, Lot 16	465 GROVE ST.	CRANDOL, LAMONT	P.O. BX 2122	PATERSON, NEW JERSEY 07509
Block 114, Lot 17	467 GROVE ST.	THOMAS, DOROTHY	467 GROVE STREET	IRVINGTON, NEW JERSEY 07111
Block 157, Lot 11	470 GROVE ST.	CONBAHR PROPERTIES LLC	470 GROVE ST	IRVINGTON, NJ 07111
Block 157, Lot 13	466 GROVE ST.	CONBAHR PROPERTIES LLC	470 GROVE ST	IRVINGTON, NJ 07111
Block 157, Lot 15	462 GROVE STREET	EBN REALTY LLC,	132 N.ARLINGTON AVE	EAST ORANGE, NJ 07017
Block 157, Lot 16	460 GROVE ST.	MYERS, DEISHAUN C/O NORMANDY CORP.	46 PRINCE STREET	ROCHESTER,NEW YORK 14607
Block 157, Lot 17	412 14TH AVE.	ESSEX PORTFOLIO LLC	531 N. 11TH STREET	NEWARK, NJ 07107
Block 157, Lot 18	408 14TH AVE.	ROBINSON, JAMES & CATHERINE	408-10 14TH AVENUE	IRVINGTON, NEW JERSEY 07111
Block 157, Lot 19	406 14TH AVE.	WEBBER,DELORES&JEROME HILDORY	406 14TH AVENUE	IRVINGTON, NEW JERSEY 07111
Block 157, Lot 20	404 14TH AVE.	SHORTE, TRACIE	66 10TH STREET	PISCATAWAY, NEW JERSEY 08854
Block 157, Lot 21	79-81 21ST ST.	GEORGE, MARY	79 21ST STREET	IRVINGTON, NEW JERSEY 07111
Block 157, Lot 22	83 21ST ST.	MCNAIR, CHRISTINE P.	83 21ST STREET	IRVINGTON, NEW JERSEY 07111
Block 158, Lot 10	80 21ST ST.	80 21 STREET LLC,	1346 42ND STREET	Brooklyn, NY 11219
Block 158, Lot 11	78 21ST ST.	MDS INVESTMENTS,LLC/LATORRACA	295 MONTGOMERY STREET	BLOOMFIELD, NEW JERSEY 07003
Block 158, Lot 12	396 14TH AVE.	RAMOS, ANGEL & GINO-RAMOS, ENID	18 E.105TH ST/APT.B	NEW YORK, NY 10029
Block 158, Lot 13	392 14TH AVE.	RELTOR INVESTMENT LLC	846 NEPTUNE COURT	San Mateo, CA 94404
Block 158, Lot 14	388-390 14TH AVE.	VENTURA DEVELOPING COMPANY	650 E PALISADE AVE.# 2221	Englewood Cliffs, NJ 07632
Block 158, Lot 16	384-86 14TH AVE.	HUDLEY, OCTOBER	386 14TH AVE.	IRVINGTON, NJ 07111
Block 161, Lot 1	16 21ST ST.	SHALOM TORAH CENTERS	25 E.11TH STREET	LAKEWOOD, NEW JERSEY 08701
Block 4000, Lot 1	536-538 SOUTH ORANGE AVE	N J LODGE 38 BRITH ABRAHAM	616 LYONS AVE	IRVINGTON, NJ 071113435
Block 4000, Lot 7	540-542 SOUTH ORANGE AV R	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 071022660
Block 1789, Lot 18	387-389 S 20TH ST.	S 20 NJ LLC,	156 SKILLMAN ST #2F	BROOKLYN, NY 11205
Block 1789, Lot 19	391-393 S 20TH ST	M&J SOUTH 20 LLC,	246 LYNCH ST #2E	BROOKLYN, NY 000000000
Block 1789, Lot 20	535-537 SOUTH ORANGE AVE	545 SOUTH ORANGE LLC	111 E JERICHO TPKE	MINEOLA, NY 115013145
Block 1789, Lot 22	539 SOUTH ORANGE AVE	545 SOUTH ORANGE LLC,	111 E JERICHO TPKE	MINEOLA, NY 115013145
Block 1789, Lot 23	541 SOUTH ORANGE AVE	545 SOUTH ORANGE LLC,	111 E JERICHO TPKE	MINEOLA, NY 115013145
Block 1789, Lot 24	543-545 SOUTH ORANGE AVE	545 SOUTH ORANGE LLC,	111 E JERICHO TPKE	MINEOLA, NY 115013145
Block 1789, Lot 26	547 SOUTH ORANGE AVE	545 SOUTH ORANGE LLC,	111 E JERICHO TPKE	MINEOLA, NY 115013145
Block 1789, Lot 27	549 SOUTH ORANGE AVE	GREATER PATERSON PROPERTIES	110 CHESTNUT RIDGE RD#28	MONTVALE, NJ 076451706
Block 1789, Lot 28	551 SOUTH ORANGE AVE	TEJEDA, ERICK	551 SOUTH ORANGE AVE	NEWARK, NJ 07103
Block 1789, Lot 29	553 SOUTH ORANGE AVE	DESIR, ALTERESE B.	312 WEEQUAHIC AVENUE	NEWARK, NJ 000000000
Block 1789, Lot 30	555 SOUTH ORANGE AVE	CITY OF NEWARK	920 BROAD ST	NEWARK NJ 07102
Block 1789, Lot 31	557 SOUTH ORANGE AVE	AKARAH, TAMER	134 BLOOMFIELD AVE	PATERSON, NJ 075032604
Block 1789, Lot 32	559 SOUTH ORANGE AVE	AKARAH, TAMER	134 BLOOMFIELD AVE	PATERSON, NJ 075032604
Block 1789, Lot 33	561 SOUTH ORANGE AVE	AKARAH, TAMER	134 BLOOMFIELD AVE	PATERSON, NJ 075032604
Block 1789, Lot 34	563 SOUTH ORANGE AVE	AKARAH, TALAT	134 BLOOMFIELD AVE	PATERSON, NJ 075032604
Block 1789, Lot 35	565 SOUTH ORANGE AVE	AKARAH, TAMER	134 BLOOMFIELD AVE	PATERSON, NJ 075032604
Block 1789, Lot 36	567 SOUTH ORANGE AVE	567 SOUTH ORANGE AVENUE, LLC	567 SOUTH ORANGE AVE	Newark, NJ 07103
Block 1789, Lot 37	569-571 SOUTH ORANGE AVENUE	CITY OF NEWARK	920 BROAD STREET	Newark, NJ 07102
Block 1789, Lot 38	374 GROVE STREET	HOMEMADE1 LLC,	374 GROVE STREET	Newark, NJ 07102
Block 1789, Lot 55	376 GROVE ST	CITY OF NEWARK	920 BROAD ST	NEWARK NJ 07102
Block 1792, Lot 23	525 SOUTH ORANGE AVE	FULL GOSPEL MON OF FAITH CHURCH INC	527 S ORANGE AVE	NEWARK NJ 07103
Block 1792, Lot 24	527-529 SOUTH ORANGE AVE	FULL GOSPEL MON OF FAITH CHURCH INC	527 S ORANGE AVE	NEWARK NJ 07103
Block 1792, Lot 27	531-533 SOUTH ORANGE AVE	FULL GOSPEL MONUMENT OF FAITH CHURC	531 S ORANGE AVE	Newark, NJ 07103
Block 1792, Lot 48	392-394 S 20TH	J & R RENTALS	PO BOX 36	Chatham, NJ 07928
Block 4246, Lot 13	373 GROVE STREET	INTERVIVOUS TRUST OF ARTHUR CHRISTE	304 ELMWOOD AVE	Maplewood, NJ 07040
Block 4246, Lot 15	577-579 SOUTH ORANGE AVE	SOUTH ORANGE HOLDINGS, LTD	2500 S. ORANGE BLVD. #103	BOCA RATON FL 33432
Block 4246, Lot 17	581 SOUTH ORANGE AVE	ROLLINS, DERRICK J.	12 MIDLAND PL	NEWARK, NJ 07106
Block 4246, Lot 18	583-585 SOUTH ORANGE AVE	WALDRON, EDWARD	583-585 SOUTH ORANGE AV	NEWARK, NJ 07106
Block 4246, Lot 20	587 SOUTH ORANGE AVE	KIRKLAND, ALFONSO	PO BOX 4013	WAYNE, NJ 07474
Block 4246, Lot 21	589-591 SOUTH ORANGE AVE	591 SOUTH ORANGE AVE,	6 LOCUST ST	NUTLEY, NJ 07110
Block 4246, Lot 23	30-32 WHITNEY ST	591 SOUTH ORANGE AVE,	6 LOCUST ST	Nutley, NJ 07110
Block 4244, Lot 18	597-601 SOUTH ORANGE AVE	CITY OF NEWARK	920 BROAD STREET	NEWARK, NJ 07102
Block 323, Lot 1	530-534 SOUTH ORANGE AVE	CONG BNAI ABRAHAM CEMETERY ASSN	300 E NORTHFIELD RD # 46	LIVINGSTON, NJ 07039
Block 323, Lot 8.01	401-403 S 19TH ST	JOON S. JOO	401-403 S 19TH ST	NEWARK, NJ 071031296
Block 323, Lot 8.02	405 S 19TH ST	SOUTH 19 ASSOCIATES,LLC	530B 13TH AVE. #126	BROOKLYN,NY 11219
Block 323, Lot 8.03	407-409 S 19TH ST	THOMAS, MOLLETTA	407-409 S 19TH ST	NEWARK, NJ 071031285
Block 323, Lot 8.04	411 S 19TH ST	SOUTH 19 ASSOCIATES,LLC	530B 13TH AVE. #126	BROOKLYN NY 11229
Block 323, Lot 8.05	413-415 S 19TH ST	SOUTH 19 ASSOCIATES,LLC,	530B 13TH AVE. #126	BROOKLYN NY 11229
Block 323, Lot 8.06	417 S 19TH ST	SOUTH 19 ASSOCIATES,LLC	530B 13TH AVE. #126	BROOKLYN NY 11229
Block 323, Lot 8.07	419-421 S 19TH ST	SOUTH 19 ASSOCIATES LLC	530B 13TH AVE.#126	BROOKLYN, NY 11219
Block 4003, Lot 1	204 SOUTH ORANGE AVE	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 2	602 SOUTH ORANGE AVE	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 3	600 SOUTH ORANGE AVE	ISLAMIC COMMUNITY OF NJ	165 S 11TH STREET	NEWARK, NJ 07106
Block 4003, Lot 5	594-598 SOUTH ORANGE AVE	CITY OF NEWARK	920 BROAD ST.	NEWARK NJ 07102
Block 4003, Lot 6.01	47-49 WHITNEY ST	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 6.02	51-53 WHITNEY ST	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 6.03	55-57 WHITNEY ST	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 6.04	59-63 WHITNEY ST	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 071022660
Block 4003, Lot 16	65 WHITNEY ST	CAMPBELL-SMITH, WINSOME	265 S MAIN ST #10	JONESBORO, GA 30236
Block 4003, Lot 17	67-69 WHITNEY ST	CITY OF NEWARK	920 BROAD ST.	NEWARK NJ 07102
Block 4003, Lot 20	71 WHITNEY ST	EDWIN, WILLIAM	275 BROAD ST	BLOOMFIELD, NJ 07003
Block 4003, Lot 21	73 WHITNEY ST	EDWIN, ALBERT & WILLIAM	275 BROAD ST	BLOOMFIELD, NJ 070031528
Block 4003, Lot 22	75 WHITNEY ST	3878 PARTNERSHIP LLC,	304 ELMWOOD AVE	MAPLEWOOD, NJ 070401820
Block 4003, Lot 24	77-79 WHITNEY ST	SMITH, ANTHONY & TRICIA	77-79 WHITNEY ST	NEWARK, NJ 07106
Block 4003, Lot 25	81 WHITNEY ST	KLEIN, MORDECHAI	46 MAIN ST SUITE 235	MONSEY, NY 10952
Block 4003, Lot 26	83 WHITNEY ST	CMY HOMES LLC,	1832 EAST 32 ST	BROOKLYN, N.Y. 11234
Block 4003, Lot 27	85 WHITNEY STREET	CITY OF NEWARK	920 BROAD ST.	NEWARK NJ 07102
Block 4003, Lot 28	87-89 WHITNEY ST	CITY OF NEWARK	920 BROAD ST.	NEWARK NJ 07102
Block 4003, Lot 29	25-27 DASSING AVE	CITY OF NEWARK	920 BROAD STREET	NEWARK, NJ 07102
Block 4003, Lot 32	40 GLADSTONE AVE	CITY OF NEWARK	920 BROAD STREET	NEWARK, NJ 07102
Block 4003, Lot 33	36-38 GLADSTONE AVE	TORRES, DANIEL	36-38 GLADSTONE AVENUE	NEWARK, NJ 07102
Block 4003, Lot 34	34 GLADSTONE AVE	PITTMAN, SEMEENA	34 GLADSTONE AVE	NEWARK, NJ 07106
Block 4003, Lot 35	32 GLADSTONE AVE	COOPER LAWRENCE B.	32 GLADSTONE AVE	NEWARK, NJ 07106
Block 4003, Lot 36	30 GLADSTONE AVE	BERGER, CHAIM & EISEN, ESTHER	368 NEW HEMPSTEAD RD #3	NEW CITY NY 10956
Block 4003, Lot 38	28 GLADSTONE AVE	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 39	24-26 GLADSTONE AVE	CITY OF NEWARK	920 BROAD ST	NEWARK, NJ 07102
Block 4003, Lot 40	22 GLADSTONE AVE	JONES, PATRICIA A	22 GLADSTONE AVE	NEWARK, NJ 07106
Block 4003, Lot 41	20 GLADSTONE AVE	RODRIGUEZ ROMAN, JULIO K	20 GLADSTONE AVE	NEWARK, NJ 07106
Block 4003, Lot 42	18 GLADSTONE AVE	IGWE, NGOZI	18 GLADSTONE AVE	NEWARK, NJ 07106
Block 4003, Lot 44	14-16 GLADSTONE AVE	HARRISON, LUDLOW & DEON BROWN	14-16 GLADSTONE AVE	NEWARK, NJ 07106
Block 4003, Lot 45	12 GLADSTONE AVE	12 GLADSTONE INVESTM,	72 W MAIN ST	BERGENFIELD, NJ 07621
Block 4003, Lot 46	10 GLADSTONE AVE	BRILLER BARGERON	10 GLADSTONE AVE	NEWARK, NJ 07106



Project Location Map & Zoning Area

SCALE 1"=100'

PUBLIC UTILITIES AND OTHER AGENCIES TO BE NOTIFIED

COMCAST CABLEVISION
800 RAHWAY AVENUE
UNION, NJ 07083

ELIZABETHTOWN WATER COMPANY
AT. PROPERTY MANAGER
1341 NORTH AVENUE
PLAINFIELD, NJ 07061

BELL ATLANTIC
540 BROAD STREET
NEWARK, NJ 07101

PUBLIC SERVICE ELECTRIC & GAS COMPANY
MANAGER-CORPORATE PROPERTIES
80 PARK PLAZA, T6B
NEWARK, NEW JERSEY 07102

ELIZABETHTOWN GAS COMPANY
1 ELIZABETHTOWN PLAZA
UNION, NJ 07083

GENERAL NOTES:

1) THE PROPERTY IS KNOWN AS THE FOLLOWING:
   - LOT 1, BLOCK 4002 & LOT 1, BLOCK 4001 AS SHOWN ON THE TAX MAPS OF THE CITY OF NEWARK
   - LOT 1, BLOCK 112, LOT 1, BLOCK 160 AS SHOWN ON THE TAX MAPS OF THE TOWNSHIP OF IRVINGTON
   - 429 & 444 GROVE ST (IRVINGTON) & 552 & 572-588 SOUTH ORANGE AVE (NEWARK)
2) APPLICANT: SUMO ENTERPRISES
   27 PRINCE STREET
   ELIZABETH, NJ 07208
3) OUTBOUND AS SHOWN IS BASED ON BOUNDARY AND TOPOGRAPHIC SURVEY BY XXX DATED //
4) THE PROPERTY IS LOCATED IN THE "C-2" COMMUNITY COMMERCIAL ZONE & R-2 TWO FAMILY RESIDENTIAL ZONE.
5) THE LOCATION OF ALL EXISTING AND PROPOSED UTILITY SERVICES SHOWN ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH THE UTILITY COMPANIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6) THE CONTRACTOR SHALL NOTIFY HARBOR CONSULTANTS IMMEDIATELY IF ACTUAL EXISTING SITE CONDITIONS DIFFER, OR, IF THE PROPOSED CONSTRUCTION WOULD BE INHIBITED BY ANY OTHER SITE FEATURES NOT IDENTIFIED HEREIN.
7) CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
8) SOLID WASTE IS TO BE DISPOSED OF BY CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
9) REQUIRED PERMITS:
   A. CITY OF NEWARK BUILDING PERMIT
   B. CITY OF NEWARK SEWER AND WATER PERMITS
   C. TOWNSHIP OF IRVINGTON BUILDING PERMIT
   D. TOWNSHIP OF IRVINGTON SEWER AND WATER PERMITS
10) THE APPLICANT AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR ALL SIGNAGE AND SIGNAL IMPROVEMENTS PER THE DETERMINATION OF THE CITY TRAFFIC ENGINEER.
11) ALL UTILITIES SHALL BE INSTALLED UNDERGROUND.
12) NO HAZARDOUS MATERIALS SHALL BE STORED ONSITE
13) ALL EXISTING DRAINAGE AND GRADING PATTERNS SHALL REMAIN.
14) NOISE LEVELS SHALL BE LIMITED TO NJDOT APPROVED VEHICLES.
15) REFUSE AND RECYCLABLE MATERIALS SHALL BE CURBSIDE PICKUP AS PROVIDED BY THE CITY OF NEWARK.
16) PROPERTY IS SITUATED IN FLOOD ZONE X (BASE FLOOD ELEVATIONS DETERMINED) PER A PLAN ENTITLED "FIRM" FLOOD INSURANCE RATE MAP, FOR THE CITY OF NEWARK COMMUNITY/PANEL No. 340189 0152 F & TOWNSHIP OF IRVINGTON COMMUNITY/PANEL No. 340184 0152 F, MAP No. 34013C0152F EFFECTIVE DATE JUNE 4, 2007.

PREPARED DECEMBER 2019

FOR

CROWN VILLAGE

27 PRINCE STREET

ELIZABETH, NJ 07208

CERTIFICATION OF APPROVAL

APPROVED BY THE ZONING BOARD OF ADJUSTMENT
TOWNSHIP OF IRVINGTON

CHAIRMAN DATE

SECRETARY DATE

ENGINEER DATE

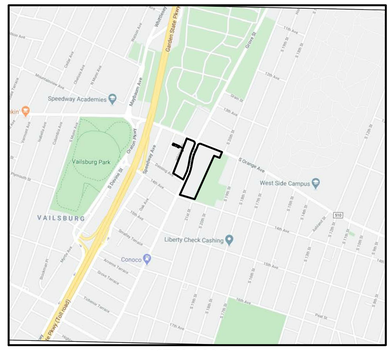
CERTIFICATION OF APPROVAL

APPROVED BY THE PLANNING BOARD
CITY OF NEWARK

CHAIRMAN DATE

SECRETARY DATE

ENGINEER DATE



KEY MAP

SCALE: 1"=1,000'

ZONING FOR THE CITY OF NEWARK, ESSEX COUNTY, NJ GENERAL BULK & DESIGN STANDARDS (COMMUNITY COMMERCIAL ZONE C-2) BLOCK 4002, LOT 1 & BLOCK 4001, LOT 1

ITEM:	REQUIRED:	EXISTING:	PROPOSED:	COMPLY:	EXISTING:	PROPOSED:	COMPLY:
BUILDING TYPE	GROUND FLOOR COMMERCIAL WITH COMMERCIAL/RESIDENTIAL ON UPPER FLOOR	VACANT	GROUND FLOOR COMMERCIAL WITH COMMERCIAL/RESIDENTIAL ON UPPER FLOOR	YES	VACANT	GROUND FLOOR COMMERCIAL WITH COMMERCIAL/RESIDENTIAL ON UPPER FLOOR	YES
MIN. LOT SIZE	3,500 S.F.	108,365 S.F.	108,365 S.F.	YES	251,342 S.F.	251,342 S.F.	YES
MIN. LOT WIDTH	35 FT	114.98 FT	114.98 FT	YES	375.07 FT	375.07 FT	YES
MAX BLDG. HEIGHT	5 STORIES 60 FEET	N/A	5 STORIES 60 FEET	YES	N/A	5 STORIES 60 FEET	YES
FRONT YARD SETBACK	0 FEET	N/A	0 FEET	YES	N/A	0 FEET	YES
SIDE YARD SETBACK	0 FEET	N/A	0 FEET	YES	N/A	0 FEET	YES
REAR YARD SETBACK	25 FEET ABUTTING RESIDENTIAL USE 20 FEET ABUTTING NON-RESIDENTIAL USE	N/A	N/A	YES	N/A	N/A	YES
MAX. LOT COVERAGE	80%	N/A	90.0% (97,490 S.F.)	NO (1)	N/A	74.5% (187,296 S.F.)	YES
MIN. LOT AREA PER DWELLING UNIT	340 SF/DU	N/A	452 S.F./DU	YES	N/A	651 S.F./DU	YES
RESIDENTIAL PARKING	1 SPACE/UNIT 215 SPACES (BLOCK 112) 431 SPACES (BLOCK 160)	0 SPACES	160 SPACES	NO (1)	0 SPACES	390 SPACES	NO (1)
COMMERCIAL PARKING	1 SPACE/1000 S.F. OVER 2,500 S.F. 10 SPACES (BLOCK 112) 17 SPACES (BLOCK 160)	0 SPACES			0 SPACES		

(1) VARIANCE REQUESTED

ZONING FOR THE TOWNSHIP OF IRVINGTON, ESSEX COUNTY, NJ GENERAL BULK & DESIGN STANDARDS (TWO FAMILY RESIDENTIAL ZONE R-2) BLOCK 112, LOT 1 & BLOCK 160, LOT 1

ITEM:	REQUIRED:	EXISTING:	PROPOSED:	COMPLY:	EXISTING:	PROPOSED:	COMPLY:
BUILDING TYPE	ONE/TWO FAMILY	VACANT	HIGH RISE APARTMENT	NO (1)	VACANT	HIGH RISE APARTMENT	NO (1)
MAX RESIDENTIAL DENSITY	20 UNITS/ACRE	VACANT	96.5 DU/ACRE	NO (1)	VACANT	71.40 DU/ACRE	NO (1)
MIN. LOT SIZE	N/A	108,365 S.F.	108,365 S.F.	YES	251,342 S.F.	251,342 S.F.	YES
MIN. IMPERVIOUS COVERAGE	N/A	VACANT	90.0% (97,4901 S.F.)	NO (1)	NO	VACANT	74.5% (187,296 S.F.)	NO (1)
MIN. LOT WIDTH	N/A	114.98 FT	114.98 FT	YES	375.07 FT	375.07 FT	YES
MAX BLDG. HEIGHT	2 1/2 STORIES 35 FEET	N/A	5 STORIES 60 FEET	NO (1)	N/A	5 STORIES 60 FEET	NO (1)
FRONT YARD SETBACK	15 FEET	N/A	0 FEET	NO (1)	N/A	0 FEET	NO (1)
SIDE YARD SETBACK	15 FEET	N/A	0 FEET	NO (1)	N/A	0 FEET	NO (1)
REAR YARD SETBACK	15 FEET	N/A	N/A	YES	N/A	N/A	YES
RESIDENTIAL PARKING	1 SPACE/UNIT 215 SPACES (BLOCK 112) 431 SPACES (BLOCK 160)	0 SPACES	163 SPACES	NO (1)	0 SPACES	390 SPACES	NO (1)
COMMERCIAL PARKING	4 SPACES PLUS 1 SPACE FOR EVERY 333 S.F. OVER 2,500 S.F. 21 SPACES (BLOCK 112) 42 SPACES (BLOCK 160)	0 SPACES			0 SPACES		

(1) VARIANCE REQUESTED

SHEET INDEX

SHEET No.	DESCRIPTION	PREPARED	LAST REVISED
1	COVER SHEET	12/10/19	02/19/2020
2	EXISTING CONDITIONS & DEMOLITION PLAN	12/10/19	02/19/2020
3	LAYOUT & DIMENSIONING PLAN	12/10/19	02/19/2020
4	GRADING & UTILITY PLAN	12/10/19	02/19/2020
5	LANDSCAPING & LIGHTING PLAN	12/10/19	02/19/2020
6	SOIL EROSION & SEDIMENT CONTROL PLAN	12/10/19	02/19/2020
7	CONSTRUCTION DETAILS-1	12/10/19	02/19/2020
8	CONSTRUCTION DETAILS-2	12/10/19	02/19/2020

APPLICANT/OWNER:

SUMO ENTERPRISES
1100 NORTH BROAD STREET
HILLSIDE, NJ 07205

THE UNDERSIGNED HEREBY CERTIFIES THAT THEY ARE THE APPLICANT AS DEPICTED HEREON & CONSENTS TO THE FILING OF THIS PLAN WITH THE ZONING BOARD OF ADJUSTMENT OF TOWNSHIP OF IRVINGTON

(APPLICANT)

(PRINT)

APPLICANT/OWNER:

SUMO ENTERPRISES
1100 NORTH BROAD STREET
HILLSIDE, NJ 07205

THE UNDERSIGNED HEREBY CERTIFIES THAT THEY ARE THE APPLICANT AS DEPICTED HEREON & CONSENTS TO THE FILING OF THIS PLAN WITH THE PLANNING BOARD OF CITY OF NEWARK

(APPLICANT) (DATE)

(PRINT)

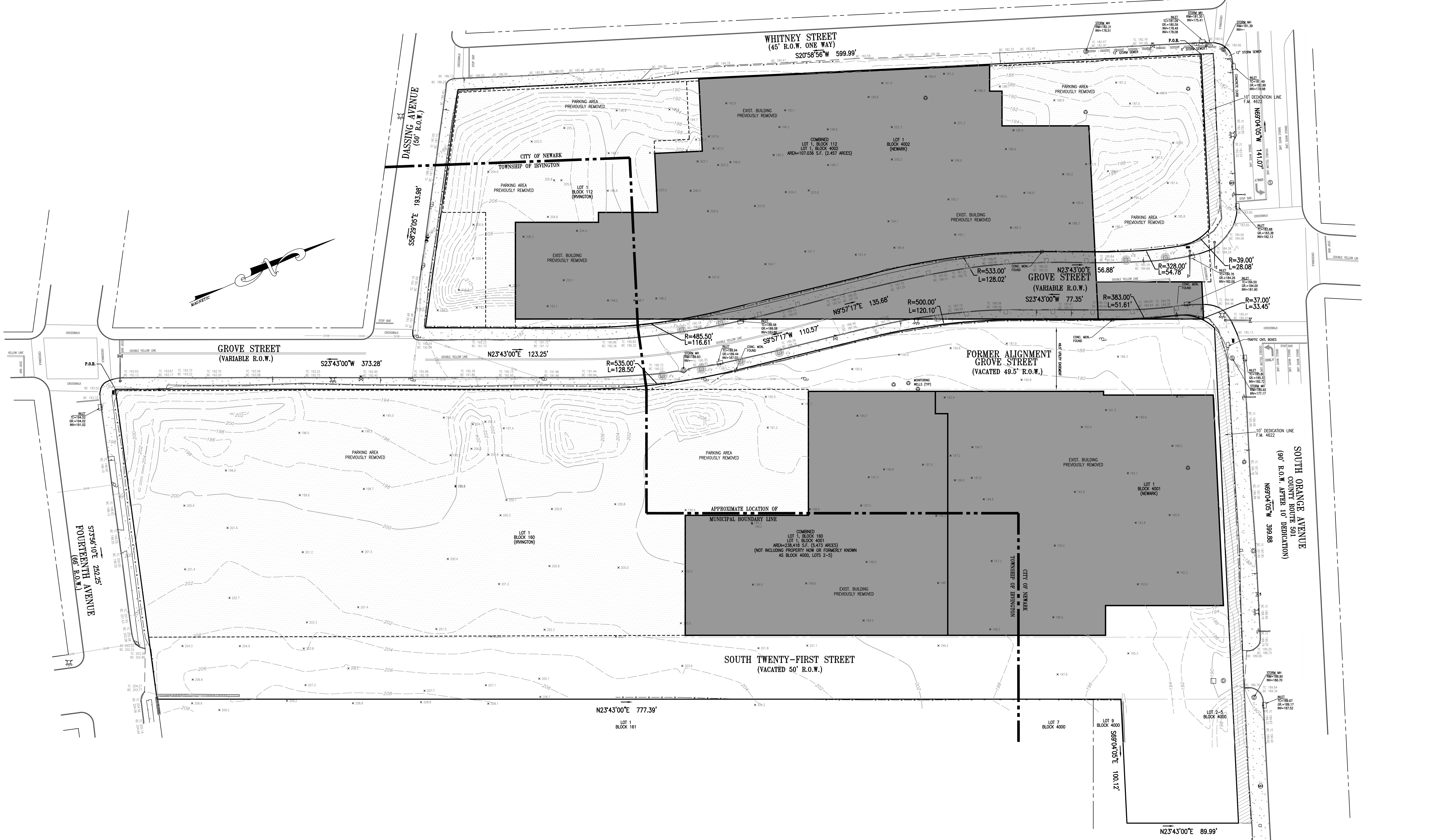
PRELIMINARY AND FINAL SITE PLAN
429 & 444 GROVE ST (IRVINGTON)
& 552 & 572-588 SOUTH ORANGE AVE (NEWARK)
LOT 1, BLOCK 112 & LOT 1, BLOCK 160 (IRVINGTON)
LOT 1, BLOCK 400 & LOT 1, BLOCK 4001 (NEWARK)
CITY OF NEWARK & TOWNSHIP OF IRVINGTON, ESSEX COUNTY, NJ

COVER SHEET

HARBOR CONSULTANTS
ENGINEERS & SURVEYORS
320 NORTH AVENUE EAST
CRANFORD, N.J. 07016
Tel. (908) 276-2715 Fax (908) 709-1738
Email: info@hcleg.net

VICTOR E. VINEGRA
P.E. & L.S. LIC. No. 34460

PROJECT: 20191973



WHITNEY STREET
(45' R.O.W. ONE WAY)
S20°58'56"W 599.99'
DASSING AVENUE
(50' R.O.W.)
S58°29'05"E 193.98'
MAGNETIC
CITY OF NEWARK
TOWNSHIP OF IRVINGTON
PARKING AREA
PREVIOUSLY REMOVED
LOT 1
BLOCK 112
(IRVINGTON)
EXIST. BUILDING
PREVIOUSLY REMOVED
COMBINED
LOT 1, BLOCK 112
LOT 1, BLOCK 4002
AREA=107,036 S.F. (2.457 ACRES)
LOT 1
BLOCK 4002
(NEWARK)
N69°04'05"W 141.07'
10' DEDICATION LINE
F.M. 4622
GROVE STREET
(VARIABLE R.O.W.)
S23°43'00"W 373.28'
N23°43'00"E 123.25'
P.O.B.
R=485.50'
L=116.61'
R=535.00'
L=128.50'
S9°57'17"W 110.57'
N9°57'17"E 135.68'
R=500.00'
L=120.10'
R=533.00'
L=128.02'
N23°43'00"E 56.88'
S23°43'00"W 77.35'
R=328.00'
L=54.78'
R=39.00'
L=28.08'
R=383.00'
L=51.61'
R=37.00'
L=33.45'
FORMER ALIGNMENT
GROVE STREET
(VACATED 49.5' R.O.W.)
MONITORING
WELLS (TYP)
SOUTH ORANGE AVENUE
COUNTY ROUTE 501
(90' R.O.W. AFTER 10' DEDICATION)
N69°04'05"W 399.88
EXIST. BUILDING
PREVIOUSLY REMOVED
LOT 1
BLOCK 4001
(NEWARK)
APPROXIMATE LOCATION OF
MUNICIPAL BOUNDARY LINE
COMBINED
LOT 1, BLOCK 160
LOT 1, BLOCK 4001
AREA=238,418 S.F. (5.473 ACRES)
(NOT INCLUDING PROPERTY NOW OR FORMERLY KNOWN
AS BLOCK 4000, LOTS 2-5)
LOT 1
BLOCK 160
(IRVINGTON)
CITY OF NEWARK
TOWNSHIP OF IRVINGTON
FOURTEENTH AVENUE
(66' R.O.W.)
S73°56'10"E 252.25'
SOUTH TWENTY-FIRST STREET
(VACATED 50' R.O.W.)
N23°43'00"E 777.39'
LOT 1
BLOCK 161
LOT 7
BLOCK 4000
LOT 9
BLOCK 4000
S69°04'05"E 100.12'
LOT 2-5
BLOCK 4000
N23°43'00"E 89.99'

DIG SAFELY - NEW JERSEY

CALL BEFORE YOU DIG
1-800-272-1000
IT'S THE LAW

Dig Safely

NEW JERSEY ONE CALL
CONTRACTORS SHALL CALL 1-800-272-1000
MINIMUM THREE DAYS, MAXIMUM 10 DAYS NOTICE PRIOR TO BEGINNING EXCAVATION

LEGEND

·	STREET SIGN	·	IRON BAR FOUND
●	CLEANOUT	□	MAILBOX
·	SANITARY MANHOLE		STREET TREE
·	DRAINAGE MANHOLE	X 0.00	EXIST. SPOT ELEVATION
·	CATCH BASIN	— — 10 — —	EXISTING CONTOUR LINE
·	CATCH BASIN	—— G ——	GAS LINE
·	SOIL BORING	—— W ——	WATER LINE
·	GUY WIRE	·	GAS VALVE
·	UTILITY POLE	·	WATER VALVE
·	P.K. NAIL FOUND	·	FIRE HYDRANT
·	CONC. MONUMENT FOUND	·	LIGHT POST

DEMOLITION NOTES:-

1. WORK TO BE IN ACCORDANCE WITH ALL LOCAL AND STATE RULES AND REGULATIONS AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
2. PROTECT AT ALL TIMES ADJACENT PROPERTIES AND PUBLIC RIGHT-OF-WAYS FROM DAMAGE, DUST AND DEBRIS. PROVIDE FOR THE SAFETY OF PEDESTRIANS AT ALL TIMES.
3. ALL UNDERGROUND PIPING TO BE REMOVED SHALL BE CAPPED AT THE PROPERTY LINE.
4. THE USE OF EXPLOSIVES IS PROHIBITED WITHOUT THE REQUIRED LOCAL AND STATE PERMITS.
5. THE LOCATION OF ALL UNDERGROUND UTILITIES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE TO BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION ACTIVITIES. ANY DISCREPENCIES BETWEEN PLAN AND FIELD INFORMATION ARE TO BE REPORTED IMMEDIATELY TO HARBOR CONSULTANTS.
6. THE DISRUPTION OF EXISTING UTILITY SERVICES SHALL BE AVOIDED TO THE GREATEST EXTENT POSSIBLE. ANY REQUIRED DISRUPTION OF SERVICES SHALL BE COORDINATED IN ADVANCE WITH THE RESPECTIVE AUTHORITY AND AFFECTED USERS SHALL BE ADEQUATELY NOTIFIED.
7. ALL CONSTRUCTION DEBRIS AND REFUSE SHALL BE DISPOSED OF OFF-SITE IN AN APPROPRIATE MANNER.
8. ALL FEATURES AND STRUCTURES WITHIN THE PROPERTY LINES AND ALONG THE ENTIRE FRONTAGE OF ALL PROPERTIES INVOLVED IN THIS PROJECT SHALL BE DEMOLISHED AND REMOVED.

ELEVATIONS SHOWN ARE BASED ON NAVD 88

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
1	02/19/2020	REVISED AS PER CITY OF NEWARK PLANNING & ZONING BOARDS COMMENTS	S.P.	

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Engineers & Surveyors
320 NORTH AVENUE EAST
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PRELIMINARY & FINAL SITE PLAN

EXISTING CONDITIONS & DEMOLITION PLAN

LOT 1, BLOCK 4001, LOT 1, BLOCK 4002 CITY OF NEWARK
LOT 1. BLOCK 112, LOT 1 , BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

2

VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
1"=30'	12/10/19	V.E.V.	S.P./C.V.F.	2019173_Exist&Demo	24GA27962100	2019173

118318 - CROWN VILLAGE HOUSING

			Studio	1 Bed	2 Bed	3 Bed	Floor Total
BLOCK 1							
Residential Unit Counts:			Studio	1 Bed	2 Bed	3 Bed	Floor Total
BUILDING 1	First Living Level		5	14	5		24
	Second Living Level		5	22	1		28
	Third Living Level		5	22	1		28
	Fourth Living Level		5	22	1		28
		Totals	**20**	**80**	**8**	**0**	**108**
BUILDING 2	First Living Level		2	22	6		30
	Second Living Level		2	22	2	2	28
	Third Living Level		1	22	3		26
	Fourth Living Level			21	2		23
		Totals	**5**	**87**	**13**	**2**	**107**
	Sub Totals		**25**	**167**	**21**	**2**	**215**
	Unit Type Percentage		11.6%	77.7%	9.8%	0.9%	
Block 1 Retail	Retail Space 1		1,589				
	Retail Space 2		1,593				
	Retail Space 3		1,853				
	Retail Space 4		4,080				
		Totals	**9,115**	**sf**			
Block 1 Comm	Community Room		1,894				
	Library/Co-working		1,551				
			3,445	**sf**			

118318 - CROWN VILLAGE HOUSING

			Studio	1 Bed	2 Bed	3 Bed	Floor Total	
BLOCK 2								
Residential Unit Counts:			Studio	1 Bed	2 Bed	3 Bed	Floor Total	
BUILDING 3	First Living Level			9	3		12	
	Second Living Level			9	3		12	
	Third Living Level			9	3		12	
	Fourth Living Level			8	2		10	
		Totals	**0**	**35**	**11**	**0**	**46**	
BUILDING 4	First Living Level		2	9	6		17	
	Second Living Level		2	8	7		17	
	Third Living Level		2	8	7		17	
	Fourth Living Level		3	9	6		18	
		Totals	**9**	**34**	**26**	**0**	**69**	
BUILDING 5	First Living Level		5	11	3		19	
	Second Living Level		9	11	3		23	
	Third Living Level		9	11	3		23	
	Fourth Living Level		9	11	3		23	
		Totals	**32**	**44**	**12**	**0**	**88**	
BUILDING 6a	First Living Level		4	19	5		28	
	Second Living Level		3	24	1		28	
	Third Living Level		3	24	1		28	
	Fourth Living Level		4	22	1		27	
		Totals	**14**	**89**	**8**	**0**	**111**	
BUILDING 6b	First Living Level						0	
	Second Living Level			16			16	
	Third Living Level			16			16	
	Fourth Living Level						0	
		Totals	**0**	**32**	**0**	**0**	**32**	
BUILDING 6c	First Living Level		1	23	0		24	
	Second Living Level		1	16	3		20	
	Third Living Level		3	15	3		21	
	Fourth Living Level		1	16	3		20	
		Totals	**6**	**70**	**9**	**0**	**85**	
	Sub Totals		**61**	**304**	**66**	**0**	**431**	
	Unit Type Percentage		14.2%	70.5%	15.3%	0.0%		
Block 2 Retail	Retail Space 5		2,255					
	Retail Space 6		1,844					
	Retail Space 7		1,813					
	Retail Space 8		2,237					
	Retail Space 9		3,572					
	Retail Space 10		2,355					
		Totals	**14,076**	**sf**				
Block 2 Comm.	Day Care		2,378					
	Community Room		3,252					
	Gym		1,409					
			7,039	**sf**				
Unit Type Total / Grand Total			**86**	**471**	**87**	**2**	**646**	Units
	Unit Type Percentage		13.3%	72.9%	13.5%	0.3%		

UNIT & PARKING COUNT (LOT 1)

FLOOR	STUDIO	1 BED	2 BED	3 BED	SUBTOTAL
BUILDING 1	20	80	8	0	108
BUILDING 2	5	87	13	2	107
TOTALS (UNIT %)	25 (11.6%)	167 (77.7%)	21 (9.8%)	2 (0.9%)	215
PARKING FACTOR: 1 x NO. OF UNITS =					215
PARKING PROVIDED:					163

UNIT & PARKING COUNT (LOT 2)

FLOOR	STUDIO	1 BED	2 BED	3 BED	SUBTOTAL
BUILDING 3A	6	105	20	0	131
BUILDING 3B	0	32	0	0	32
BUILDING 3C	14	89	8	0	111
BUILDING 4	9	34	26	0	69
BUILDING 5	32	44	12	0	88
TOTALS (UNIT %)	61 (11.6%)	304 (77.7%)	66 (19.8%)	0 (10.9%)	431
PARKING FACTOR: 1 x NO. OF UNITS =					431
PARKING PROVIDED:					390

TOTALS:

FLOOR	STUDIO	1 BED	2 BED	3 BED	SUBTOTAL
TOTALS (UNIT %)	86 (13.3%)	471 (72.9%)	87 (13.5%)	2 (0.3%)	646
PARKING FACTOR: 1 x NO. OF UNITS =					646
PARKING PROVIDED:					553

RESIDENTIAL UNIT SIZES

UNIT TYPE	AREA RANGE IN SQUARE FEET (SF)
STUDIO	370 – 429 SF
1 BEDROOM	744 – 948 SF
2 BEDROOM	1012 – 1364 SF
3 BEDROOM	1662 SF

LEGEND

STREET SIGN	IRON BAR FOUND
CLEANOUT	MAILBOX
SANITARY MANHOLE	STREET TREE
DRAINAGE MANHOLE	X 0.00 EXIST. SPOT ELEVATION
CATCH BASIN	— — 10 — — EXISTING CONTOUR LINE
CATCH BASIN	—G— GAS LINE
SOIL BORING	—W— WATER LINE
GUY WIRE	GAS VALVE
UTILITY POLE	WATER VALVE
P.K. NAIL FOUND	FIRE HYDRANT
CONC. MONUMENT FOUND	LIGHT POST

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
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3

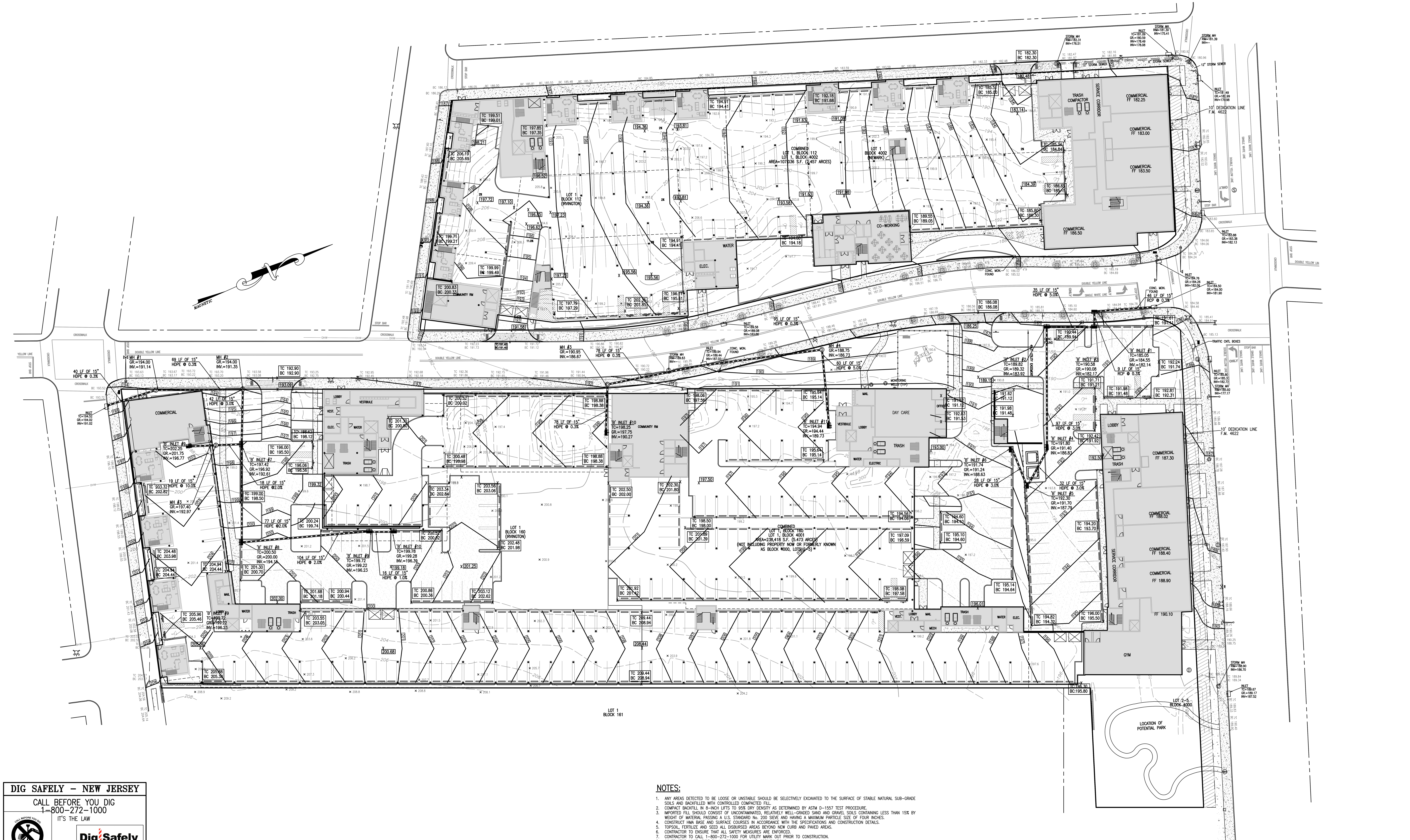
PRELIMINARY & FINAL SITE PLAN

LAYOUT & DIMENSIONING PLAN

LOT 1, BLOCK 4001, LOT 1, BLOCK 4002 CITY OF NEWARK
LOT 1. BLOCK 112, LOT 1 , BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
1"=30'	12/10/19	V.E.V.	S.P./C.V.F.	2019173_L&D	24GA27962100	2019173



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IT'S THE LAW

NEW JERSEY ONE CALL
CONTRACTORS SHALL CALL 1-800-272-1000
MINIMUM THREE DAYS, MAXIMUM 10 DAYS NOTICE PRIOR TO BEGINNING EXCAVATION

LEGEND

·	STREET SIGN	·	IRON BAR FOUND
●	CLEANOUT	□	MAILBOX
·	SANITARY MANHOLE		STREET TREE
·	DRAINAGE MANHOLE	X 0.00	EXIST. SPOT ELEVATION
·	CATCH BASIN	— — 10 — —	EXISTING CONTOUR LINE
·	CATCH BASIN	—— G ——	GAS LINE
·	SOIL BORING	—— W ——	WATER LINE
·	GUY WIRE	·	GAS VALVE
·	UTILITY POLE	·	WATER VALVE
·	P.K. NAIL FOUND	·	FIRE HYDRANT
·	CONC. MONUMENT FOUND	·	LIGHT POST

NOTES:

1. ANY AREAS DETECTED TO BE LOOSE OR UNSTABLE SHOULD BE SELECTIVELY EXCAVATED TO THE SURFACE OF STABLE NATURAL SUB-GRADE SOILS AND BACKFILLED WITH CONTROLLED COMPACTED FILL.
2. COMPACT BACKFILL IN 8-INCH LIFTS TO 95% DRY DENSITY AS DETERMINED BY ASTM D-1557 TEST PROCEDURE.
3. IMPORTED FILL SHOULD CONSIST OF UNCONTAMINATED, RELATIVELY WELL-GRADED SAND AND GRAVEL SOILS CONTAINING LESS THAN 15% BY WEIGHT OF MATERIAL PASSING A U.S. STANDARD No. 200 SIEVE AND HAVING A MAXIMUM PARTICLE SIZE OF FOUR INCHES.
4. CONSTRUCT HMA BASE AND SURFACE COURSES IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DETAILS.
5. TOPSOIL, FERTILIZE AND SEED ALL DISBURSED AREAS BEYOND NEW CURB AND PAVED AREAS.
6. CONTRACTOR TO ENSURE THAT ALL SAFETY MEASURES ARE ENFORCED.
7. CONTRACTOR TO CALL 1-800-272-1000 FOR UTILITY MARK OUT PRIOR TO CONSTRUCTION.
8. CONTRACTOR MUST ABIDE BY ALL REGULATIONS AND SPECIFICATIONS.
9. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND PLAN SHALL BE BROUGHT TO DESIGN ENGINEER'S ATTENTION IMMEDIATELY.
10. OSHA REQUIREMENTS SHALL BE FOLLOWED FOR PROTECTION OF TRENCH SIDEWALLS.
11. ELEVATIONS SHOWN ARE BASED ON NAVD 88.
12. NOT ALL UTILITY POLES, UTILITY LINES, VALVES, DRIVEWAYS, INLETS, TREES, LOOP DETECTORS AND OTHER EXISTING TOPOGRAPHIC FEATURES HAVE BEEN SHOWN ON PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN ALL LOCATIONS PRIOR TO CONSTRUCTION.
13. PERFORM ALL CONSTRUCTION WORK IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES. APPLICABLE SAFETY CODES MEANS THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS AND ADDITIONS THERETO OF THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S "OCCUPATIONAL SAFETY AND HEALTH STANDARDS" (OSHA); "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" OF THE STATE OF NEW JERSEY, DEPARTMENT OF LABOR AND INDUSTRY, BUREAU OF ENGINEERING AND SAFETY; "CONSTRUCTION SAFETY CODE," AND "MAINTENANCE, CONSTRUCTION AND DEMOLITION," AND "BUILDING CODE."
14. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FLOW WITHOUT PONDING OF WATER.
15. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY/TOWNSHIP POLICE DEPARTMENT 72 HOURS PRIOR TO THE START OF ANY WORK AND SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITHIN 30 DAYS OF DAY PROJECT AWARDED TO CONTRACTOR.
16. ALL TRAFFIC CONTROL AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH M.U.T.C.D., LATEST EDITION, AND MUNICIPAL TRAFFIC ORDINANCES. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE POLICE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK. TRAFFIC CONTROL PLANS SHALL INCLUDE AT A MINIMUM, THE FOLLOWING SITUATIONS: 1) ROAD CLOSED, 2) LANE CLOSED, AND 3) SHOULDER CLOSED. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL ON THE PROJECT. ANY COSTS ASSOCIATED WITH TRAFFIC CONTROL SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROJECT.
17. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL UTILITIES TO RAISE OR LOWER MANHOLES, METERS, VALVES, ETC. TO GRADE AS WORK PROGRESSES.
18. THE CONTRACTOR IS RESPONSIBLE FOR THE STAKEOUT AND LAYOUT OF THE PROJECT. THE STAKEOUT AND LAYOUT IS TO BE PERFORMED BY A NEW JERSEY PROFESSIONAL LAND SURVEYOR. ALL COSTS ASSOCIATED WITH THE STAKEOUT AND LAYOUT OF THE PROJECT ARE TO BE INCLUDED IN THE BID ITEM "CONSTRUCTION LAYOUT." ALL GRADES ARE TO BE SET IN THE FIELD BY THE LAND SURVEYOR.
19. ALL SHOP DRAWINGS ARE TO BE SUBMITTED AT A MINIMUM OF THREE (3) WEEKS PRIOR TO CONSTRUCTION. ALL PROPOSED DRAINAGE STRUCTURES, IF ANY, MUST BE DESIGNED BY A NEW JERSEY PROFESSIONAL ENGINEER. ALL SHOP DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
20. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE IMPROVEMENTS SHOWN SHALL BE IN ACCORDANCE WITH THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007" AND ALL APPLICABLE AMENDMENTS.

ELEVATIONS SHOWN ARE BASED ON NAVD 88

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
1	02/19/2020	REVISED AS PER CITY OF NEWARK PLANNING & ZONING BOARDS COMMENTS	S.P.	

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4

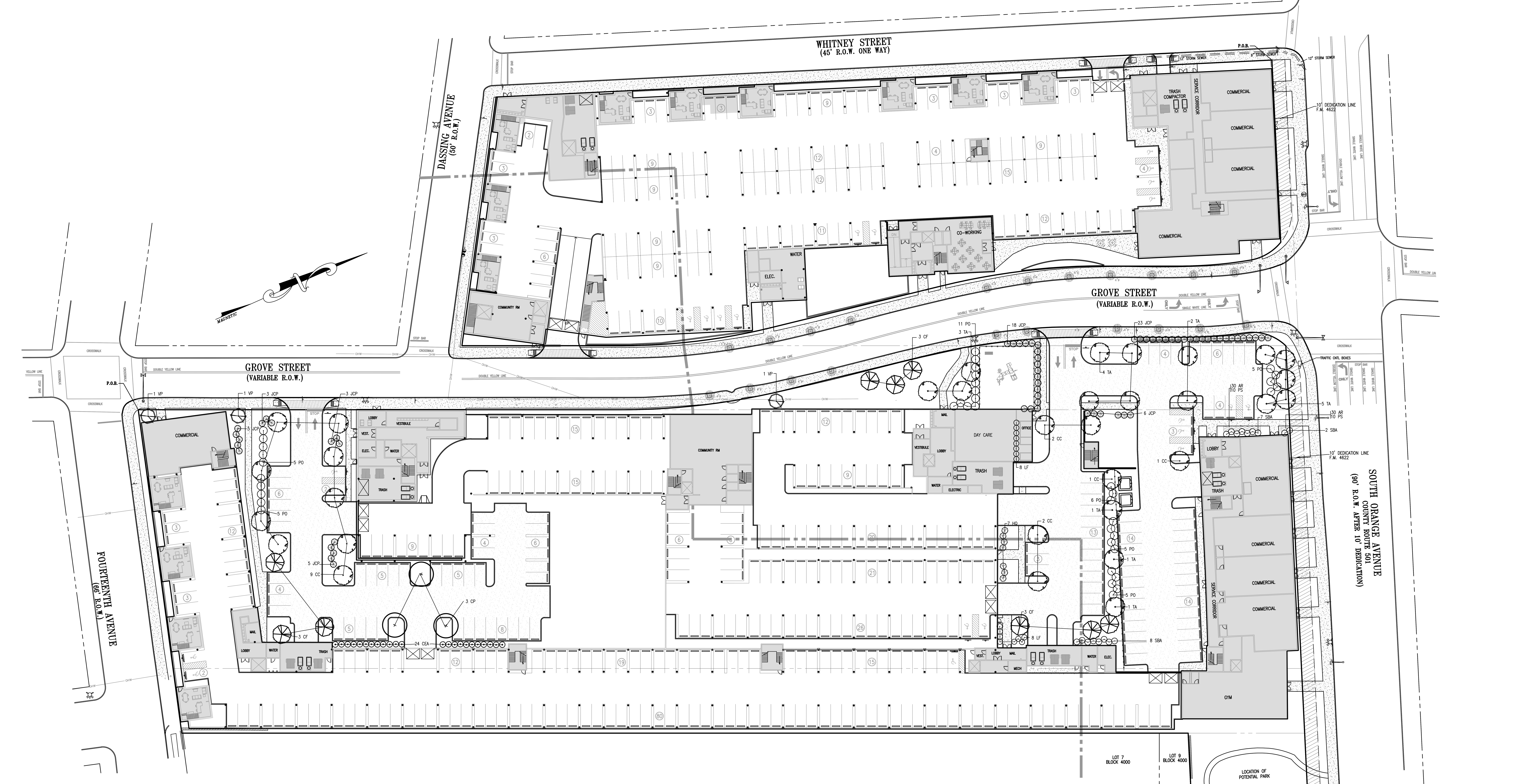
PRELIMINARY & FINAL SITE PLAN

GRADING & UTILITY PLAN

LOT 1, BLOCK 4001, LOT 1, BLOCK 4002 CITY OF NEWARK
LOT 1. BLOCK 112, LOT 1 , BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
1"=30'	12/10/19	V.E.V.	S.P./C.V.F.	2019173_G&U	24GA27962100	2019173



PROPOSED PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	DESCRIPTION HEIGHT / CALIPER	DESCRIPTION ROOT	TREE CREDIT
Trees						
CP	3	Crataegus Phaenopyrum 'Princeton Security'	Washington Hawthorn	2 1/2-3" cal	B & B	3
CC	15	Carpinus Caroliniana	American Hornbeam	2 1/2-3" cal	B & B	15
CF	9	Cornus Florida	Flowering Dogwood	8'-10' ht, 3" Cal.	B & B	9
VP	3	Viburnum Plicatum Tomentosum	Doublefile Viburnum	6'-8' ht, 3" cal	B & B	3
TA	17	Tilia Americana	American Linden	2 1/2-3" cal	B & B	17
Shrubs						
CEA	24	Ceanothus Americanus	N.J. Tea	30-36"	15 CAN	
HQ	7	Hydrangea quercifolia 'Pee Wee'	'Pee Wee' Oak leaf hydrangea	30-36"	15 CAN	
JPC	60	Juniperus Chinensis pfitzeriana 'Compacta'	Compact Pftizer Juniper	24-30"	#3 Can	
LF	16	Leucothoe Fontanesiana 'Girard's Rainbow'	Drooping Leucothoe	24-30"	#3 Can	
PO	42	Physocarpus Opulifolius 'Dart's Gold'	Dart's Gold Ninebark	30-36"	#3 Can	
SBA	17	Spiraea bumalda 'Anthony Waterer'	Anthony Waterer Spirea	18"-24	#7 Can	
Perennials, Grasses, Groundcovers and Bulbs						
AR	30	Ajuga Reptans	Bugleweed	#1 CONT.		
PS	10	Phlox Subulata	Creuping Phlox	2 GAL		
					TOTAL TREE CREDIT	47

LEGEND

·	STREET SIGN	·	IRON BAR FOUND
●	CLEANOUT	□	MAILBOX
·	SANITARY MANHOLE		STREET TREE
·	DRAINAGE MANHOLE	X 0.00	EXIST. SPOT ELEVATION
·	CATCH BASIN	— — 10 — —	EXISTING CONTOUR LINE
·	CATCH BASIN	—G—	GAS LINE
·	SOIL BORING	—W—	WATER LINE
·	GUY WIRE	·	GAS VALVE
·	UTILITY POLE	·	WATER VALVE
·	P.K. NAIL FOUND	·	FIRE HYDRANT
·	CONC. MONUMENT FOUND	·	LIGHT POST

PLANTING NOTES

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.

2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE LANDSCAPING PLANS.

3. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT "AMERICAN STANDARD FOR NURSERY STOCK:", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN OR EQUIVALENT.

4. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED.

5. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING.

6. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING.

7. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN THREE VERTICAL LOCATIONS.

8. THE DAY PRIOR TO PLANTING, THE LOCATION OF ALL TREES AND SHRUBS SHALL BE STAKED IN THE FIELD. AT THAT TIME, THE LOCATIONS OF THE PLANTING MATERIAL SHALL BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.

9. ALL PLANT MATERIAL SHALL BE TAGGED AT THE NURSERY, INDICATING BOTANICAL NAME, COMMON NAME, VARIETY AND SIZE. IT IS ASSUMED THAT ALL PLANT MATERIAL IS AVAILABLE IN CENTRAL NEW JERSEY.

10. ALL SHADE TREES TO BE TREE FORM AND CLEAR OF BRANCHES TO SEVEN FEET ABOVE GROUND.

11. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS.

12. ALL PLANTS AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.

13. TOPSOIL SHALL BE SANDY LOAM, FREE FROM SUBSOIL, STONES LARGER THAN ONE INCH, OR ANY UNDESIRABLE MATERIAL, CONTAIN 5% ORGANIC MATTER, pH 6-6.5. IT IS RECOMMENDED THAT A MINIMUM OF 6" OF TOP SOIL IS PROVIDED FOR ALL LAWN. PLANT PERENNIALS AND GROUNDCOVER IN 8" DEEP TOPSOIL BED CONSISTING OF ⅔ TOPSOIL, ⅓ HUMUS. PLANT BULBS IN NATURALIZED DRIFTS.

14. ALL PLANTS SHALL BE WATERED THOROUGHLY, TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON.

15. ALL PLANTS AND THE ENTIRE SHRUB BED SHALL RECEIVE A MINIMUM OF A 3 INCH LAYER OF SHREDDED HARDWOOD BARK MULCH. MULCH ALL PINES TO WITHIN 3 INCHES OF BRANCH ENDS. OVER 10 MIL FABRIC EQUAL TO "WEEDBLOCK".

16. TREE STAKES AND GUY WIRES TO BE CHECKED AFTER FIRST YEAR ALONG WITH CONDITIONS OF PLANT MATERIAL. STAKES AND GUY WIRES SHALL BE REMOVED AFTER A ONE YEAR PERIOD.

17. TOPSOIL OR SEED ALL DISTURBED AREAS AS A RESULT OF ANY AND ALL CONSTRUCTION OR STORAGE EQUIPMENT, WHETHER AREAS ARE SHOWN ON THE PLANS OR NOT. CONTRACTOR TO FIELD VERIFY AREAS OF SEED.

18. THE FOLLOWING SEED MIXTURES SHALL BE USED WITHIN THE AREAS SPECIFIED: SEED @ 30 LBS PER ACRE; OPTIMUM SEEDING DATES: FEB 15TH TO APRIL 1, AND AUG 15 TO OCT 15

LAWN AREA MIX:
- 30% Onyx Turf-Type Tall Fescue
- 30% Montauk Turf-Type TallFescue
- 10% Santa Fe Turf-Type Tall Fescue
- 30% Washington Kentucky Bluegrass

19. NO GRADING, PLANTING OR STRUCTURE SHALL BE ERECTED OR MAINTAINED MORE THAN THREE (3) FEET ABOVE THE STREET CENTER LINE IN THE ESTABLISHED SIGHT TRIANGLES. ANY PROPOSED OR EXISTING STREET TREES LOCATED IN THE SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED UP TO EIGHT (8) FEET ABOVE FINISHED GRADE.

20. IF CLEARING OF THE EXISTING VEGETATION EXTENDS BEYOND THE LIMITS SHOWN, ADDITIONAL PLANTINGS SHALL BE ADDED AT THE DIRECTION OF THE PLANNING BOARD LANDSCAPE ARCHITECT ALONG THE PERIPHERIES OF THE SITE FOR SCREENING PURPOSES.

21. LOCATION AND SPECIES OF TREES WILL BE FIELD ADJUSTED AT THE TIME OF INSTALLATION IF THE LANDSCAPE ARCHITECT FINDS THAT CONFLICTS OCCUR BETWEEN LANDSCAPING AND LIGHTING.

22. SHOULD DISCREPANCIES OCCUR BETWEEN THE QUANTITY OF PLANTINGS SHOWN ON THE PLANTING SCHEDULE AND THE PLANS, THE NUMBER AS SHOWN ON THE PLANS SHOULD BE HELD.

23. ALL SHADE TREES MUST BE PLANTED A MINIMUM OF TEN (10) FEET FROM THE EDGE OF ANY DRIVEWAY OR LIGHT POLE. NO TREES SHALL BE PLANTED CLOSER THAN TEN (10) FEET TO ANY UTILITY.

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
1	02/19/2020	REVISED AS PER CITY OF NEWARK PLANNING & ZONING BOARDS COMMENTS	S.P.	

Harbor Consultants Inc.
Engineers & Surveyors
320 NORTH AVENUE EAST
CRANFORD, N.J. 07016
Phone (908) 276-2715 Fax (908) 709-1738
Email: info@hcicg.net

5

PRELIMINARY & FINAL SITE PLAN

LANDSCAPING & LIGHTING PLAN

LOT 1, BLOCK 4001, LOT 1, BLOCK 4002 CITY OF NEWARK
LOT 1. BLOCK 112, LOT 1 , BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
1"=30'	12/10/19	V.E.V.	S.P./C.V.F.	2019173_L&D	24GA27962100	2019173

STANDARD FOR STABILIZATION WITH VEGETATIVE COVER

(REVISED PER "NJ STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" 7th EDITION, JULY 2017)

METHODS AND MATERIALS

1. SITE PREPARATION

A. GRADE, AS NEEDED AND FEASIBLE, TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.

B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.

C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SEEDBED PREPARATION

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT, WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OF LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS OF SPECIFIC REQUIREMENTS.

3. SEEDING

A. SELECT A MIXTURE FROM TABLE 4-3 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITH 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED.

1 SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

2 WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85°F AND ABOVE. SEE TABLE 4-3 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3 COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 65°F. SEE TABLE 4-3 MIXTURES 8 TO 20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL-SEASON GRASSES.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF ¼ TO ½ INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE ¼ INCH DEEPER ON COARSE-TEXTURED SOIL.

C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MUULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4-MULCHING BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OF HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWN DUE TO THE PRESENCE OF WEED SEED.

APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE EACH AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1 PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS 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.

2 MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3 CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE MY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4 LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

(A) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

(B) USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USED IN THIS STATE.

(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OF GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,5000 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPED AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

5. IRRIGATION (WHERE FEASIBLE)

IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF ¼ INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A - SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO THE ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATE APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.

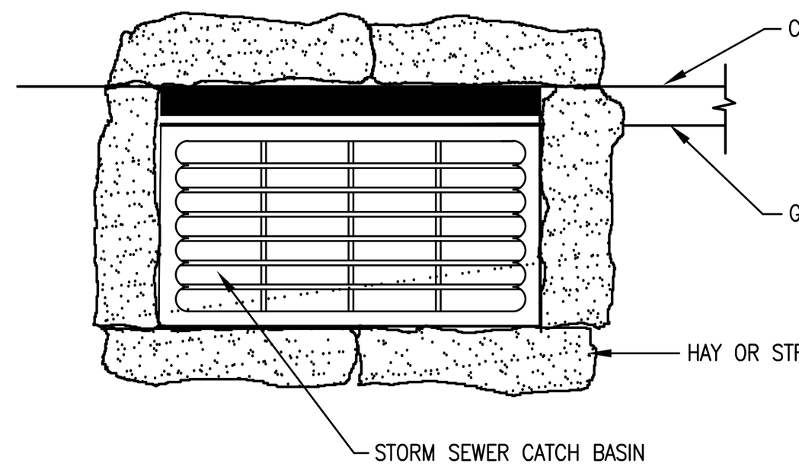
LEGEND

·	STREET SIGN	·	IRON BAR FOUND
●	CLEANOUT	□	MAILBOX
·	SANITARY MANHOLE		STREET TREE
·	DRAINAGE MANHOLE	X 0.00	EXIST. SPOT ELEVATION
·	CATCH BASIN	— — 10 — —	EXISTING CONTOUR LINE
·	CATCH BASIN	——G——	GAS LINE
·	SOIL BORING	——W——	WATER LINE
·	GUY WIRE	·	GAS VALVE
·	UTILITY POLE	·	WATER VALVE
·	P.K. NAIL FOUND	·	FIRE HYDRANT
·	CONC. MONUMENT FOUND	·	LIGHT POST

T:\2019173 - South Orange Ave, Newark\Finals\2019173_SESC.dwg, 2/19/2020 11:23:46 AM, DWG To PDF.pc3

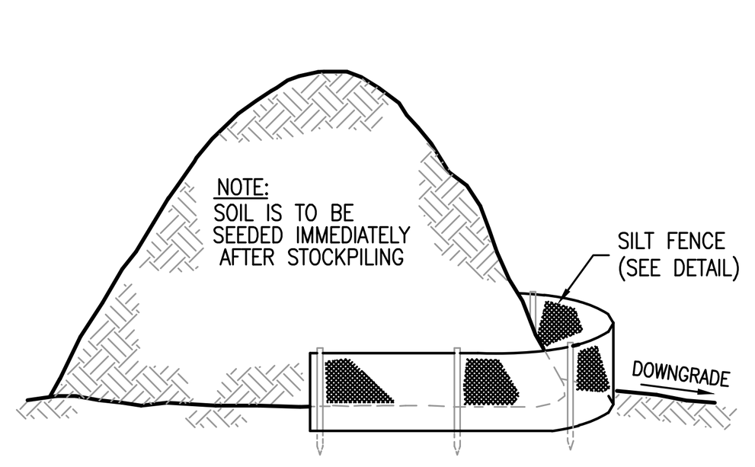
GENERAL NOTES:

1. CITY OF NEWARK DEPARTMENT OF ENGINEERING
   225 CENTRAL AVENUE
   NEWARK, NJ 07013
   JERRY REAVES (973)-424-4281
   BETH TANZOSH (973)-733-4300
2. OWNER/APPLICANT:
   SUMO ENTERPRISES
   1100 NORTH BROAD STREET
   HILLSIDE, NJ 07205
3. THIS PLAN IS ONLY TO BE USED AS A GUIDE TO THE IMPLEMENTATION OF SOIL EROSION CONTROL MEASURES. IT IS NOT TO BE USED FOR CONSTRUCTION. REFER TO GRADING & UTILITY PLAN AND SUPPLEMENTS THERETO.
4. ALL ROADS AND WALKWAYS WILL BE SWEPT DAILY THROUGH THE DURATION OF CONSTRUCTION.
5. AREA WITHIN LIMIT OF DISTURBANCE
   383,965 S.F. (8.81± ACRES)

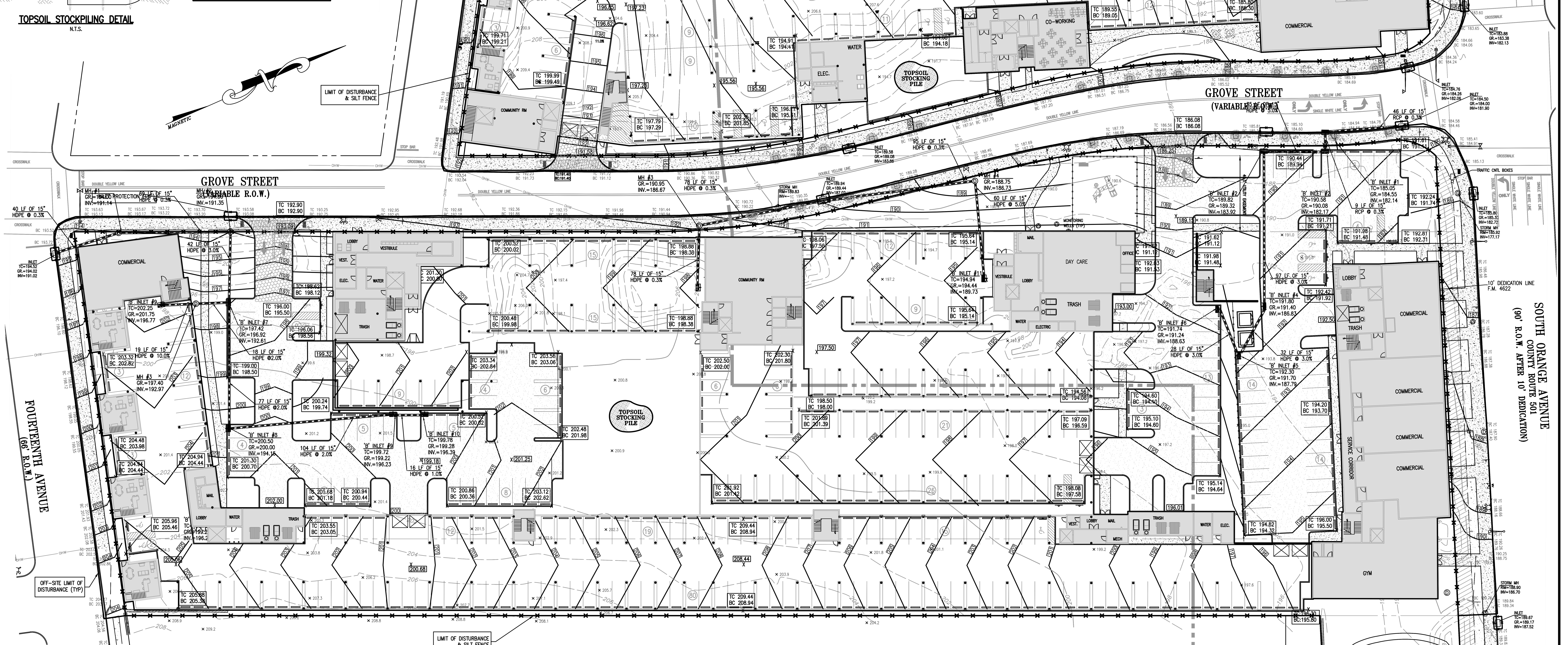


INLET PROTECTION DETAIL
N.T.S.

DIG SAFELY - NEW JERSEY
CALL BEFORE YOU DIG
1-800-272-1000
IT'S THE LAW
Dig Safely
NEW JERSEY ONE CALL
CONTRACTORS SHALL CALL 1-800-272-1000
MINIMUM THREE DAYS, MAXIMUM 10 DAYS NOTICE PRIOR TO BEGINNING EXCAVATION



TOPSOIL STOCKPILING DETAIL
N.T.S.



ACID SOIL MITIGATION NOTES (IF APPLICABLE)

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID PRODUCING SOILS ARE ENCOUNTERED.
2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS.
3. STOCKPILES OF HIGH ACID PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOIL MATERIAL TO BE EXPOSED MORE THAT 30 DAYS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID PRODUCING SOIL.
5. HIGH ACID PRODUCING SOILS WITH A PH OF 4 OR LESS, OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 6 TONS PER ACRE (OR 275 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5 OR MORE EXCEPT AS FOLLOWS:
   A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OF 5 OR MORE.
   B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN A 24 INCHES OF ANY SURFACE OF SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES AND OTHERS TO PREVENT POTENTIAL LATERAL LEACHING DAMAGE.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. NON VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SILT FENCE, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID PRODUCING SOILS FROM, AROUND OR OFF THE SITE.
8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE, (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 7-1, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4-1 AND TOPSOILING, PG. 8-1) MONITORING SHOULD CONTINUE FOR APPROXIMATELY 6 TO 12 MONTHS TO ASSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.
9. MONITORING OF AREAS WHERE HIGH ACID SOIL PRODUCING SOIL HAS BEEN PLACED OR BURIED SHOULD BE PERFORMED FOR AT LEAST 2 YEARS OR LONGER IF PROBLEMS OCCUR, TO ASSURE THERE IS NO MIGRATION OF POTENTIAL ACID LEACHATE.

LIQUID MULCH-BINDERS SHALL BE APPLIED AS FOLLOWS:

1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
2. USE ONE OF THE FOLLOWING:
   A. EMULSIFIED ASPHALT - (SSI-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, AND CRS-2). APPLY 0.04 GAL./SQ./YD. OR 194 GAL./ACRE ON FLAT AREAS AND ON SLOPES LESS THAN 8 FEET OR MORE HIGH, USE 0.075 GAL./SQ./YD. OR 363 GAL./ACRE. THESE MATERIALS MAY DE DIFFICULT TO APPLY UNIFORMLY AND WILL DISCOLOR SURFACES.
   B. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN WILL BE CONSTRUCTED IN ACCORDANCE WITH THE "NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" 7TH EDITION LAST REVISED DECEMBER 2017. THESE MEASURES WILL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

2. ALL SOIL TO BE EXPOSED OR STOCKPILED FOR A PERIOD OF GREATER THAN 14 DAYS, AND NOT UNDER ACTIVE CONSTRUCTION, WILL BE TEMPORARILY SEEDED AND HAY MULCHED OR OTHERWISE PROVIDED WITH VEGETATIVE COVER. THIS TEMPORARY COVER SHALL BE MAINTAINED UNTIL SUCH TIME WHEREBY PERMANENT RESTABILIZATION IS ESTABLISHED.

3. SEEDING DATES: THE FOLLOWING SEEDING DATES ARE RECOMMENDED TO BEST ESTABLISH PERMANENT VEGETATIVE COVER WITHIN MOST LOCATIONS IN THE HEPSCD: SPRING - 3/1-5/15 AND FALL - 8/15 - 10/1

4. SEDIMENT FENCES ARE TO BE PROPERLY TRENCHED AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED

5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY ONE OF THE PRACTICES ACCEPTED IN THE STANDARDS, AND PROTECTION SHALL REMAIN UNTIL PERMANENT STABILIZATION HAS BEEN ESTABLISHED. STORM DRAINAGE OUTLET POINTS SHALL BE PROTECTED AS REQUIRED BEFORE THEY BECOME FUNCTIONAL.

6. MULCH MATERIALS SHALL BE UN-ROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 70 TO 90 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.

7. ALL EROSION CONTROL DEVICES SHALL BE PERIODICALLY INSPECTED, MAINTAINED AND CORRECTED BY THE CONTRACTOR. ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.

8. THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT WILL BE NOTIFIED IN WRITING AT LEAST 48 HOURS PRIOR TO ANY SOIL DISTURBING ACTIVITIES. FAX - (862) 333-4507 OR EMAIL - INFORMATION@HEPSCD.ORG

9. THE APPLICANT MUST OBTAIN A DISTRICT ISSUED REPORT-OF-COMPLIANCE PRIOR TO APPLYING FOR THE CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY FROM THE RESPECTIVE MUNICIPALITY, NJ - DCA OR ANY OTHER CONTROLLING AGENCY. CONTACT THE DISTRICT AT 862-333-4505 TO REQUEST A FINAL INSPECTION, GIVING ADVANCED NOTICE UPON COMPLETION OF THE RESTABILIZATION MEASURES. A PERFORMANCE DEPOSIT MAY BE POSTED WITH THE DISTRICT WHEN WINTER WEATHER OR SNOW COVER PROHIBITS THE PROPER APPLICATION OF SEED, MULCH, FERTILIZER OR HYDRO-SEED.

10. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. DO NOT UTILIZE A FIRE OR GARDEN HOSE TO CLEAN ROADS UNLESS THE RUNOFF IS DIRECTED TO A PROPERLY DESIGNED AND FUNCTIONING SEDIMENT BASIN. WATER PUMPED OUT OF THE EXCAVATED AREAS CONTAINS SEDIMENTS THAT MUST BE REMOVED PRIOR TO DISCHARGING TO RECEIVING BODIES OF WATER USING REMOVABLE PUMPING STATIONS, SUMP PITS, PORTABLE SEDIMENTATION TANKS AND/OR SILT CONTROL BAGS.

11. ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED TOPSOIL PRIOR TO RE-SEEDING, SODDING OR PLANTING. A DEPTH OF 5.0 INCHES, FIRMED IN PLACE, IS REQUIRED, AS PER THE STANDARDS FOR TOPSOILING AND LAND GRADING, LAST REVISED DECEMBER 2017.

12. ALL PLAN REVISIONS MUST BE SUBMITTED TO THE DISTRICT FOR PROPER REVIEW AND APPROVAL.

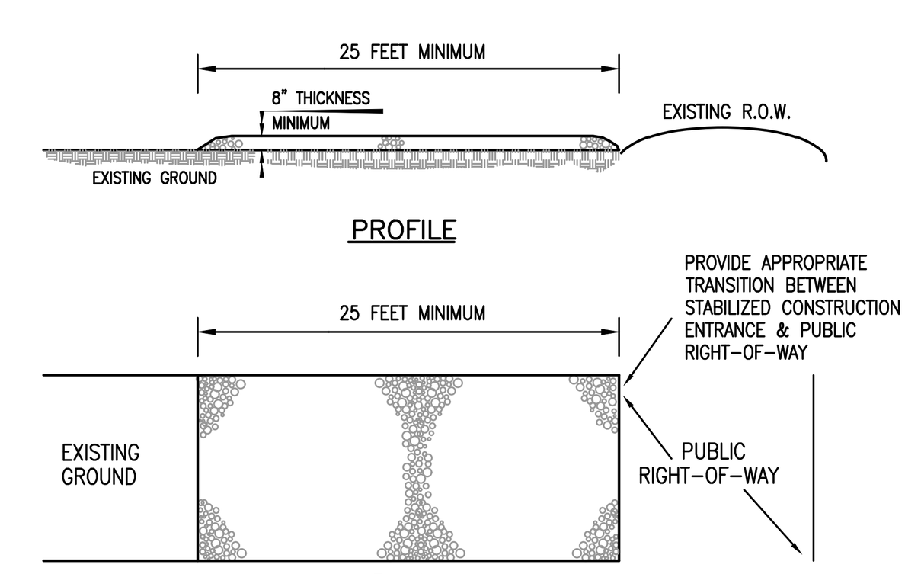
13. A CRUSHED STONE WHEEL CLEANING TRACKING-PAD IS TO BE INSTALLED AT ALL SITE EXITS USING 2 ½ -1" CRUSHED ANGULAR STONE (ASTM 2 OR 3) TO A MINIMUM LENGTH OF 50 FEET AND MINIMUM DEPTH OF 6". ALL DRIVEWAYS MUST BE PROVIDED WITH CRUSHED STONE UNTIL PAVING IS COMPLETE.

14. STEEP SLOPES INCURRING DISTURBANCE MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. THESE "SPECIAL" MEASURES SHALL BE DESIGNED BY THE APPLICANT'S ENGINEER AND BE APPROVED BY THE SOIL CONSERVATION DISTRICT.

15. THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED, IN WRITING, FOR THE SALE OF ANY PORTION OF THE PROJECT OR FOR THE SALE OF INDIVIDUAL LOTS. NEW OWNERS' INFORMATION SHALL BE PROVIDED. ADDITIONAL MEASURES DEEMED NECESSARY BY DISTRICT OFFICIALS SHALL BE IMPLEMENTED AS CONDITIONS WARRANT.

SEEDING SCHEDULE

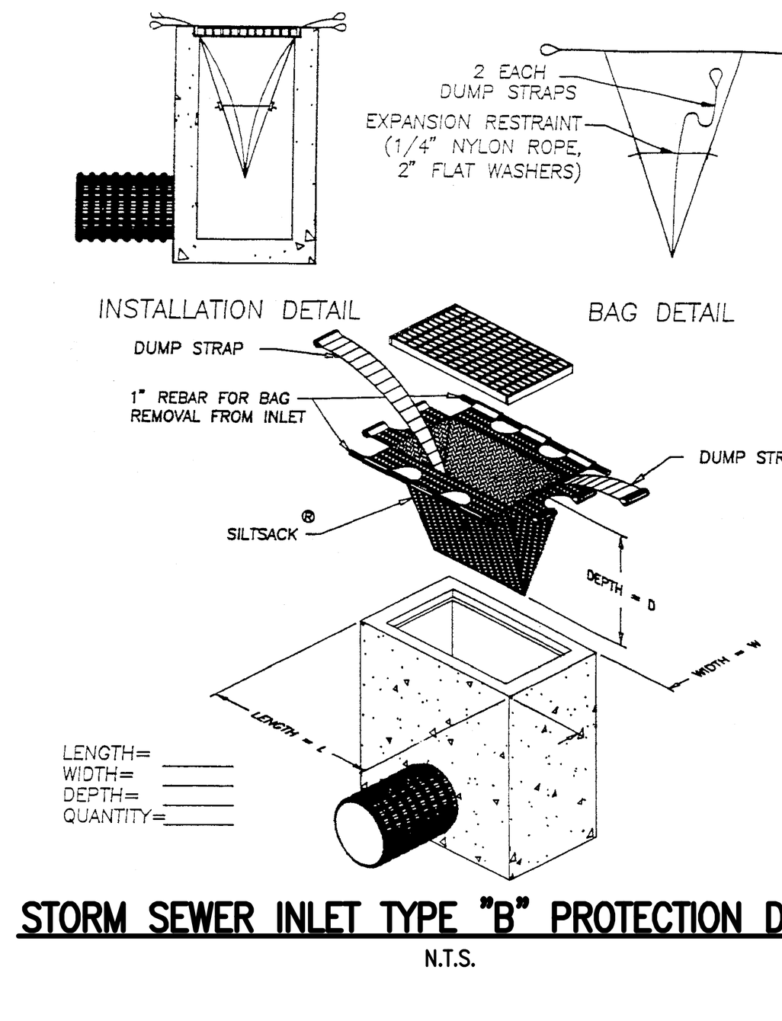
1. REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL
2. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.
3. TEMPORARY SEEDING SHALL CONSIST OF SPRING OATS APPLIED AT A RATE OF 2.0 LBS. PER 1,000 SF OR GRAIN RYE APPLIED AT A RATE OF 2.4 LBS. PER 1,000 SF. TEMPORARY SEEDING TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING.. IF ANY SERIOUS EROSION PROBLEM OCCURS, THE ERODED AREAS SHALL BE REPAIRED AND STABILIZED
4. "PERMANENT SEEDING TO BE APPLIED BY CYCLONE SPREADER OR OTHER APPROVED METHOD, AT A RATE OF 200#/ACRE. SLOPED AREA TO BE COVERED WITH MULCH AS INDICATED IN NOTE 6".
5. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE 10-20-10 APPLIED AT A RATE OF 11#/1000 SF OR AS DETERMINED BY SOIL TESTS. LIMESTONE FOR TEMPORARY SEEDING SHALL BE APPLIED AT A RATE OF 90#/1000 SF. LIMESTONE FOR PERMANENT SEEDING SHALL BE APPLIED AT A RATE OF 135#/1000 SF.
6. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 8.
7. ALL SEEDED AREAS SHALL BE MULCHED. MULCH SHALL CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBRE MULCH BINDER, LIQUID MULCH BINDER, OR AN APPROVED EQUAL AT A RATE OF 70-90 LBS. PER 1000 SF.



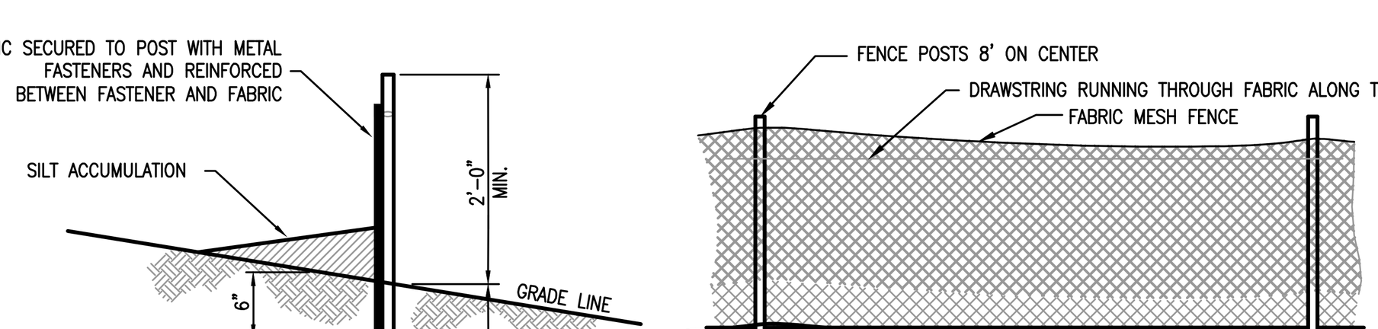
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

STABILIZED CONSTRUCTION ENTRANCE SPECIFICATIONS

1. STONE SIZE - USE ASTM C-33, SIZES NO. 2 OR 3. USE CRUSHED STONES.
2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 8 INCHES.
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, BUT IN NO CASE LESS THAN 15' WIDE.
5. WASHING - WHEN NECESSARY. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER COURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.
7. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE SHALL BE INSTALLED BEFORE INSTALLATION.



STORM SEWER INLET TYPE "B" PROTECTION DETAIL
N.T.S.



SILTATION FENCE DETAIL
N.T.S.

ELEVATIONS SHOWN ARE BASED ON NAVD 88

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
1	02/19/2020	REVISED AS PER CITY OF NEWARK PLANNING & ZONING BOARDS COMMENTS	S.P.	

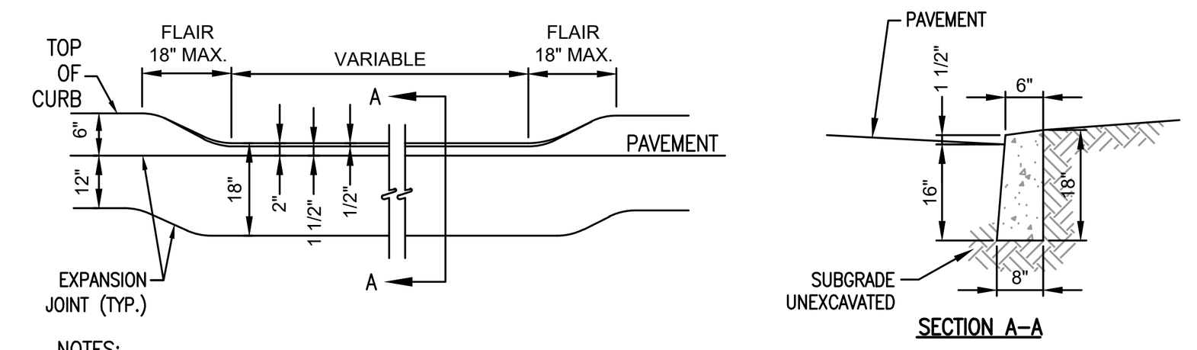
Harbor Consultants Inc.
Engineers & Surveyors
320 NORTH AVENUE EAST
CRANFORD, N.J. 07016
Phone (908) 276-2715 Fax (908) 709-1738
Email: info@hcicg.net

6

PRELIMINARY & FINAL SITE PLAN
SOIL EROSION & SEDIMENT CONTROL PLAN
LOT 1, BLOCK 4001, LOT 1, BLOCK 4002 CITY OF NEWARK
LOT 1. BLOCK 112, LOT 1 , BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

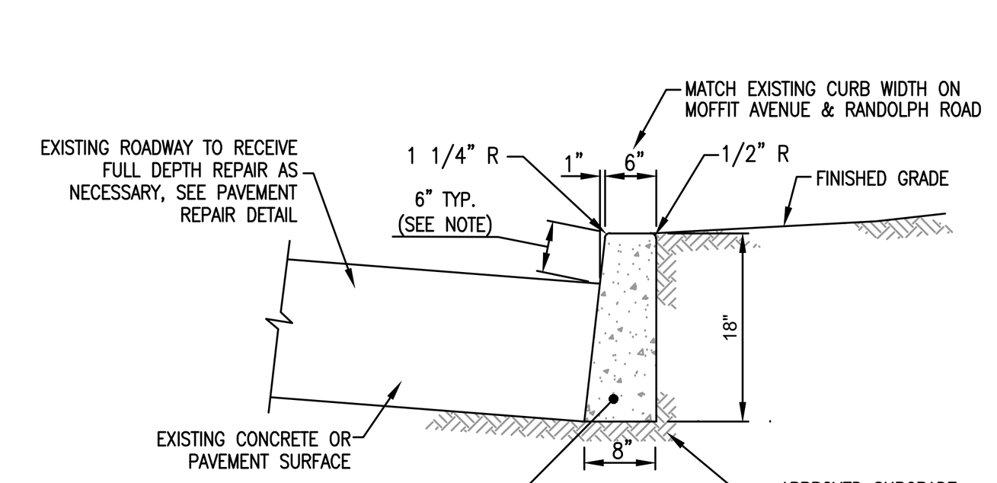
VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
1"=30'	12/10/19	V.E.V.	S.P.	2019173_Exist&Demo	24GA27962100	2019173



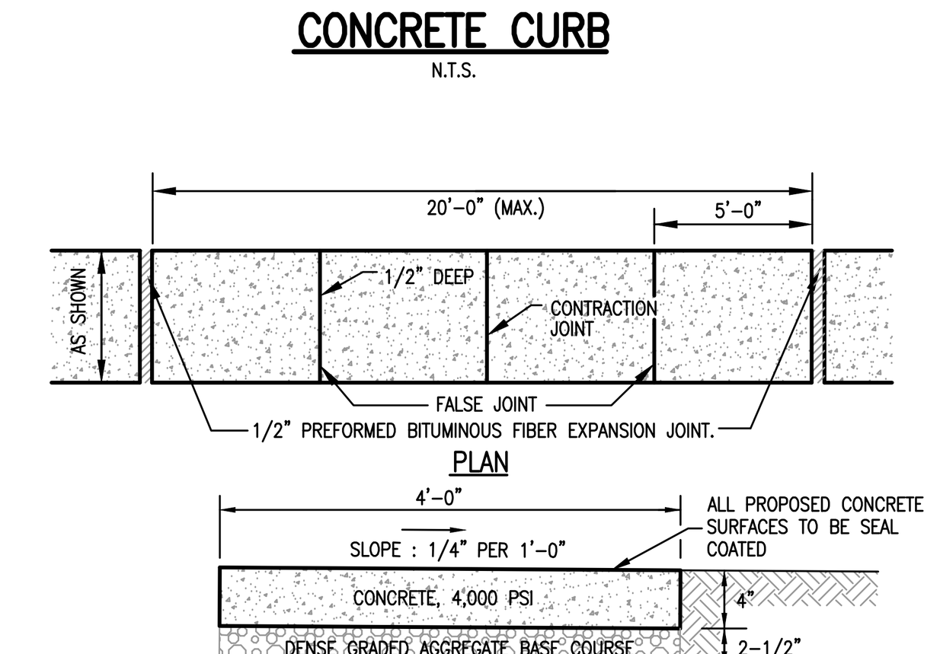
NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH ¾" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO POURING.
2. EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AND AT ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREFORMED EXPANSION JOINT FILLER, ½" THICK, CONFORMING TO NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND FRONT OF THE CONCRETE CURB.
3. TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED ¼" FROM THE FRONT FACE AND TOP OF THE CURB.
4. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.
5. WIDTH OF JOINT FILLER STRIP EQUAL TO THE THICKNESS OF THE PAVEMENT LESS ½".
6. A ½" PREFORMED EXPANSION JOINT FILLER, BITUMINOUS TYPE, CONFORMING TO AASHTO SPEC'S M-33. TO BE INSTALLED BETWEEN CURB AND NON-BITUMINOUS PAVEMENT OR BASE COURSE.
7. CONCRETE TO BE CURED PER NJDOT SPECIFICATIONS.

DEPRESSED CONCRETE CURB AT DRIVEWAY
N.T.S.



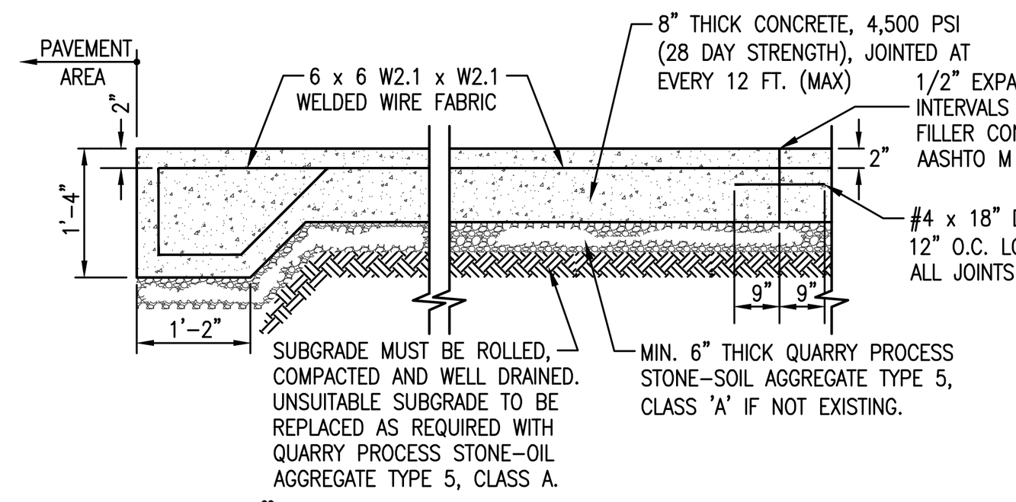
NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO POURING.
2. EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AND AT ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREFORMED EXPANSION JOINT FILLER, ½" THICK, CONFORMING TO NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND FRONT OF THE CONCRETE CURB.
3. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB.
4. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.
5. WIDTH OF JOINT FILLER STRIP EQUAL TO THE THICKNESS OF THE PAVEMENT LESS 1/2".
6. THE 6" CURB REVEAL IS TYPICAL. CONTRACTOR TO REVIEW GRADING PLAN FOR AREAS WHERE REVEAL IS TO BE MODIFIED.
7. CONCRETE TO BE CURED PER NJDOT SPECIFICATIONS.

CONCRETE CURB
N.T.S.

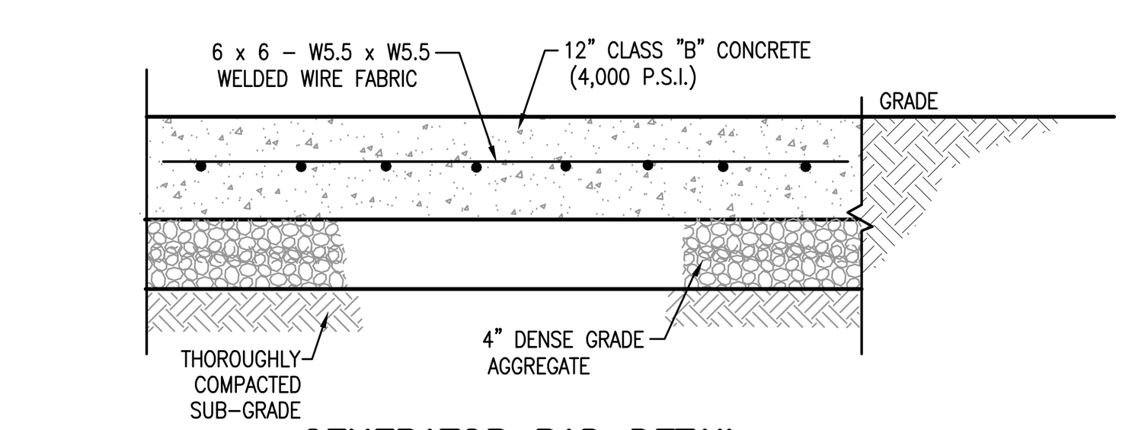


NOTES:
1. SUBGRADE SHALL BE WELL DRAINED AND COMPACTED TO A FIRM SURFACE WITH A UNIFORM BEARING POWER.
2. CONCRETE SHALL BE CLASS "B" AND AIR ENTRAINED, 4000 PSI
3. THE SIDEWALK SHALL BE FOUR (4) INCHES THICK AND SHALL BE FINISHED WITH A WOOD FLOAT FOLLOWED BY BRUSHING WITH A WET SOFT HAIR BRUSH. (6" THICK AT DRIVEWAYS)
4. CONCRETE WALK SHALL HAVE FALSE JOINTS EVERY 4 LINEAR FEET AND A FULL CUT JOINT EVERY 12 LINEAR FEET.
5. WHERE SIDEWALK ADJOINS CURB, CONCRETE APRON, OR OTHER STRUCTURE, 1/2" PERFORMED JOINT FILLER SHALL BE INSTALLED.
6. WHERE SIDEWALK IS TO BE BUILT TO ADJACENT UNPAVED STREET, FINISHED GRADES MUST BE OBTAINED FROM THE TOWNSHIP ENGINEER.
7. CONCRETE SIDEWALK TO BE CURED AS PER NEW JERSEY STATE HIGHWAY SPECIFICATION 1983 SECTION 607.05 & 905.
8. AREAS FOR STAMPED & COLOR CONCRETE SHALL RECEIVE COLOR SHAKE A TOP LAST 1" OF CONCRETE AND FLOATED INTO CONCRETE THE STAMP PATTERN SHALL BE CHOSEN BY HARBOR CONSULTANTS AND MATCH THE EXISTING PAVING STONES ON SITE.
9. CONTRACTOR TO SAW CUT CONCRETE EXPANSION JOINTS EVERY 16 LINEAR FEET 10. ALL CONCRETE TO BE SEAL COATED.

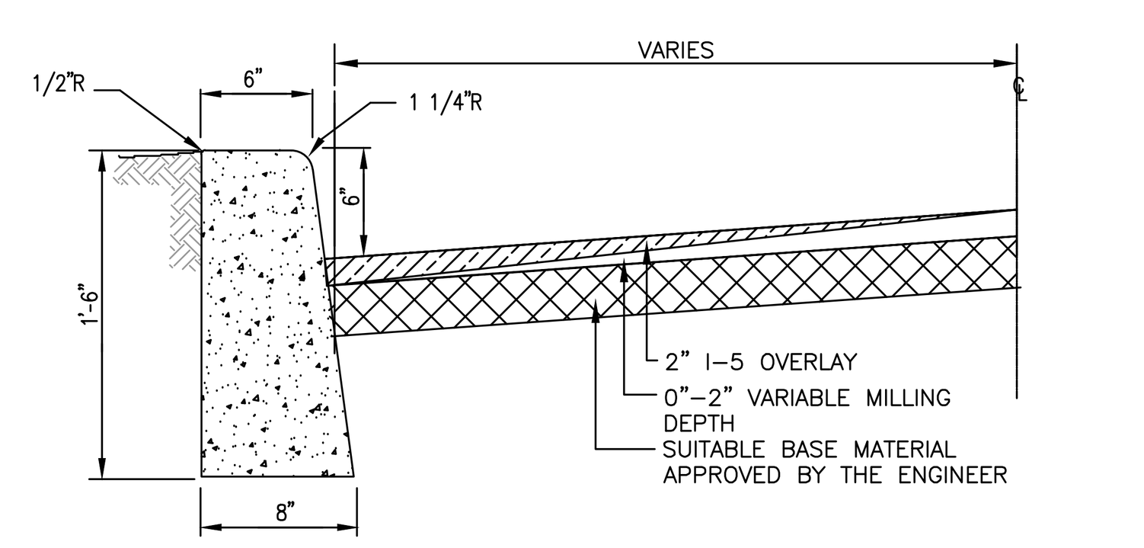
CONCRETE SIDEWALK DETAIL
N.T.S.



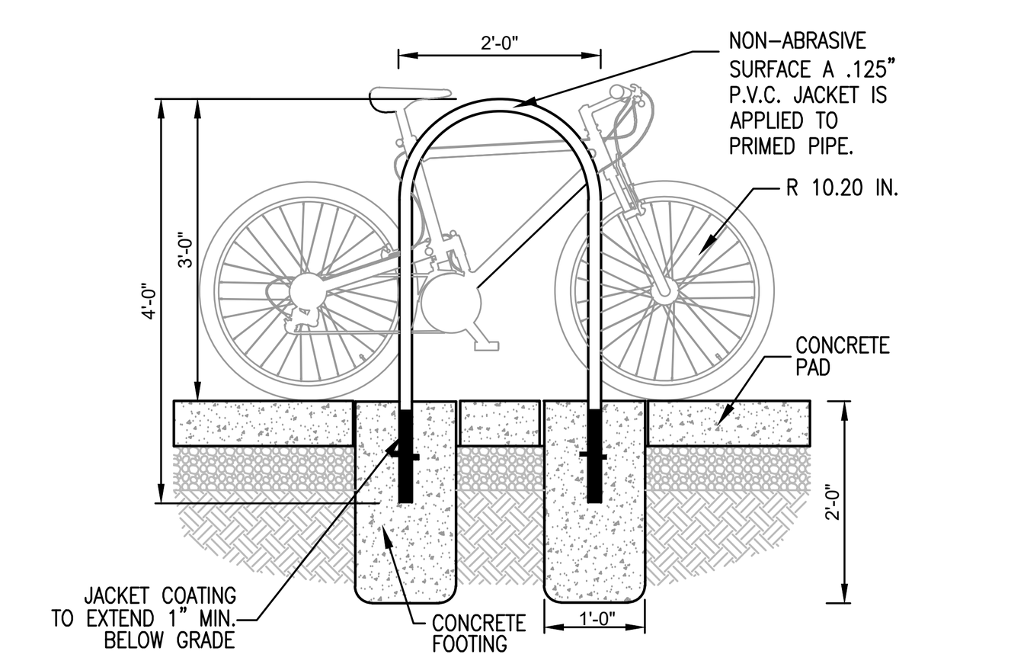
8" THICK CONCRETE TRAILER PAD
N.T.S.



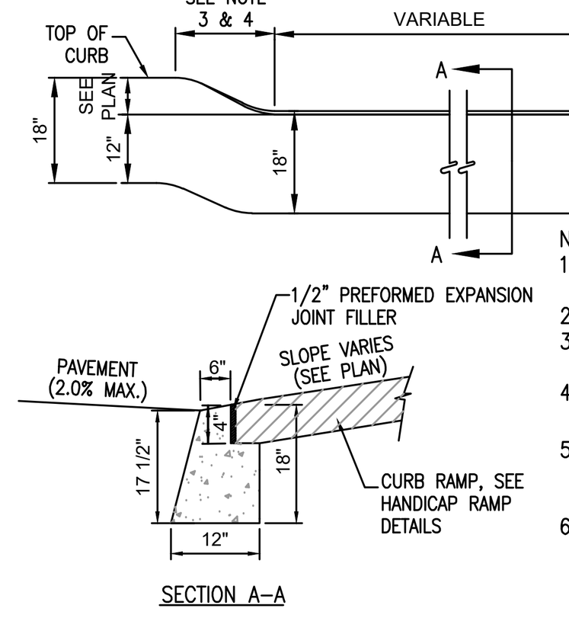
GENERATOR PAD DETAIL
N.T.S.



MILLING & OVERLAY DETAIL
N.T.S

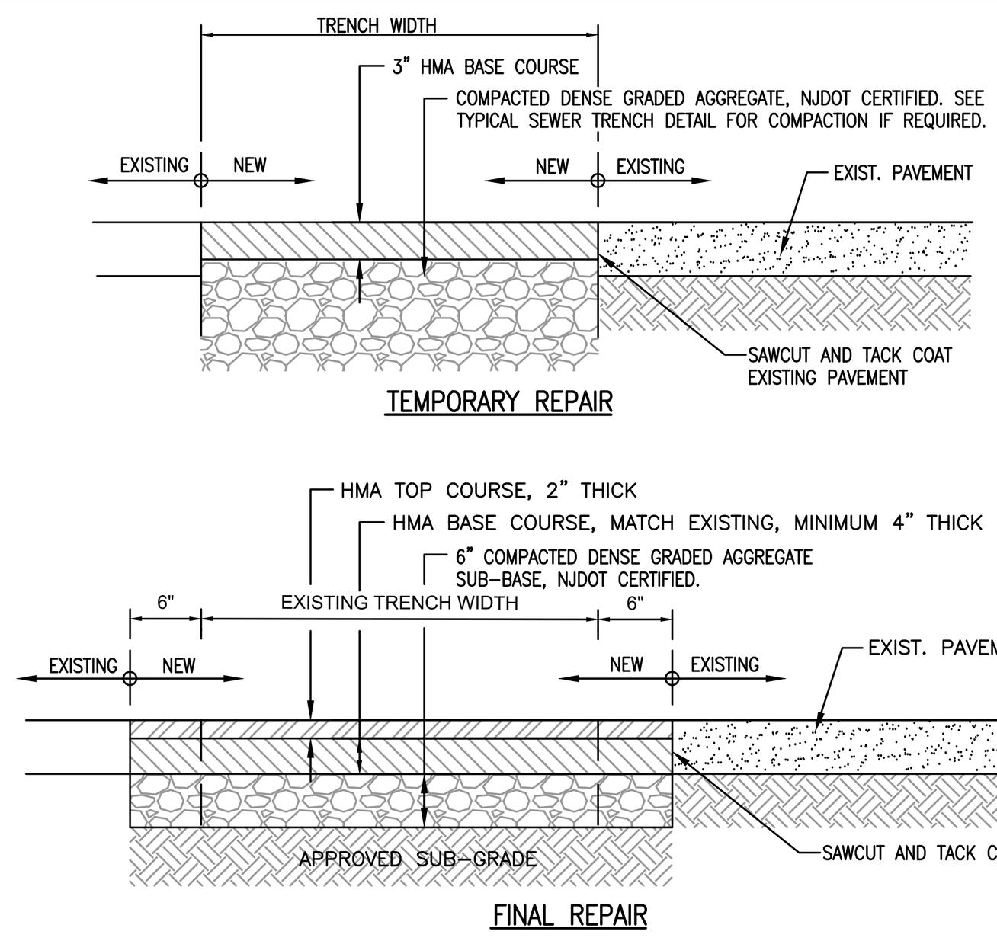


BIKE RACK DETAIL
N.T.S.



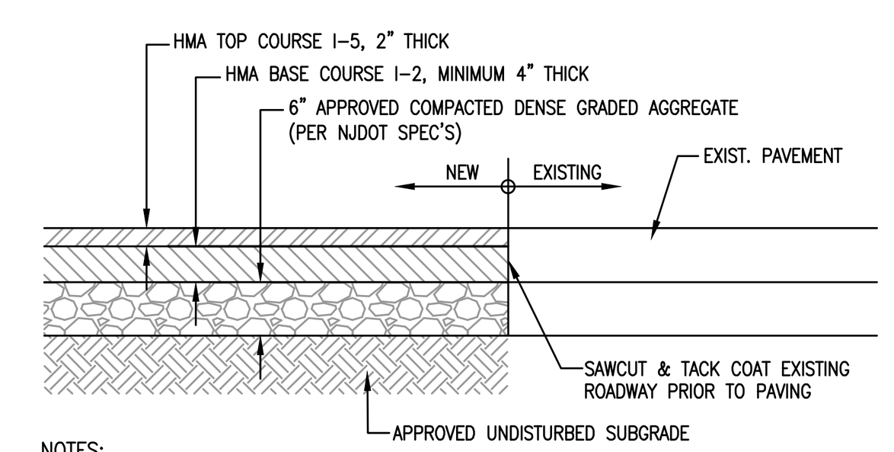
NOTE:
1. ALL CONSTRUCTION TO COMPLY WITH BARRIER FREE CODE REQUIREMENTS
2. SEE STANDARD CURB DETAIL FOR OTHER REQUIREMENTS
3. WHEN ADJACENT TO A WALKWAY, FLARED SIDE SHALL NOT BE SLOPED MORE THAN 1:12.
4. WHEN NOT ADJACENT TO A HARD SURFACE WALKWAY, FLARE CAN BE REDUCED TO 18".
5. CURB REVEAL TYPICALLY 6" BUT CONTRACTOR SHALL REFER TO PLAN AND CURB DETAIL FOR CURB REVEAL SPECIFIC TO SITE LOCATION.
6. ALL CONSTRUCTION TO COMPLY WITH BARRIER FREE CODE REQUIREMENTS. SHOULD CONDITIONS NOT PERMIT COMPLIANCE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
7. CONCRETE TO BE CURED PER NJDOT SPECIFICATIONS.

A.D.A. FLUSH CURB FOR HANDICAP RAMPS
N.T.S.



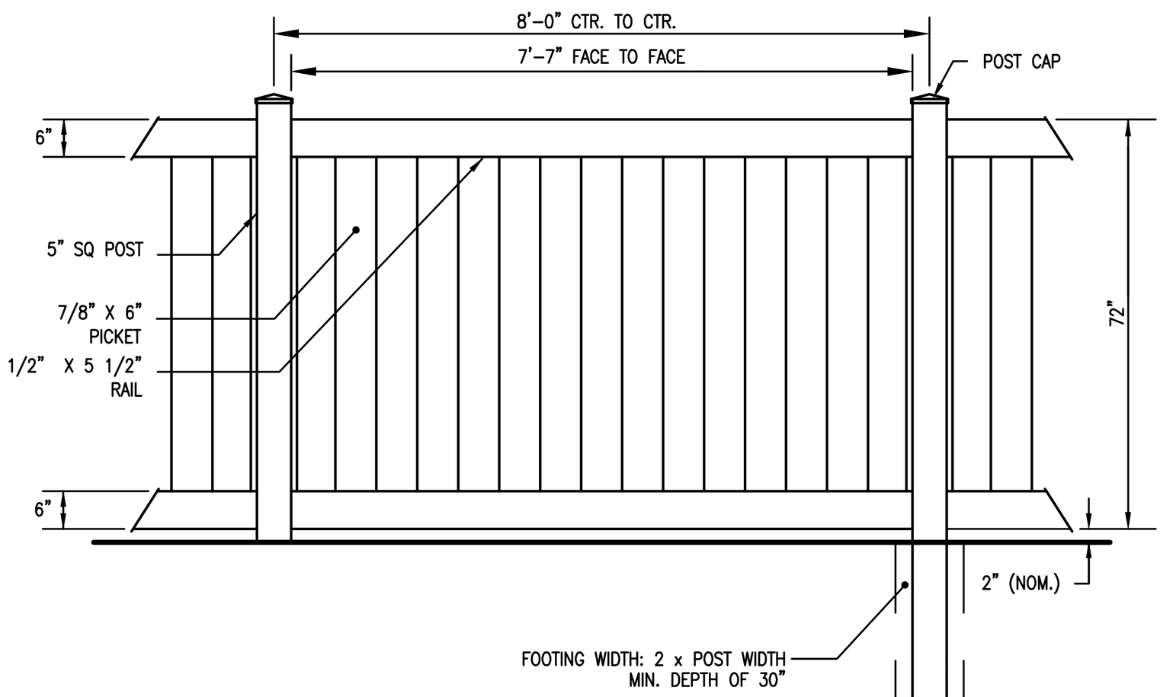
NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR UNSUITABLE SOIL CONDITIONS SHALL BE BACKFILLED WITH DENSE GRADED AGGREGATE. ALL SUBGRADES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLING PAVEMENT REPAIR.
2. MATERIAL AND METHODS USED SHALL COMPLY WITH NJDOT SPECIFICATIONS.
3. TEMPORARY REPAIR SHALL TAKE PLACE OVER THE TRENCH. AFTER A MINIMUM OF 6 MONTHS OR AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL INSTALL THE FINAL REPAIR. LIMITS OF THE FINAL REPAIR SHALL EXTEND 6" BEYOND THE TEMPORARY REPAIR. MATERIAL USED FOR THE TEMPORARY REPAIR SHALL BE REMOVED AND NEW MATERIAL SHALL BE USED FOR THE FINAL REPAIR.

PAVEMENT REPAIR DETAILS
N.T.S.

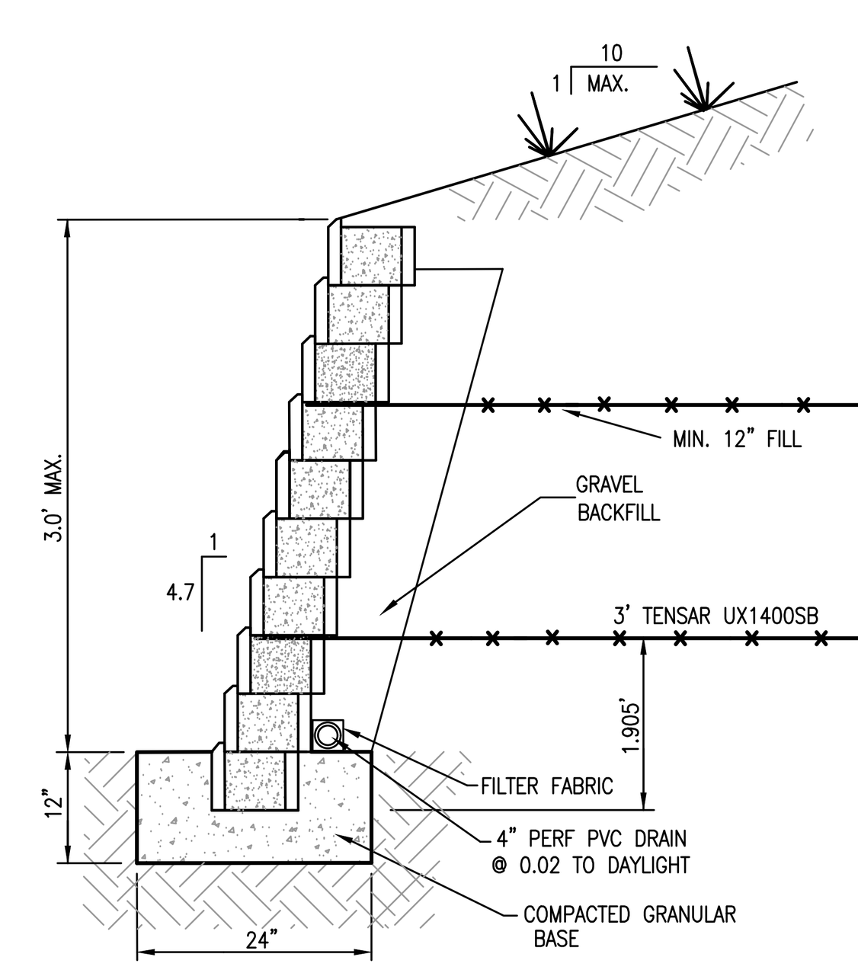


NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR UNSUITABLE SOIL CONDITIONS SHALL BE BACKFILLED WITH DENSE GRADED AGGREGATE. ALL SUBGRADES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLING PAVEMENT REPAIR
2. CONTRACTOR IS TO SUBMIT A PAVING PLAN TO THE ENGINEER PRIOR TO CONSTRUCTION.
3. MATERIALS AND METHODS USED SHALL COMPLY WITH NJDOT SPECIFICATIONS.

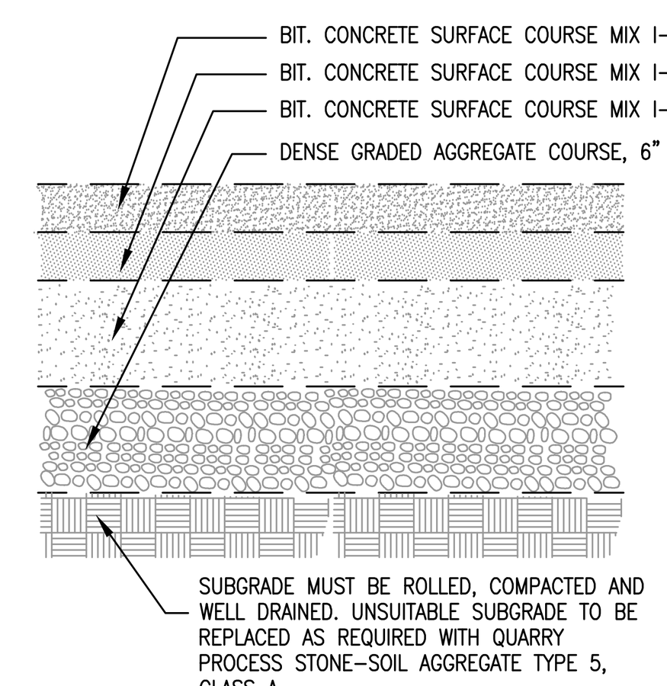
PAVEMENT SECTION DETAIL
N.T.S.



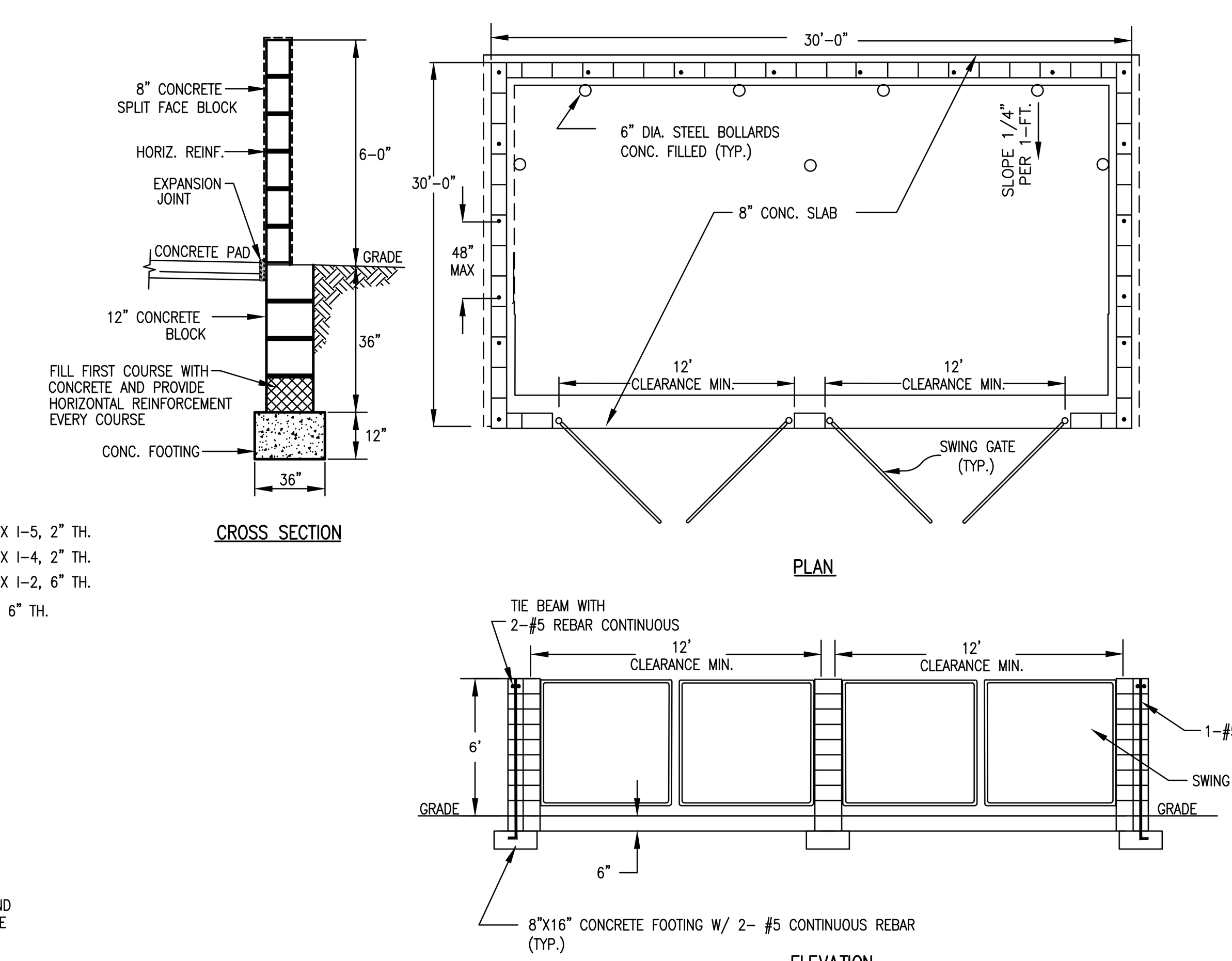
WOOD BOARD FENCE
N.T.S.



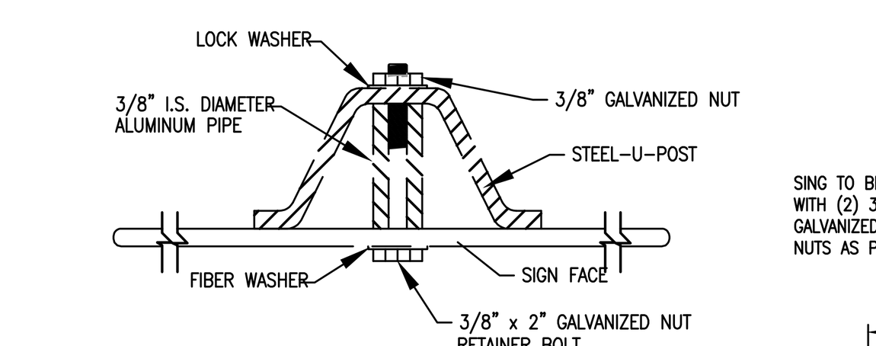
ALLAN BLOCK RETAINING WALL
N.T.S.



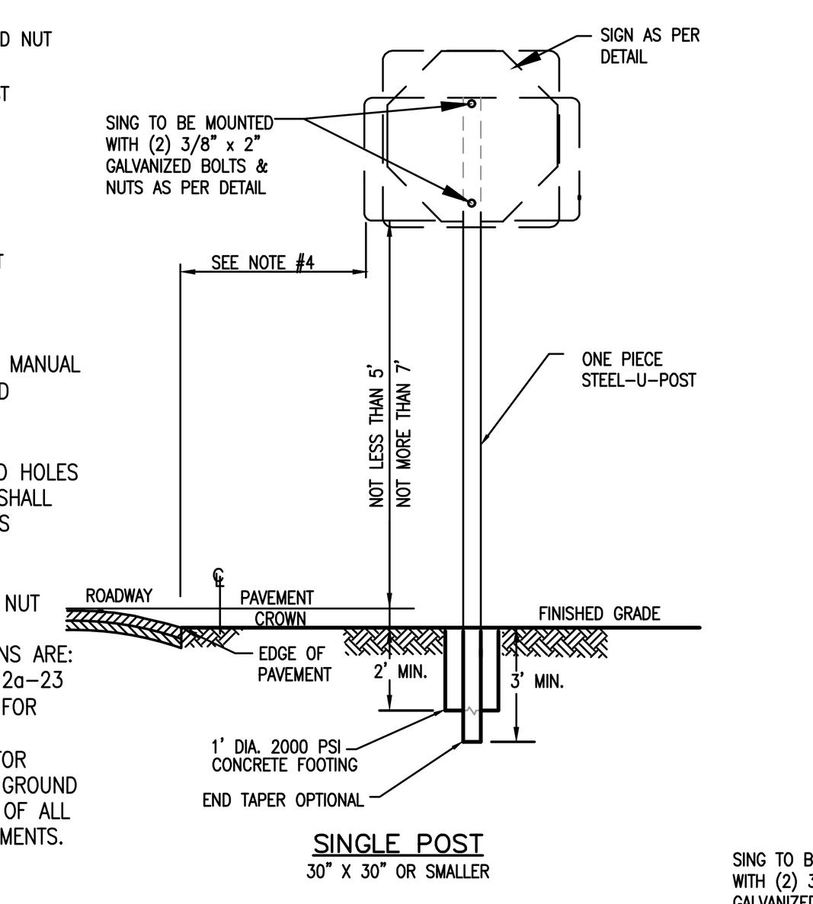
HEAVY DUTY AREA PAVEMENT DETAIL
N.T.S.



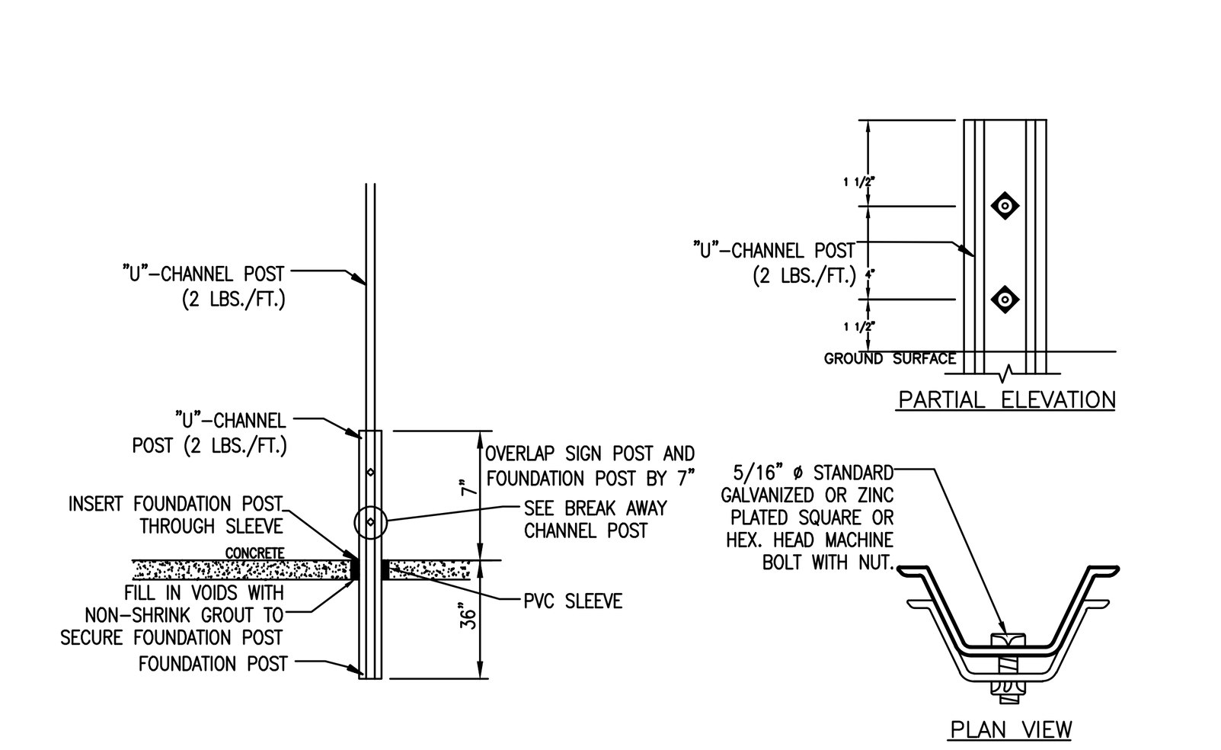
MASONRY TRASH ENCLOSURE DETAIL
N.T.S.



NOTES:
1. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION, AS STATED IN THE CURRENT MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS.
2. ALL POSTS SHALL BE EMBEDDED 3'-6" MAXIMUM.
3. ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATIONS A-123.
4. SIGN PANEL SIZES SHALL DETERMINE POST TYPE.
5. BOLTS SHALL NOT PROTRUDE MORE THAN ¾" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
6. THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE: EDGE OF PAVEMENT TO BOTTOM OF SIGN AS PER SECTION 2a-23 OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS.
GROUND TO BOTTOM OF SIGN SHALL BE 5 FEET MINIMUM FOR SINGLE POST INSTALLATIONS, THE MINIMUM DISTANCE FROM GROUND TO THE TOP OF SIGN MUST BE 9 FEET. THE FINAL HEIGHT OF ALL SIGNS MUST MEET OR EXCEED ALL OF THE ABOVE REQUIREMENTS.

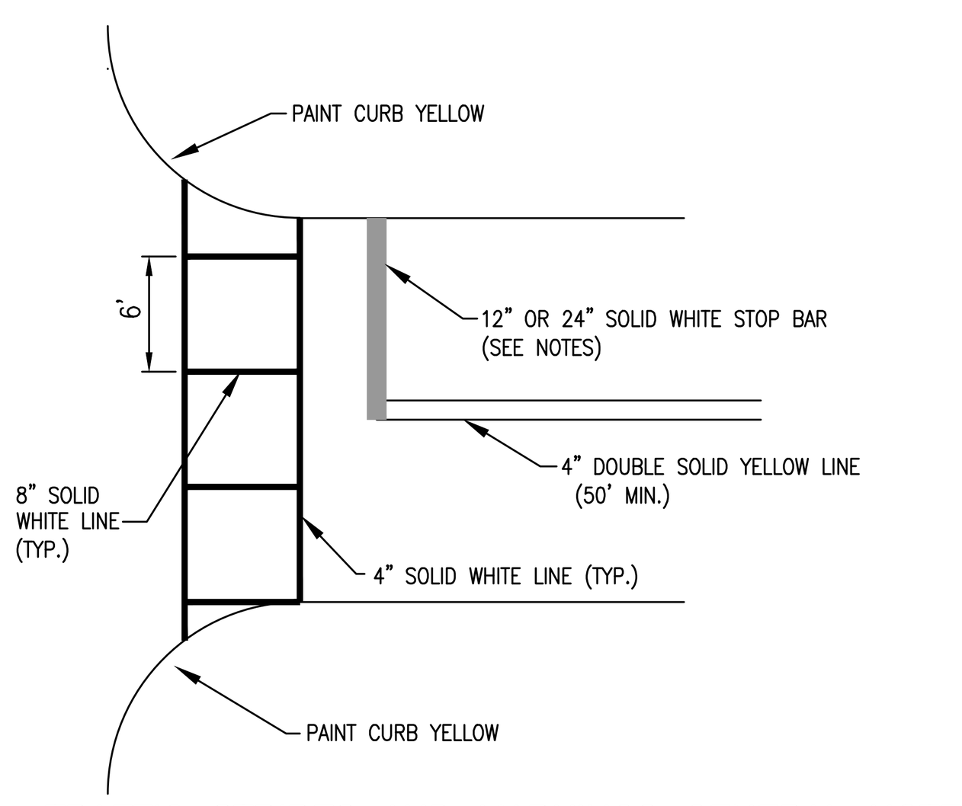


TYPICAL SIGN & MOUNTING DETAILS
N.T.S.

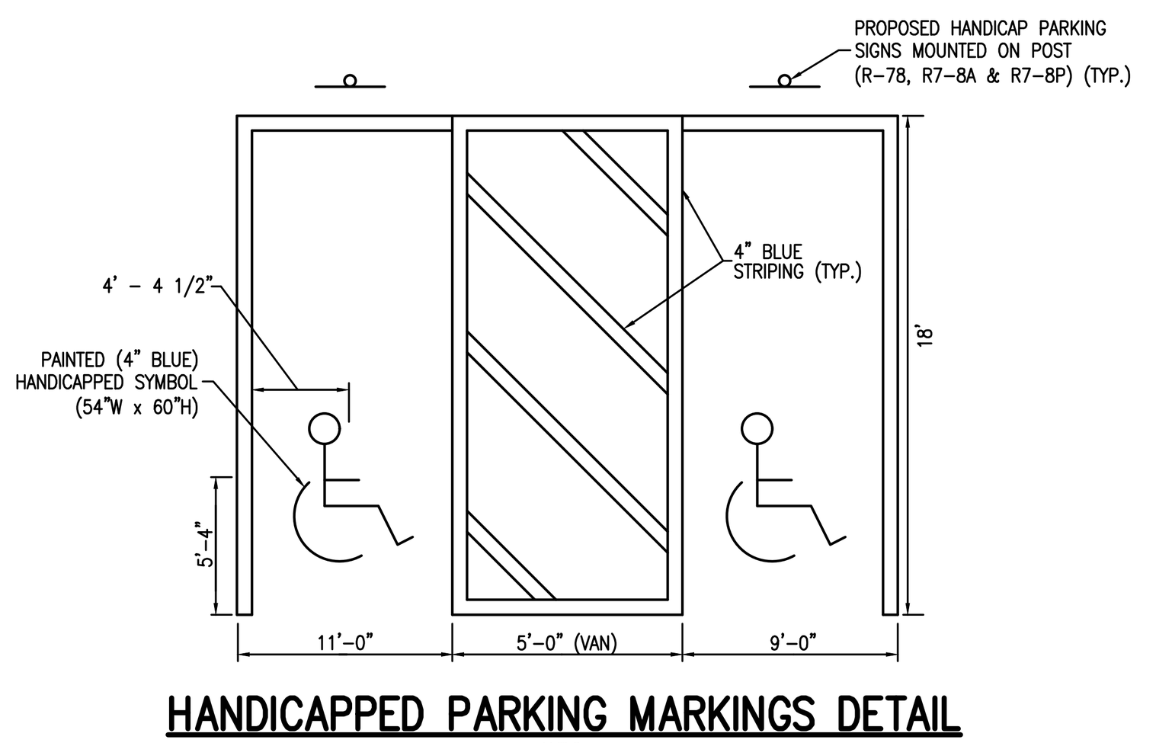


NOTES:
1. ALL SIGNS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. SIGN LOCATIONS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO CONSTRUCTION.

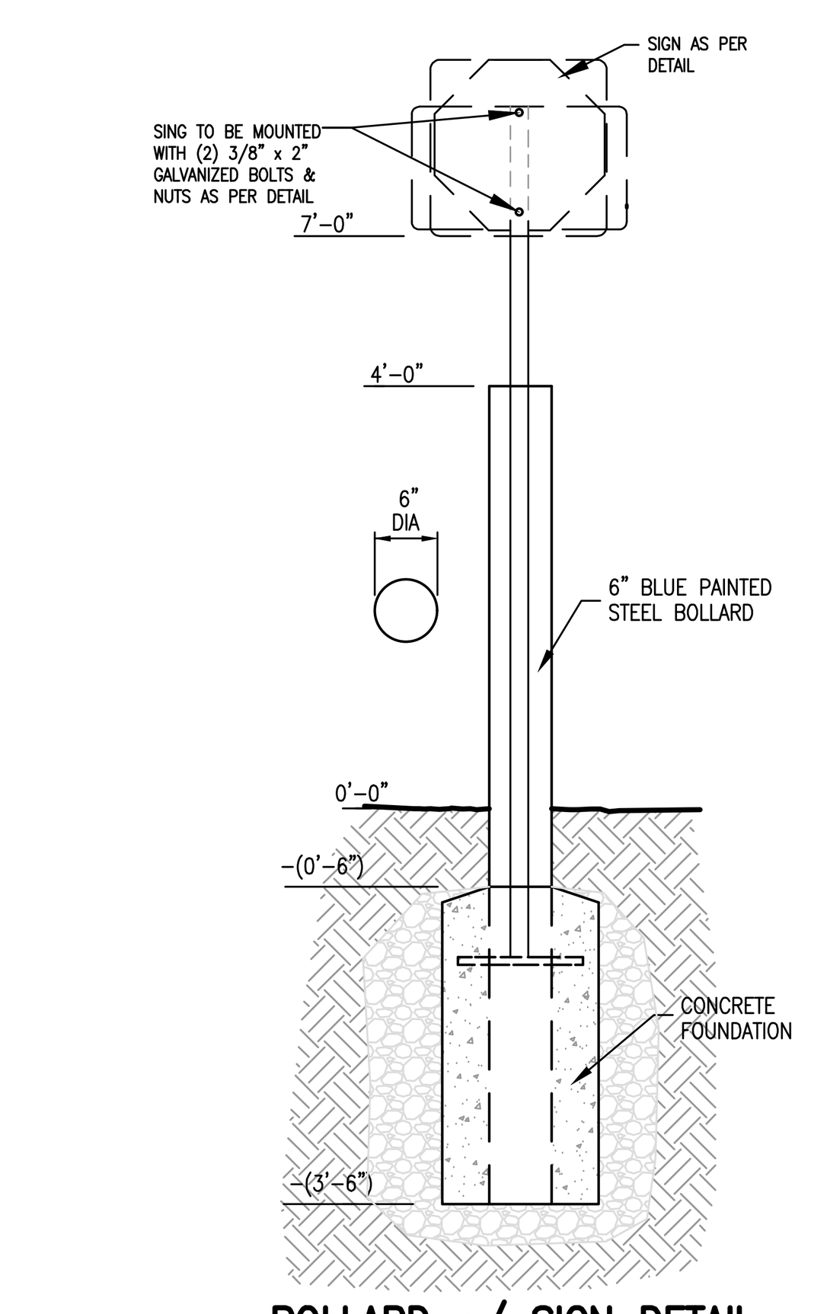
BREAK AWAY SIGN POST WITHIN HARDSCAPE AREA DETAIL
N.T.S.



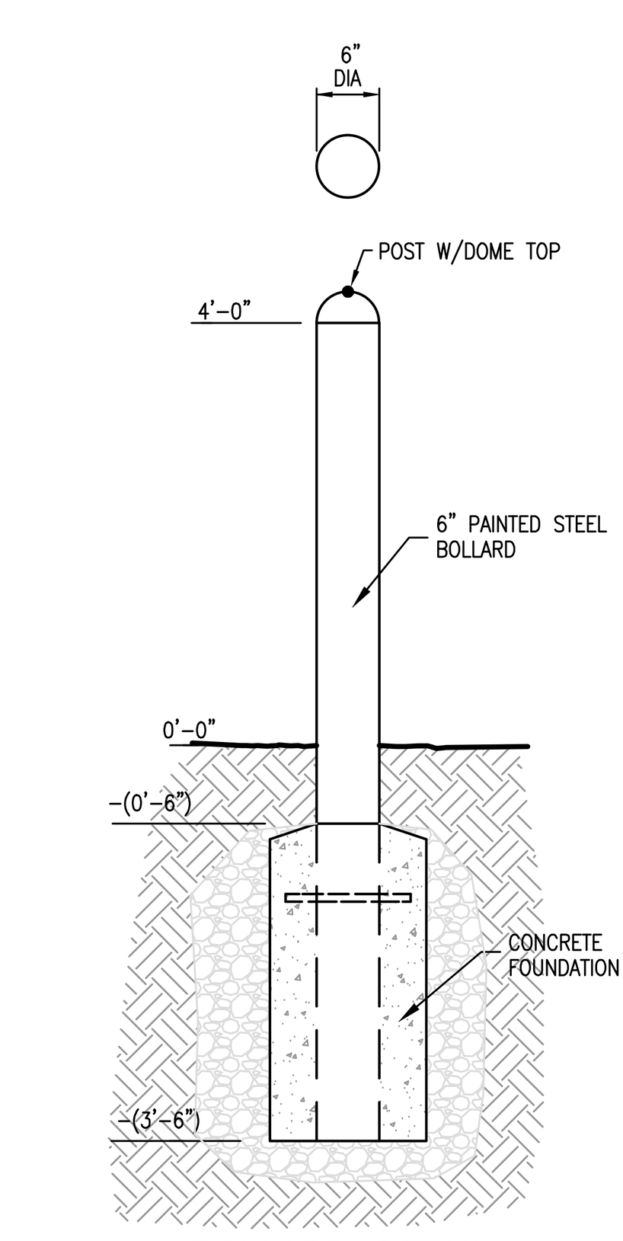
TRAFFIC STRIPES AND MARKINGS GENERAL NOTES
1. CROSSWALKS SHALL BE 6' WIDE.
2. STOP BARS SHALL BE PLACED 5' BEHIND CROSSWALK STRIPES. STOP BARS SHALL BE SOLID WHITE 12" WIDE AT NON-SIGNALIZED INTERSECTIONS, SOLID WHITE 24" WIDE AT SIGNALIZED INTERSECTIONS. IN THE ABSENCE OF A MARKED CROSSWALK, THE STOP LINE SHALL BE PLACED 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROAD.
3. ALL TRAFFIC STRIPES ARE TO BE EPOXY RESIN.
4. ALL TRAFFIC MARKINGS, INCLUDING CROSSWALKS AND STOP BARS, ARE TO BE THERMOPLASTIC.
5. DOUBLE YELLOW CENTER LINES WILL BE 4" WIDE.
6. DOUBLE YELLOW CENTERLINES DOWN SIDE STREETS AT INTERSECTION SHALL BE 50' IN LENGTH. STRIPING SHALL EXTEND BEYOND LIMITS OF PAVING, IF REQUIRED. CONFLICTING EXISTING STRIPES AND MARKINGS SHALL BE REMOVED.
7. LANE LINES SHALL BE 4" WIDE DASHED WHITE CONSISTING OF 10' LINE SEGMENTS AND 30' GAPS.
8. PAVEMENT WORD MARKINGS SHALL BE 8 FEET IN HEIGHT. IF THE MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD EB READ "UP" I.E., THE FIRST WORD SHOULD BE NEAREST THE DRIVER. ALL LETTERS NUMERALS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS.
9. STRIPING SHALL EXTEND BEYOND LIMITS OF PAVING, IF REQUIRED. CONFLICTING EXISTING STRIPES AND MARKINGS SHALL BE REMOVED.
10. EXISTING STRIPING IN CONFLICT WITH PROPOSED SHALL BE REMOVED AT NO EXTRA COST. CROSSWALKS SHALL ONLY BE MARKED AT STOP CONDITIONS.
11. PAINT CURB YELLOW AT ALL CROSSWALKS.



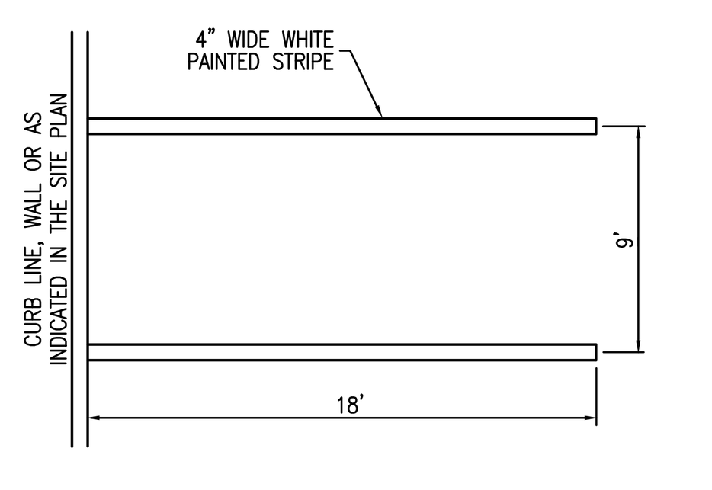
HANDICAPPED PARKING MARKINGS DETAIL
N.T.S.



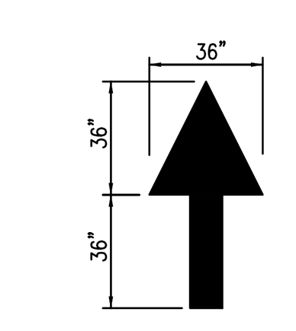
BOLLARD w/ SIGN DETAIL
(H.C. & E.V. SIGNS)
N.T.S.



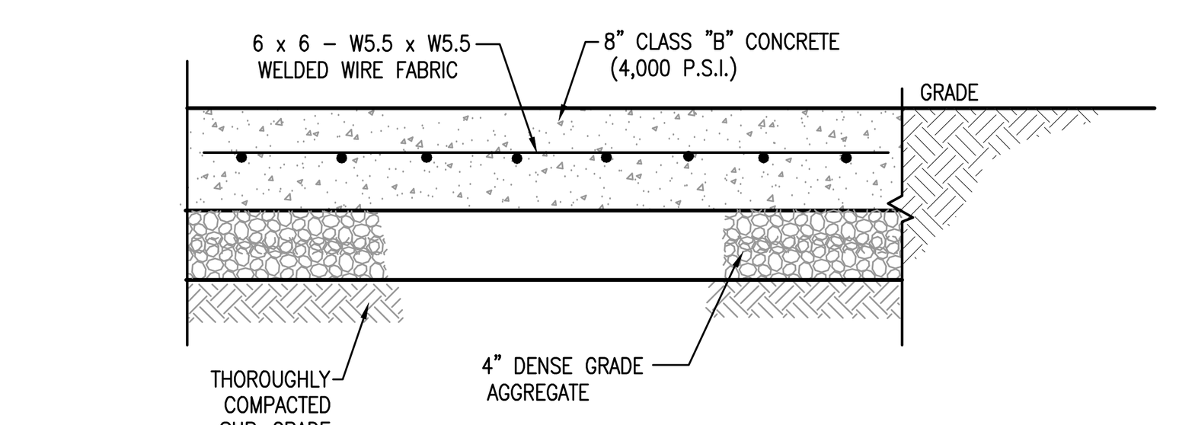
BOLLARD DETAIL
N.T.S.



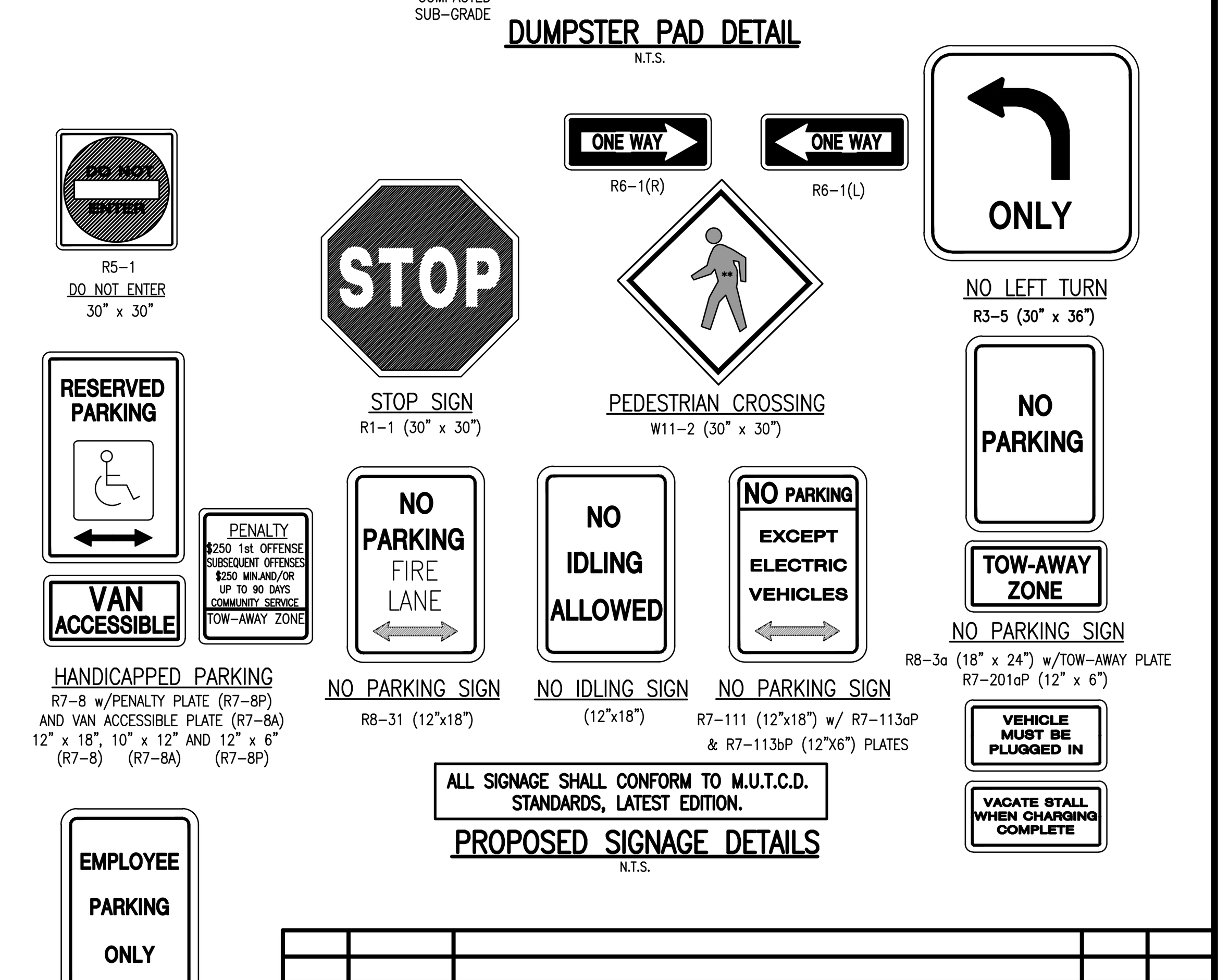
TYPICAL PARKING STALL MARKINGS
N.T.S.



PAINTED MARKING DETAILS
N.T.S.



DUMPSTER PAD DETAIL
N.T.S.



R5-1
DO NOT ENTER
30" x 30"

R6-1(R)

R6-1(L)

NO LEFT TURN
R3-5 (30" x 36")

STOP SIGN
R1-1 (30" x 30")

PEDESTRIAN CROSSING
W11-2 (30" x 30")

HANDICAPPED PARKING
R7-8 w/PENALTY PLATE (R7-8P) AND VAN ACCESSIBLE PLATE (R7-8A)
12" x 18", 10" x 12" AND 12" x 6"
(R7-8) (R7-8A) (R7-8P)

NO PARKING SIGN
R8-31 (12"x18")

NO IDLING SIGN
(12"x18")

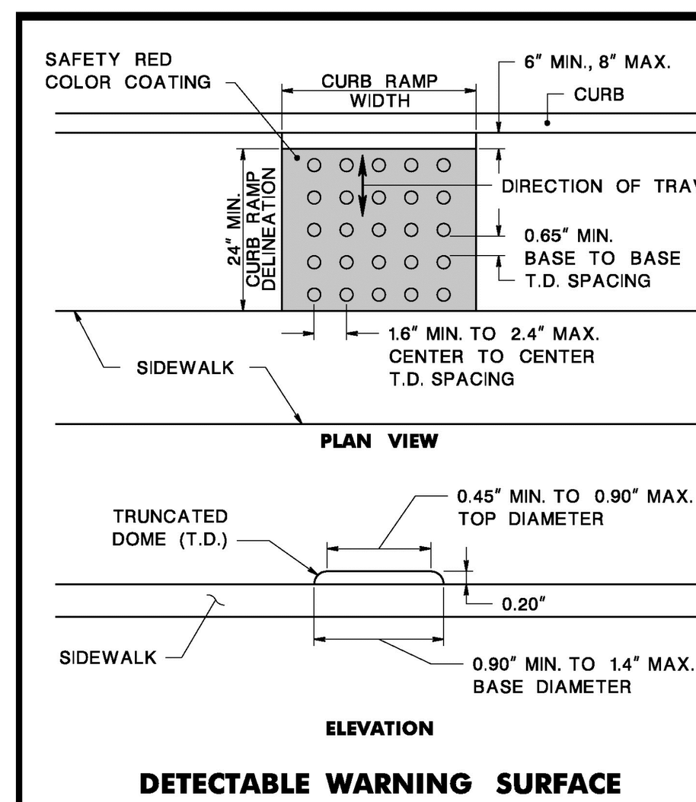
NO PARKING SIGN
R7-111 (12"x18") w/ R7-113aP & R7-113bP (12"X6") PLATES

NO PARKING SIGN
R8-3a (18" x 24") w/TOW-AWAY PLATE R7-201aP (12" x 6")

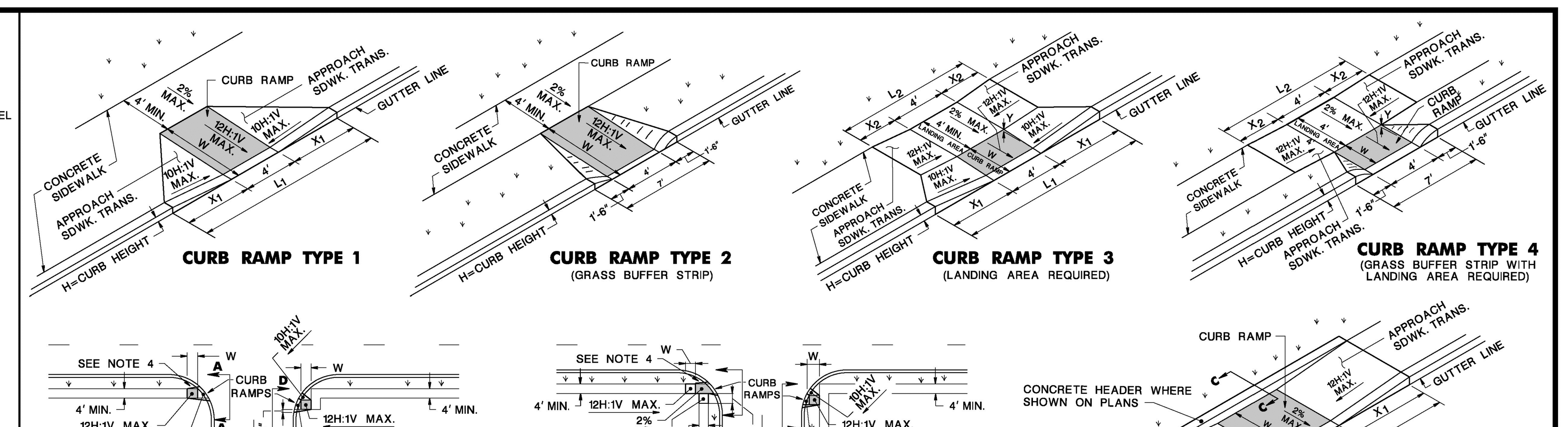
EMPLOYEE PARKING SIGN
(12"x18")

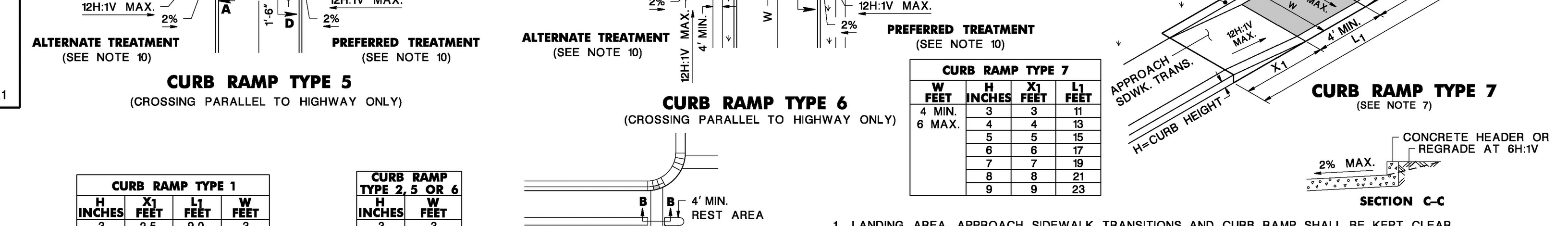
ALL SIGNAGE SHALL CONFORM TO M.U.T.C.D. STANDARDS, LATEST EDITION.

PROPOSED SIGNAGE DETAILS
N.T.S.

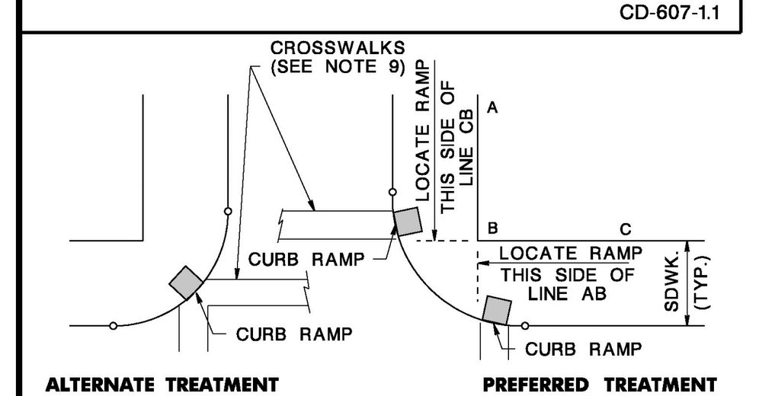


DETECTABLE WARNING SURFACE
CD-607-1.1



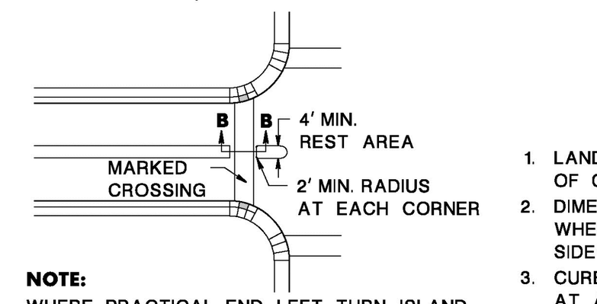


CURB RAMP TYPE 7			
W FEET	H INCHES	X_1 FEET	L_1 FEET
4 MIN. 6 MAX.	3	3	11
	4	4	13
	5	5	15
	6	6	17
	7	7	19
	8	8	21
	9	9	23



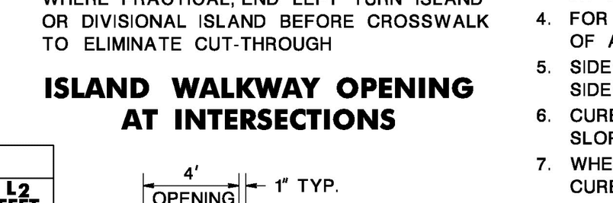
CURB RAMP TYPE 1			
H INCHES	X_1 FEET	L_1 FEET	W FEET
3	2.5	9.0	3
4	3.3	10.6	4
5	4.2	12.4	5
6	5.0	14.0	6
7	5.8	15.6	7
8	6.7	17.4	8
9	7.5	19.0	9

CURB RAMP TYPE 2, 5 OR 6	
H INCHES	W FEET
3	3
4	4
5	5
6	6
7	7
8	8
9	9



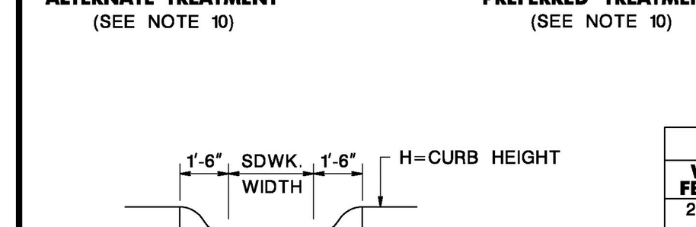
NOTE:
WHERE PRACTICAL, END LEFT TURN ISLAND OR DIVISIONAL ISLAND BEFORE CROSSWALK TO ELIMINATE CUT-THROUGH

ISLAND WALKWAY OPENING AT INTERSECTIONS

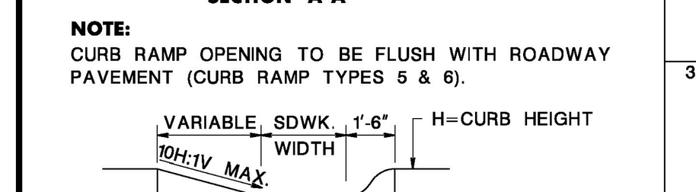


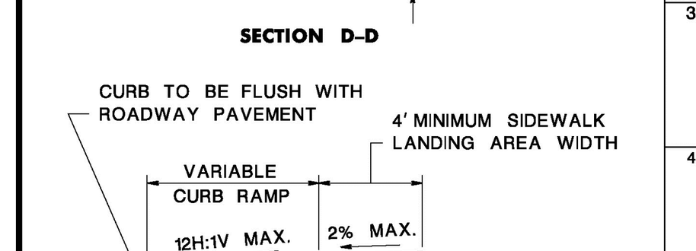
NOTE:
4' WIDE OPENING TO BE FLUSH WITH ROADWAY PAVEMENT

1. LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
2. DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRASTICALLY IN AREA OF PROPOSED CURB RAMP.
3. CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
7. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, CURB RAMP TYPE 7 SHOULD BE USED, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
8. THE PUBLIC SIDEWALK CURB RAMP, DETECTABLE WARNING SURFACE (SHADED AREA) SHALL BE SAFETY RED COLOR ON CONCRETE OR 70% COLOR CONTRAST FOR OTHER SURFACE SUCH AS BRICK.
9. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
10. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
11. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.



NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).





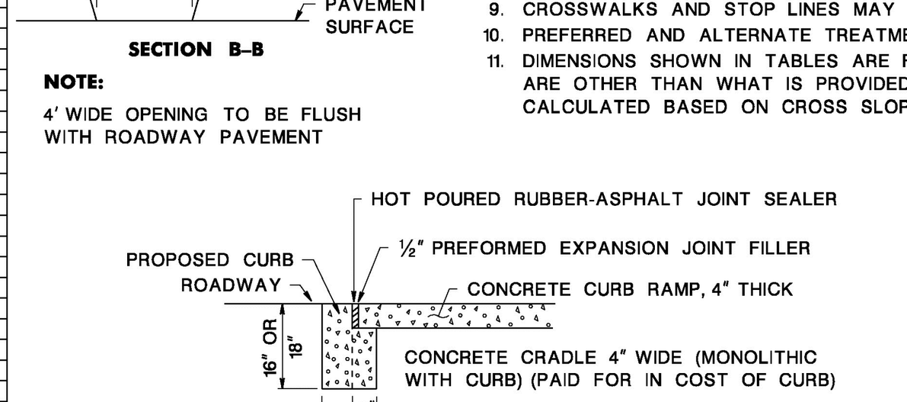
SECTION THROUGH CURB RAMPS 1 THROUGH 6

CURB RAMP TYPE 3						
W FEET	H INCHES	X_1 FEET	L_1 FEET	Y INCHES	X_2 FEET	L_2 FEET
2.5	3	2.5	9	2.5	0.5	5
	4	3.3	10.6	2.5	1.5	7
	5	4.2	12.4	2.5	2.5	9
	6	5.0	14.0	2.5	3.5	11
	7	5.8	15.6	2.5	4.5	13
	8	6.7	17.4	2.5	5.5	15
	9	7.5	19.0	2.5	6.5	17
3.0	3	*	*	*	*	*
	4	3.3	10.6	3.0	1	6
	5	4.2	12.4	3.0	2	8
	6	5.0	14.0	3.0	3	10
	7	5.8	15.6	3.0	4	12
	8	6.7	17.4	3.0	5	14
	9	7.5	19.0	3.0	6	16
3.5	3	*	*	*	*	*
	4	3.3	10.6	3.5	0.5	5
	5	4.2	12.4	3.5	1.5	7
	6	5.0	14.0	3.5	2.5	9
	7	5.8	15.6	3.5	3.5	11
	8	6.7	17.4	3.5	4.5	13
	9	7.5	19.0	3.5	5.5	15
4.0	3	*	*	*	*	*
	4	*	*	*	*	*
	5	4.2	12.4	4.0	1	6
	6	5.0	14.0	4.0	2	8
	7	5.8	15.6	4.0	3	10
	8	6.7	17.4	4.0	4	12
	9	7.5	19.0	4.0	5	14

* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1.

CURB RAMP TYPE 4				
W FEET	H INCHES	Y INCHES	X_2 FEET	L_2 FEET
2.5	3	2.5	0.5	5
	4	2.5	1.5	7
	5	2.5	2.5	9
	6	2.5	3.5	11
	7	2.5	4.5	13
	8	2.5	5.5	15
	9	2.5	6.5	17
3.0	3	**	**	**
	4	3.0	1	6
	5	3.0	2	8
	6	3.0	3	10
	7	3.0	4	12
	8	3.0	5	14
	9	3.0	6	16
3.5	3	**	**	**
	4	3.5	0.5	5
	5	3.5	1.5	7
	6	3.5	2.5	9
	7	3.5	3.5	11
	8	3.5	4.5	13
	9	3.5	5.5	15
4.0	3	**	**	**
	4	**	**	**
	5	4.0	1	6
	6	4.0	2	8
	7	4.0	3	10
	8	4.0	4	12
	9	4.0	5	14

** TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2.



CURB RAMPS
CD-607-1.2

PUBLIC SIDEWALK CURB RAMPS DETECTABLE WARNING SURFACE
N.T.S.
HMA = HOT MIX ASPHALT
CD-607-1
NEW JERSEY DEPARTMENT OF TRANSPORTATION
CONSTRUCTION DETAILS
37
129

HANDICAP RAMP CONSTRUCTION DETAILS
N.T.S.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
1	02/19/2020	REVISED AS PER CITY OF NEWARK PLANNING & ZONING BOARDS COMMENTS	S.P.	

Harbor Consultants Inc.
Engineers & Surveyors
320 NORTH AVENUE EAST
CRANFORD, N.J. 07016
Phone (908) 276-2715 Fax (908) 709-1738
Email: info@hcicg.net

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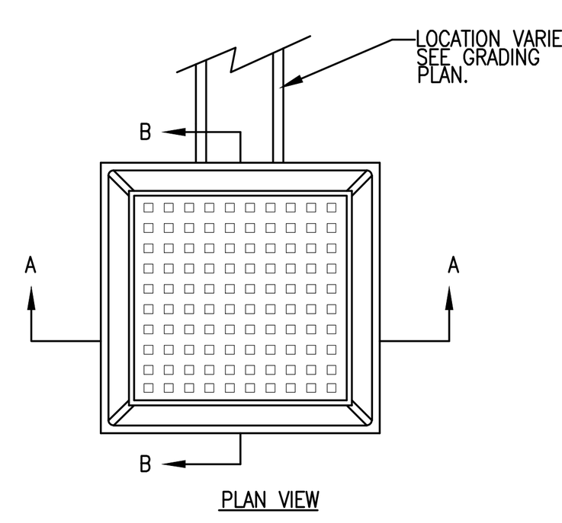
PRELIMINARY & FINAL SITE PLAN
CONSTRUCTION DETAILS – 1
LOT 1, BLOCK 4001, LOT, BLOCK 4002 CITY OF NEWARK
LOT 1, BLOCK 112, LOT 1, BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

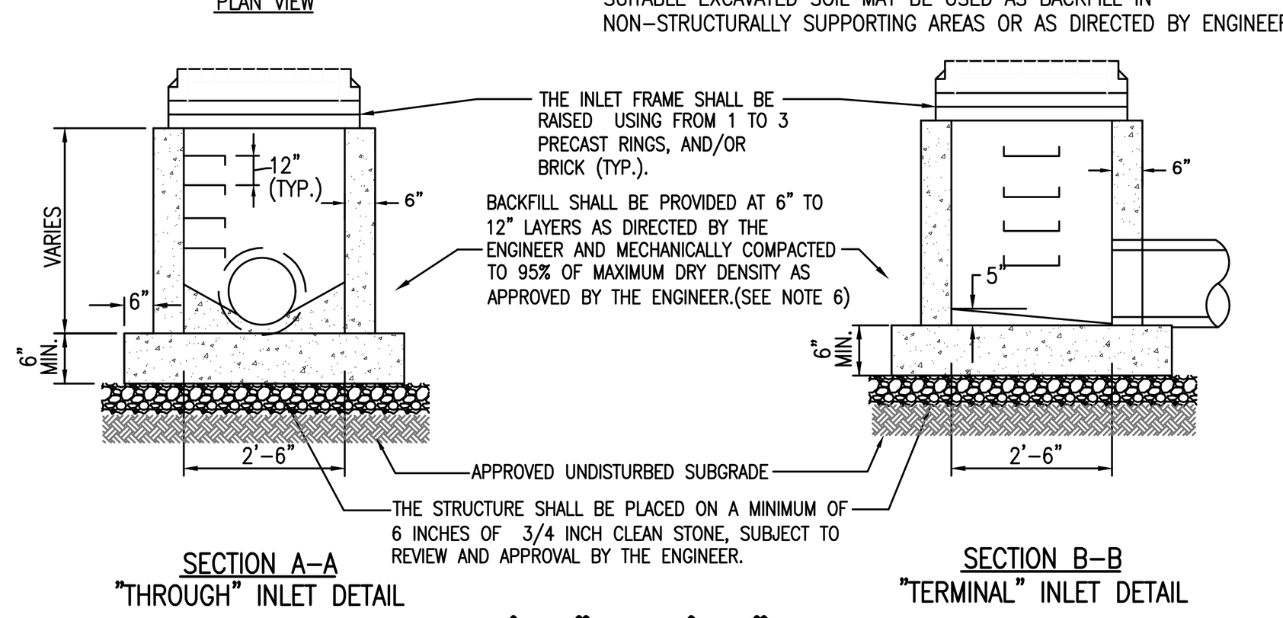
VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
N.T.S.	12/10/19	V.E.V.	S.P./C.V.F.	2019173 Details	24GA27962100	2019173

T:\2019173 - South Orange Ave, Newark\Finals\2019173 Details.dwg, 2/19/2020 11:20:23 AM, DWG To PDF.pc3

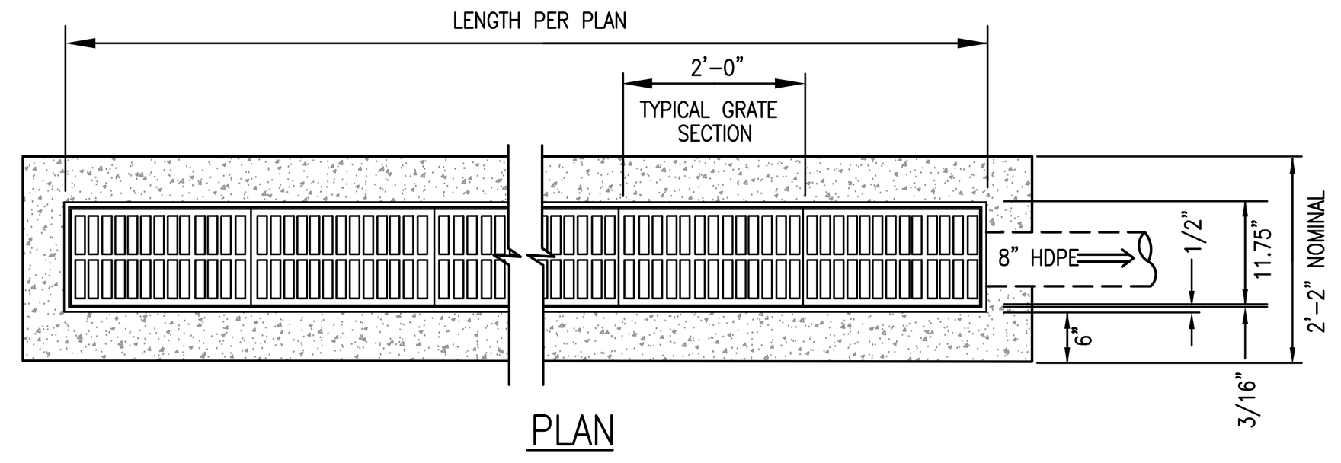
NOTES:
1. THE YARD INLET (2'– 6" X 2'–6") STRUCTURE SHALL BE PRECAST CONCRETE TO MEET A MINIMUM OF HS–25 LOADING. ALL UNITS SHALL BE CONSTRUCTED AND REINFORCED IN ACCORDANCE WITH THE APPROPRIATE ASTM, ACI, AND AASHTO STANDARDS. ALL PRECAST SECTIONS SHALL BE JOINED USING A GASKET AND CEMENT GROUT TO PRODUCE A "LEAK–PROOF" JOINT. THE STRUCTURE SHALL NOT BE PLACED IN A PAVED AREA, OR IN OTHER AREAS WHERE HIGH LOADS MAY BE INCURRED.
2. THE INLET FRAME AND GRATE SHALL BE BICYCLE SAFE AND ADA COMPLIANT AS DEFINED BY CAMPBELL FOUNDRY PATTERN NO. 3194A IN A LAWN AREA, OTHERWISE MEET HS–25 LOADING OR APPROVED EQUIVALENT.
3. THE INLET FRAME AND GRATE/COVER SHALL BE FABRICATED TO MEET A MINIMUM OF HS–25 LOADING, UNLESS PRE–APPROVED IN WRITING BY THE ENGINEER, OR UNLESS NOTED ON THE INDIVIDUAL STRUCTURE NOTES.
4. ALL PIPES SHALL EXTEND NO MORE THAN 1 INCH INTO THE STRUCTURE.
5. A 2500 PSI MIN. CONCRETE PIPE FLOW CHANNEL SHALL BE INSTALLED IN THE STRUCTURE BOTTOM, AFTER ALL THE PIPES ARE INSTALLED, OR THE FLOW CHANNELS CAN BE PRECAST WITH THE BASE.
6. AREAS SUPPORTING ANY STRUCTURE SHALL BE BACKFILLED USING DENSE GRADED AGGREGATE OR AS DIRECTED BY THE ENGINEER. SUITABLE EXCAVATED SOIL MAY BE USED AS BACKFILL IN NON–STRUCTURALLY SUPPORTING AREAS OR AS DIRECTED BY ENGINEER.

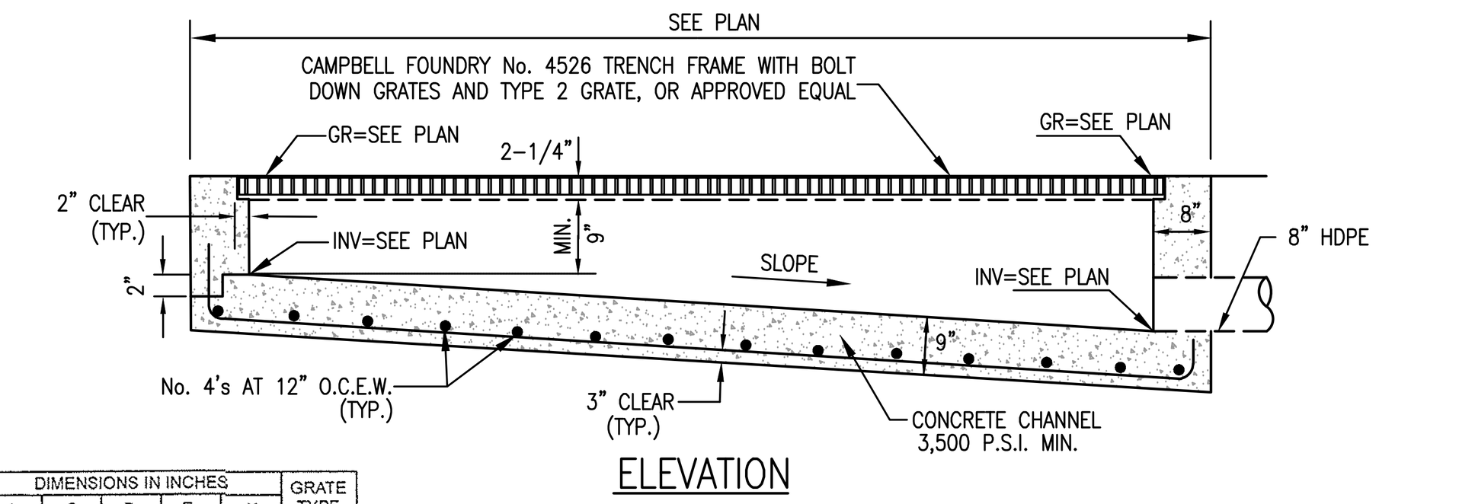




2'–6" X 2'–6" YARD INLET

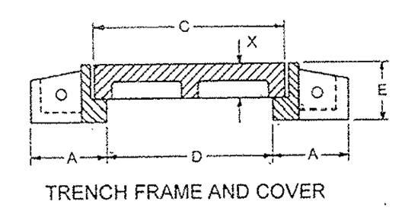
N.T.S.

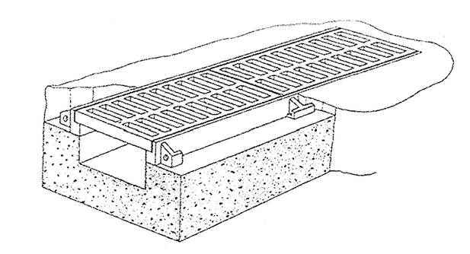




PATTERN NUMBER		DIMENSIONS IN INCHES					GRATE TYPE
COVER	GRATE	A	C	D	E	X	
4500	4525 *	3¾	7¾	6	2¼	2	1
4500A	4525A*	3¾	9¾	8	2¼	2	2
4501	4526 *	3¾	11¾	10	2¼	2	2
4501A	4526A*	3¾	14	12	2¼	2	2
4501B	4526B	3¾"	15¾	14	2¼	2	2
4501C	4526C	3¾	17¾	16	2¼	2	2
4503	4528	5	19¾	18	4	2¾	3
4503A	4528A	5	21¾	20	4	2¾	2
4504	4529	5	25¾	24	4	2¾	3**
4505	4530	5	31¾	30	4	2¾	3
4506	4531	5	38	36	4	2¾	3
4507	4532	5	44	42	4	2¾	3
4508	4533	5	50	48	4	2¾	3

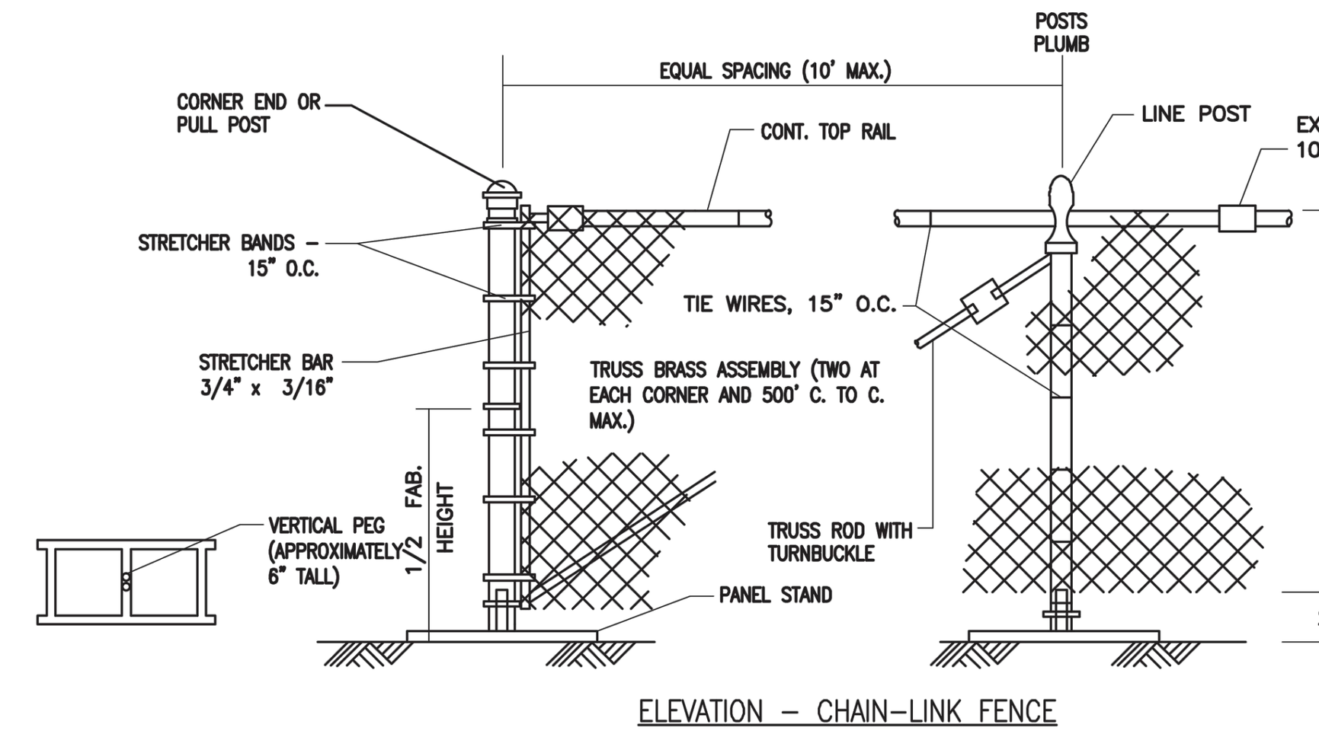
* Available with A.D.A. Compliant Openings (openings 1/2" or less in width)
** Varies





TRENCH DRAIN & GRATE DETAIL

N.T.S.

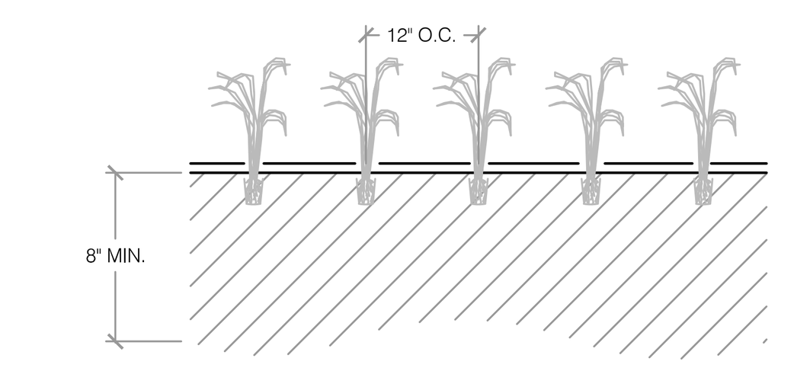


NOTES:
1. ACADEMY FENCE COMPANY – PORTABLE TEMPORARY CONSTRUCTION FENCE, OR APPROVED EQUAL
2. PLACE CINDER BLOCKS OR SAND BAGS ON PANEL STANDS FOR ADDITIONAL SUPPORT.

USE	NOM. OD.
LINE POSTS	2 1/2 "
CORNER, END, GATE, & PULL POSTS	3"
RAILS	1 5/8 "
GATE FRAMES	2"

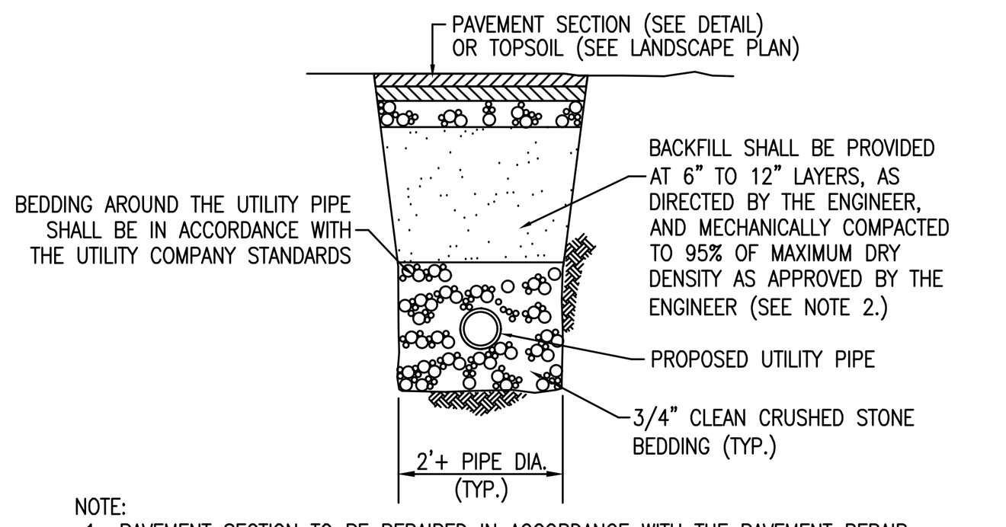
6' TEMPORARY CONSTRUCTION FENCE DETAIL

N.T.S.



PLUG PLANTING

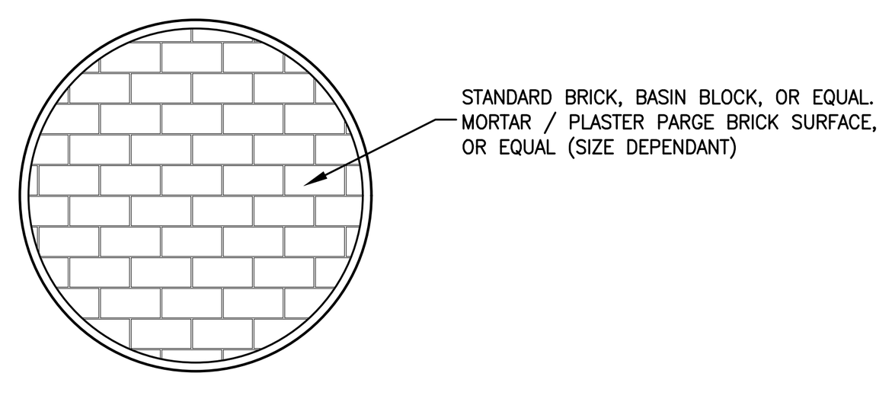
N.T.S.



NOTE:
1. PAVEMENT SECTION TO BE REPAIRED IN ACCORDANCE WITH THE PAVEMENT REPAIR DETAIL.
2. AREAS SUPPORTING ANY STRUCTURE SHALL BE BACKFILLED USING DENSE GRADED AGGREGATE OR AS DIRECTED BY THE ENGINEER. SUITABLE EXCAVATED SOIL MAY BE USED AS BACKFILL IN NON–STRUCTURALLY SUPPORTING AREAS OR AS DIRECTED BY ENGINEER.
3. EXCAVATIONS IN EXISTING PAVED ROADWAYS SHALL BE COORDINATED WITH THE CITY ENGINEER'S OFFICE, AND ALL EXCAVATION SHALL BE PAVED WITH TEMPORARY BITUMINOUS PAVEMENT FROM THE DATE OF ORIGINAL EXCAVATION UNTIL PERMANENT PAVEMENT IS INSTALLED.
4. HMA PAVEMENT REPAIRING MUST COMPLY WITH THE LATEST VERSION OF THE NJDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY THE ENGINEER PRIOR TO SCHEDULING WORK. FAILURE TO NOTIFY THE ENGINEER MAY RESULT IN THE WORK NOT BEING ACCEPTED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION.

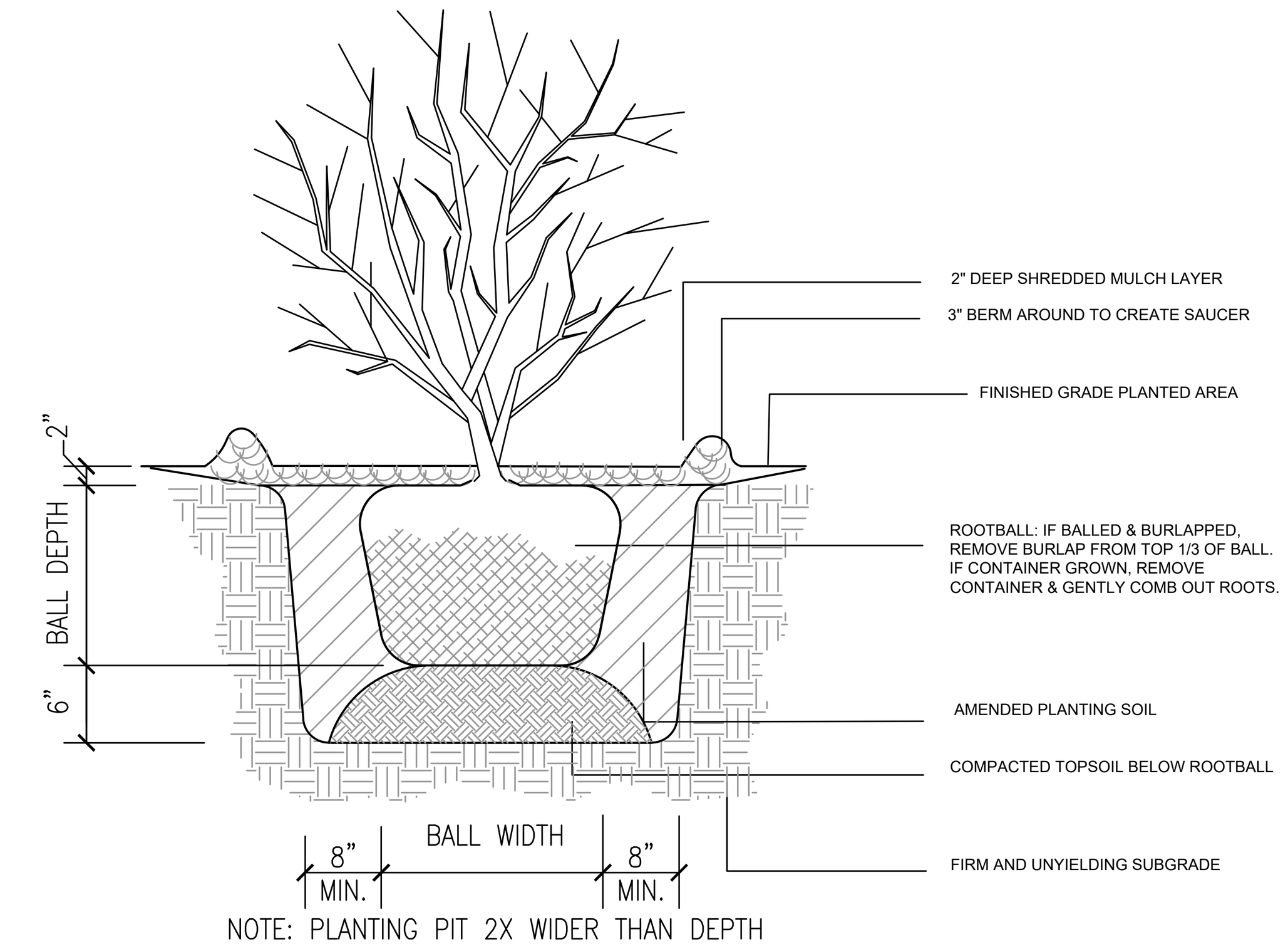
TYPICAL TRENCH DETAIL

N.T.S.



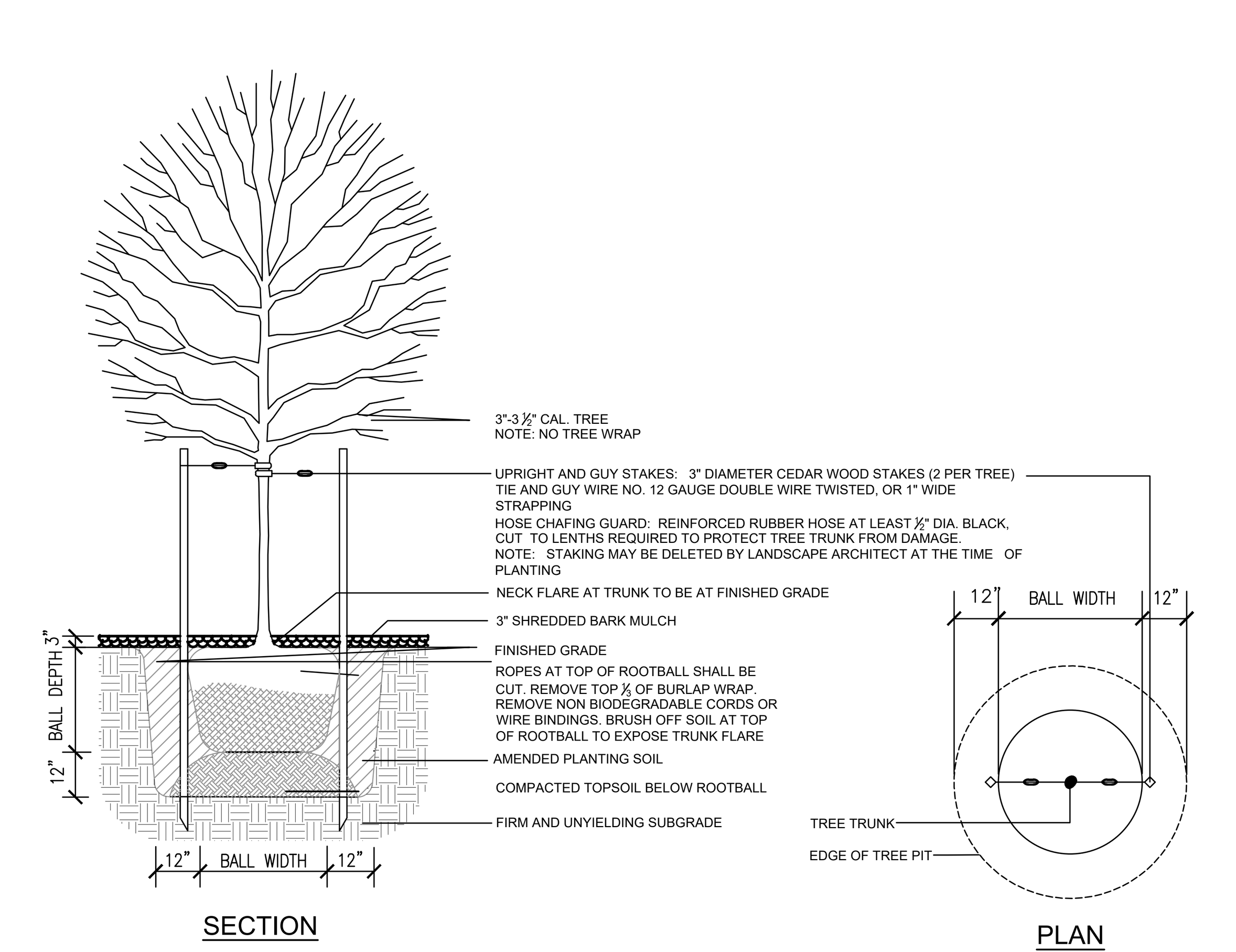
CAPPING DETAIL FOR ABANDON-IN-PLACE UTILITIES

N.T.S.



SHRUB PLANTING

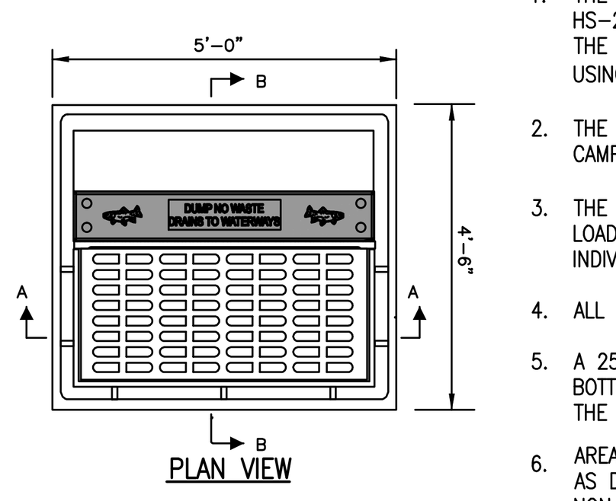
N.T.S.

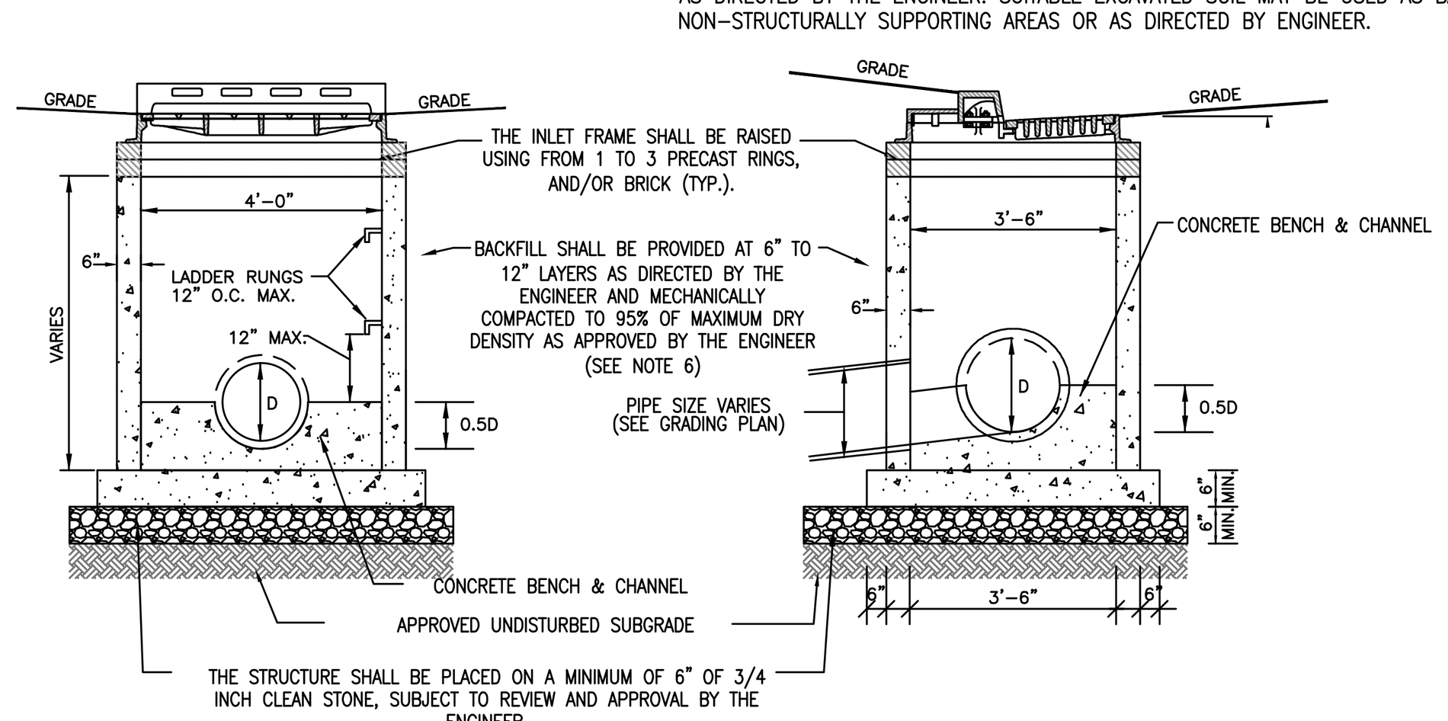


SHADE TREE PLANTING

N.T.S.

NOTES:
1. THE TYPE B INLET CONCRETE STRUCTURE SHALL BE PRECAST CONCRETE TO MEET A MINIMUM OF HS–25 LOADING. ALL UNITS SHALL BE CONSTRUCTED AND REINFORCED IN ACCORDANCE WITH THE APPROPRIATE ASTM, ACI, AND AASHTO STANDARDS. ALL PRECAST SECTIONS SHALL BE JOINED USING A GASKET AND CEMENT GROUT TO PRODUCE A "LEAK–PROOF" JOINT.
2. THE INLET GRATE SHALL BE BICYCLE SAFE WITH A CURB PIECE OF TYPE "N–ECO" AS DEFINED BY CAMPBELL FOUNDRY COMPANY PATTERN NO. 2618 OR APPROVED EQUAL.
3. THE INLET FRAME AND GRATE/COVER SHALL BE FABRICATED TO MEET A MINIMUM OF HS–25 LOADING, UNLESS PRE–APPROVED IN WRITING BY THE ENGINEER, OR UNLESS NOTED ON THE INDIVIDUAL STRUCTURE NOTES.
4. ALL PIPES SHALL EXTEND NO MORE THAN 1 INCH INTO THE STRUCTURE.
5. A 2500 PSI MIN. CONCRETE PIPE FLOW CHANNEL SHALL BE INSTALLED IN THE STRUCTURE BOTTOM, AFTER ALL THE PIPES ARE INSTALLED, OR THE FLOW CHANNELS CAN BE PRECAST WITH THE BASE.
6. AREAS SUPPORTING ANY STRUCTURE SHALL BE BACKFILLED USING DENSE GRADED AGGREGATE OR AS DIRECTED BY THE ENGINEER. SUITABLE EXCAVATED SOIL MAY BE USED AS BACKFILL IN NON–STRUCTURALLY SUPPORTING AREAS OR AS DIRECTED BY ENGINEER.





TYPE 'B' INLET

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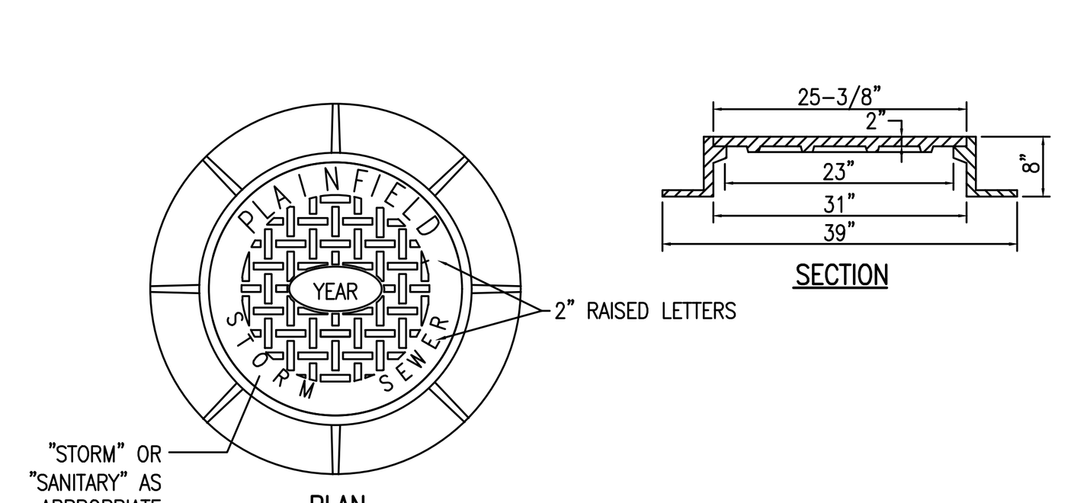

NOTES:
1. STANDARD MANHOLE FRAME & COVER SHALL BE CAMPBELL FOUNDRY PATTERN #1202B, OR APPROVED EQUIVALENT, WITH NON–PENETRATING PICK HOLES OR APPROVED EQUIVALENT.
2. "FLOW–SEAL" MANHOLE COVERS SHALL BE USED ON ALL MANHOLES OR APPROVED EQUIVALENT.
3. ALL MANHOLE FRAMES AND COVERS SHALL BE MADE IN THE USA.
4. WATERTIGHT MANHOLE FRAME & COVERS SHALL BE CAMPBELL FOUNDRY PATTERN #1011A, OR APPROVED EQUIVALENT, AND FURNISHED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE CITY ENGINEER.
5. LOCKING TYPE MANHOLE FRAMES & COVERS SHALL BE CAMPBELL FOUNDRY PATTERN #1487, OR APPROVED EQUIVALENT, AND FURNISHED IN ALL EASEMENTS OR AS DIRECTED BY THE CITY ENGINEER.

STANDARD STORM/SANITARY SEWER MANHOLE FRAME & COVER

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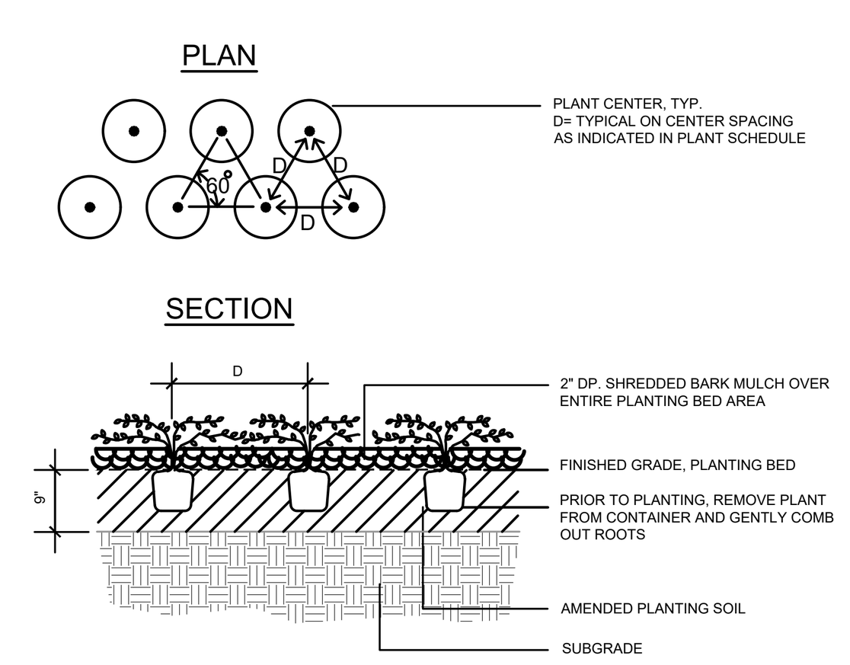
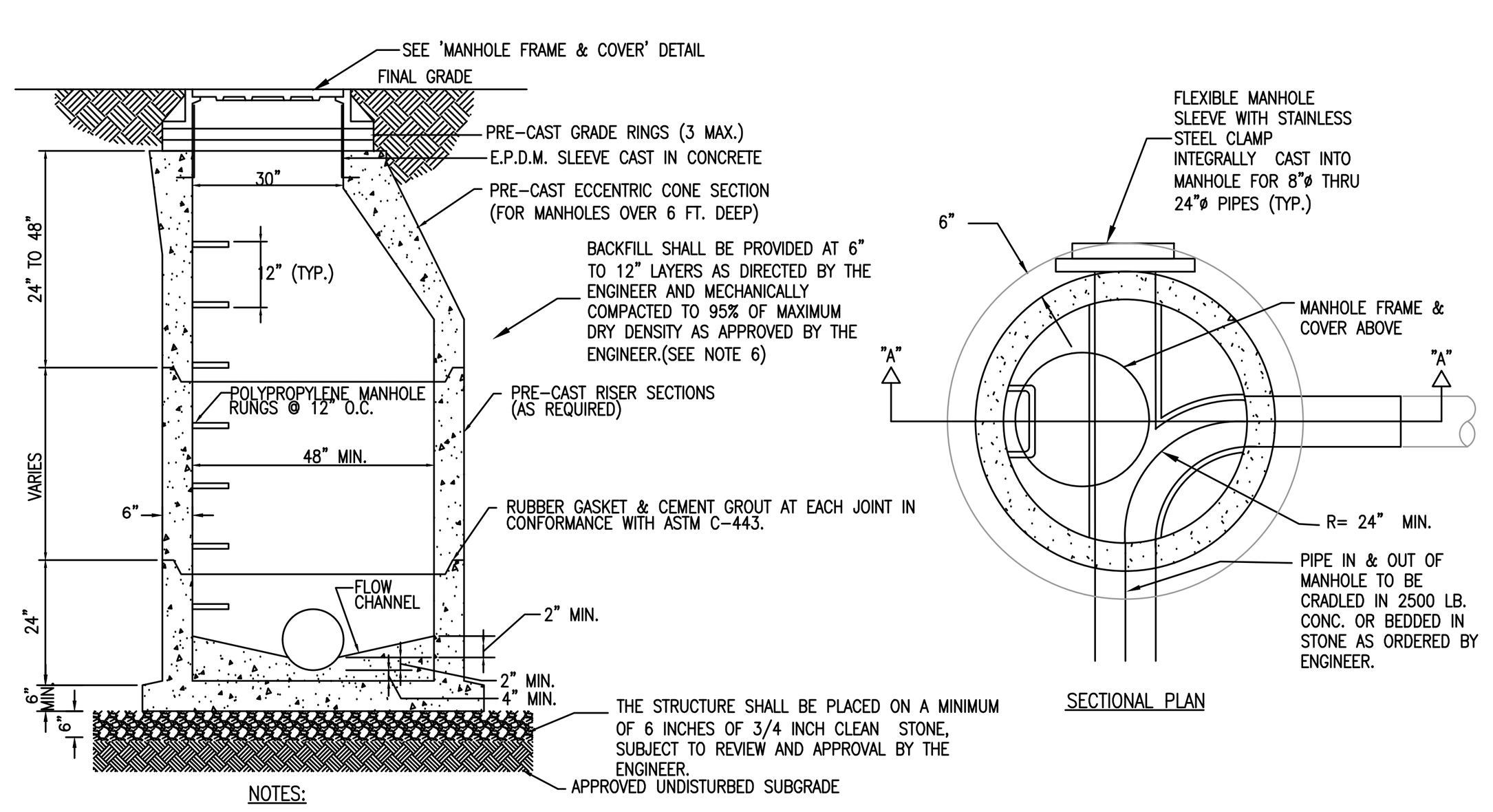


GROUNDCOVER PLANTING

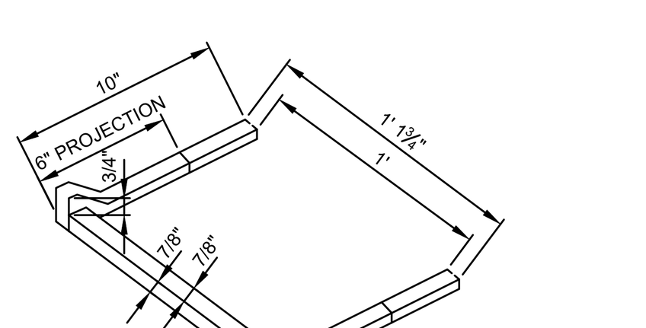
N.T.S.



NOTES:
1. THE STORM MANHOLE CONCRETE STRUCTURE SHALL BE PRECAST CONCRETE TO MEET A MINIMUM OF HS–25 LOADING. ALL UNITS SHALL BE CONSTRUCTED AND REINFORCED IN ACCORDANCE WITH THE APPROPRIATE ASTM, ACI, AND AASATO STANDARDS. ALL PRECAST SECTIONS SHALL BE JOINED USING A GASKET AND CEMENT GROUT TO PRODUCE A LEAK–PROOF JOINT.
2. ALL PIPES ENTERING OR LEAVING THE STRUCTURE SHALL BE INSTALLED WITH AN ANTI–LEAK COLLAR.
3. THE MANHOLE FRAME AND GRATE/COVER SHALL BE FABRICATED TO MEET A MINIMUM OF HS–25 LOADING, UNLESS PRE–APPROVED IN WRITING BY THE ENGINEER, OR UNLESS NOTED ON THE INDIVIDUAL STRUCTURE NOTES.
4. ALL PIPES SHALL EXTEND NO MORE THAN 1 INCH INTO THE STRUCTURE.
5. A 2500 PSI MIN. CONCRETE PIPE FLOW CHANNEL SHALL BE INSTALLED IN THE STRUCTURE BOTTOM, AFTER ALL THE PIPES ARE INSTALLED, OR THE FLOW CHANNELS CAN BE PRECAST WITH THE BASE.
6. SUITABLE EXCAVATED SOIL MAY BE USED AS BACKFILL IN NON–STRUCTURALLY SUPPORTING AREAS OR AS DIRECTED BY THE CITY ENGINEER. AREAS SUPPORTING ANY STRUCTURE SHALL BE BACKFILLED USING DENSE GRADED AGGREGATE OR AS DIRECTED BY THE ENGINEER.

STORM MANHOLE DETAIL

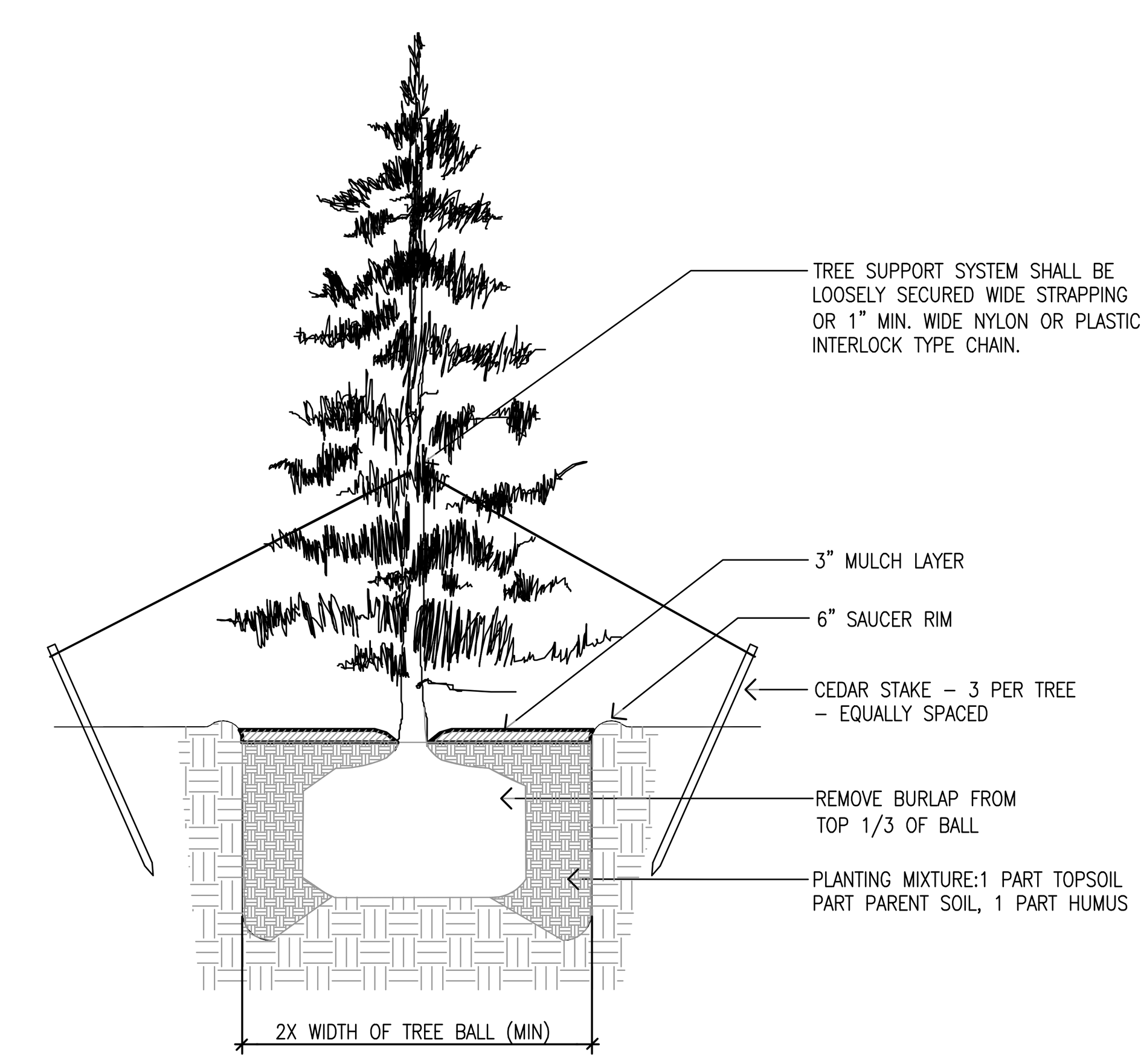
N.T.S.



NOTES:
1. STEPS SHALL BE POLYPROPYLENE WITH ½" ASTM A–615 STEEL REINFORCEMENT MIN. 3" INBEDMENT IN ACCORDANCE WITH ASTM C–478 AND O.S.H.A. STANDARDS.
2. ALL MANHOLE STEPS TO MEET OR EXCEED ASTM AND O.S.H.A. REQUIREMENTS.
3. FOR ROADWAY LOCATIONS STEPS SHALL BE ORIENTED TO ALLOW VIEWING OF ONCOMING TRAFFIC WHEN EXITING STRUCTURE.

MANHOLE POLYPROPYLENE LADDER RUNG

N.T.S.



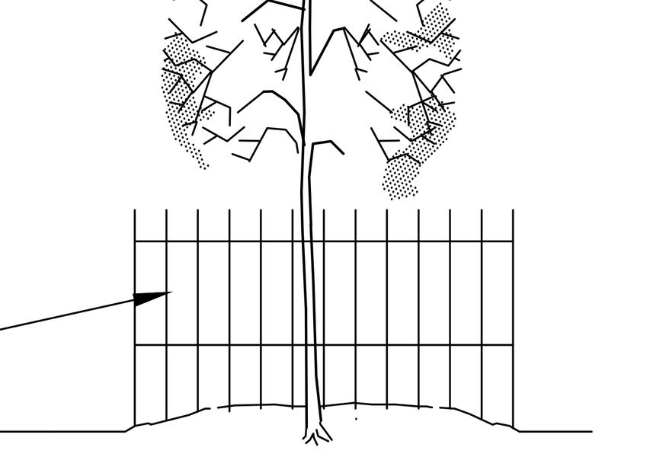
EVERGREEN TREE PLANTING

N.T.S.

TREES TO BE PROTECTED DURING CONSTRUCTION WILL BE TAGGED PRIOR TO THE START OF CONSTRUCTION. THE FINAL DETERMINATION OF THOSE TO BE PROTECTED WILL BE MADE BY THE PLANNING BOARD LANDSCAPE ARCHITECT IN THE FIELD.

PROTECTIVE FENCING IS TO BE ERECTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION AS DIRECTED BY THE PLANNING BOARD LANDSCAPE ARCHITECT.

4' HIGH SNOW FENCE WITH POST DRIVEN INTO GROUND EVERY 6'–0" O.C. AT ALL CHANGES OF DIRECTION



SNOW FENCING SHALL BE INSTALLED ALONG THE DRIP LINE OF TREES TO REMAIN OR A MIMIMUM DISTANCE OF 6 FEET FROM THE TRUNK OF THE TREE.

NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING AS CONSTRUCTION NEARS COMPLETION THE FENCING WILL BE REMOVED AS DIRECTED BY THE PLANNING BOARD LANDSCAPE ARCHITECT

AT THE COMPLETION OF CONSTRUCTION ALL TREES WILL BE PRUNED AS NECESSARY TO CORRECT ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITY

TEMPORARY TREE PROTECTION

N.T.S.

REV.	DATE	DESCRIPTION	CHK'D.	APPV'D
1	02/19/2020	REVISED AS PER CITY OF NEWARK PLANNING & ZONING BOARDS COMMENTS	S.P.	

Harbor Consultants Inc.
Engineers & Surveyors
320 NORTH AVENUE EAST
CRANFORD, N.J. 07016
Phone (908) 276–2715 Fax (908) 709–1738
Email: info@hcicg.net

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PRELIMINARY & FINAL SITE PLAN
CONSTRUCTION DETAILS – 2
LOT 1, BLOCK 4001, LOT 1, BLOCK 4002 CITY OF NEWARK
LOT 1, BLOCK 112, LOT 1, BLOCK 160 TOWNSHIP OF IRVINGTON
ESSEX COUNTY NEW JERSEY

VICTOR E. VINEGRA
PROFESSIONAL ENGINEER & LAND SURVEYOR
NEW JERSEY LICENSE No. 34460

SCALE:	DATE:	DESIGNED BY:	DRAWN BY:	WORK FILE:	CERTIFICATE OF AUTHORIZATION No.	PROJECT No:
N.T.S.	12/10/19	V.E.V.	S.P./C.V.F.	2019173 Details	24GA27962100	2019173