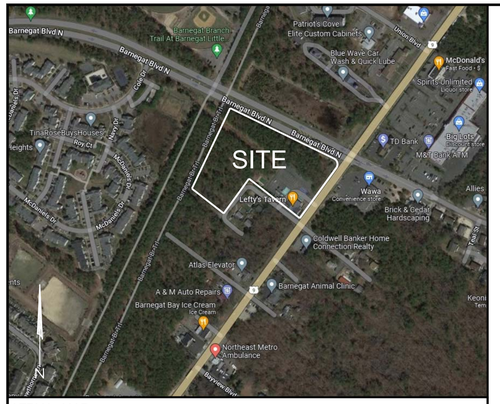
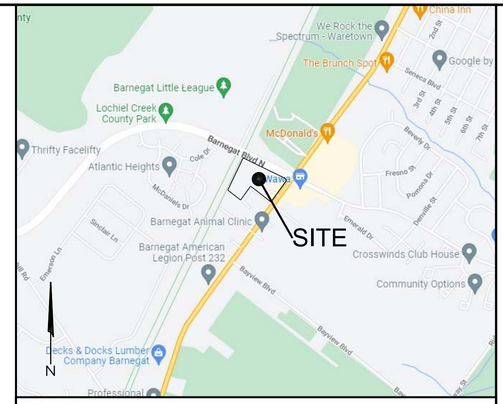
MINOR SUBDIVISION
PRELIMINARY & FINAL SITE PLAN
WaWa FOOD MARKET & FUELING STATION
BLOCK 146.02, LOT 9.02, 10.01, & 11 / BLOCK 147, LOT 1 / BLOCK 148, LOT 1 / BLOCK 149, LOT 1 & 2 / BLOCK 151, LOT 1
547 NORTH MAIN STREET
TOWNSHIP OF BARNEGAT, COUNTY OF OCEAN, NEW JERSEY



AERIAL MAP SCALE 1" = 400'



SITE MAP SCALE 1" = 1,000'

BERTIN ENGINEERING
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GLEN ROCK, NJ 07452
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F 201.670.9788
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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER
CT LIC. NO. 12950 NJ LIC. NO. 28845
MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:28:29 -04'00'

PROPERTY OWNERS WITHIN 200'

TOWNSHIP OF BARNEGAT *(Per Barnegat Tax Assessor)*

BLOCK	LOT	PROPERTY OWNER	PROPERTY LOCATION
144.01	5.02	ATLANTIC HEIGHTS LLC % SLK GLOBAL SOL 101 CHASE AVENUE LAKEWOOD, NJ 08701	900 BARNEGAT BOULEVARD N
	36.02	JERSER CENTRAL POWER & LIGHT % FIRST ENERGY P.O. BOX 4747 OAKBROOK, NJ 60522-4747	TUCKERTON RAILROAD
144.02	36.01	JERSER CENTRAL POWER & LIGHT % FIRST ENERGY P.O. BOX 4747 OAKBROOK, NJ 60522-4747	TUCKERTON RAILROAD
	34.02	OCEAN COUNTY P.O. BOX 2191 FINANACE DEPARTMENT TOMS RIVER, NJ 08753	950 BARNEGAT BOULEVARD N
145.03	1.02	OCEAN COUNTY P.O. BOX 2191 TOMS RIVER, NJ 08753	OLD RR ROW
145.04	1.03	OCEAN COUNTY P.O. BOX 2191 TOMS RIVER, NJ 08753	OLD RR ROW
146.01	9.01	OCEAN COUNTY 101 HOOPER AVENUE TOMS RIVER, NJ 08753	557 NORTH MAIN STREET
214	1.03	HOME CONNECTION REALTY INC 538 NORTH MAIN STREET BARNEGAT, NJ 08005	538 NORTH MAIN STREET
208.02	1.01	550 NORTH MAIN LLC 90 W SYLVANIA AVENUE NEPTUNE CITY, NJ 07753	24 THORN AVENUE
152	1	CJLCEL & CSDAS LLC P.O. BOX 785 BARNEGAT, NJ 08005	21 LUKE AVENUE
153	1.02	ATLAS PROPERTRY MANAGEMENT SERVICES 27 EIGHT STREET BARNEGAT, NJ 08005	533 NORTH MAIN STREET
	1.01	ATLAS PROPERTY MANAGEMENT SERVICES 27 EIGHT STREET BARNEGAT, NJ 08005	529 NORTH MAIN STREET
150	1	BELLI, NICOLE 24 W THORN AVENUE NARNEGAT, NJ 08005	24 THORN AVENUE
	5	PALDINO, DAVID 409 TWIN LAKE BOULEVARD LITTLE EGG HARBOR, NJ 08087	25 TWAIN AVENUE
	4	NUCCIO, RICHARD & SORRENTINO, ZOE 23 TWAIN AVENUE BARNEGAT, NJ 08005	25 TWAIN AVENUE
	2	VALLEY SPORTSWEAR INC 175 ROUTE 59 SPRING VALLEY, NY 10977	28 THORN AVENUE
	1.01	TRYBUN, MICHAEL 26 THORN AVENUE BARNEGAT, NJ 08005	26 THORN AVENUE
	3	BARNEGAT TOWNSHIP 900 WEST BAY AVENUE BARNEGAT, NJ 08005	537 NORTH MAIN STREET
196	5.01	UNION BANK ASSOC. % TD BANK 380 WELLINGTON STREET 10B LONDON, ONT. N6A4S4 00000	560 NORTH MAIN STREET

MUNICIPALITIES & UTILITIES

COMCAST
830 ROUTE 37 WEST
TOMS RIVER NJ 08755
732-286-2971

CONECTIV (FORMERL ATLANTIC ELEC.)
REAL ESTATE DEPARTMENT
457 US HWY 9
WEST CREEK NJ 08092
609-296-9114

BARNEGAT WATER & SEWER
900 WEST BAY AVENUE
BARNEGAT NJ 08005
609-698-0080

GPU ENERGY (FORMERLY JCP&L)
P.O. BOX 16001 REAL ESTATE DEPT
READING PA 19640-0001
610-921-6201

VERIZON
540 BROAD ST ROOM 305
NEWARK NJ 07101

NJ NATURAL GAS CO
1415 WYCKOFF ROAD
P.O. BOX 1464
WALL NJ 07719
732-938-1096

OCEAN COUNTY UTILITIES AUTHORITY
501-HICKORY LANE P.O. BOX P
BAYVILLE NJ 08721
732-269-4500

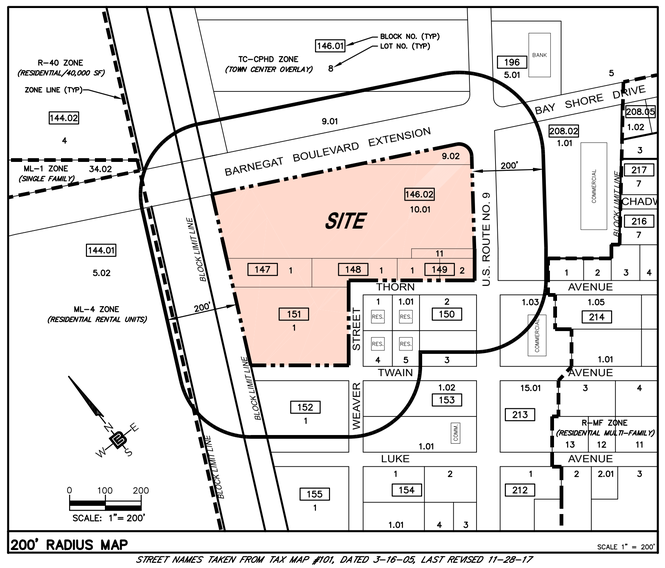
TOWNSHIP OF OCEAN DEPT OF UTILITIES
50 RAILROAD AVENUE
WARETOWN NJ 08758
609-693-3668

NJ TURNPIKE AUTHORITY (GS PARKWAY)
P.O. BOX 5042
581 MAIN STREET
WOODBRIDGE NJ 07095-5042

STATE OF NEW JERSEY DOT
CN 600
TRENTON NJ 08625

OCEAN COUNTY DOT
P.O. BOX 2191
TOMS RIVER NJ 08754

ROUTE 539
NAUTILUS DRIVE
BAY AVENUE & BAYSHORE DRIVE
GUNNING RIVER RD-RT 9 TO W BAY AVE
BARNEGAT BOULEVARD
WARREN GROVE ROAD
BROOKVILLE ROAD
LIGHTHOUSE DRIVE



200' RADIUS MAP SCALE 1" = 200'

STREET NAMES TAKEN FROM TAX MAP #101, DATED 3-16-05, LAST REVISED 11-28-17

ZONING NOTES

1. OWNER: M&T AT 547 MAIN, LLC
547 NORTH MAIN STREET BARNEGAT, NEW JERSEY 08005
(732) 985-1900

2. APPLICANT: M&T AT 547 MAIN, LLC
1260 STELTON ROAD PISCATAWAY, NEW JERSEY 08854
(732) 985-1900

3. LOCATION: 547 NORTH MAIN STREET
BARNEGAT, OCEAN COUNTY, NEW JERSEY 08005
BLOCK 146.02, LOTS 9.02, 10.01, 11 / BLOCK 147, LOT 1
BLOCK 148, LOT 1 / BLOCK 149, LOT 1 & 2 / BLOCK 151, LOT 1
TAX MAP SHEETS 101 & 102

4. ZONE: TC-CPHD – COMMERCIAL PLANNED HIGHWAY DEVELOPMENT
– TOWN CENTER OVERLAY ZONE

5. USE: EXISTING: RESTAURANT (PERMITTED)
VACANT LAND (PERMITTED)
PROPOSED:
LOT 10.02 AUTOMOTIVE FUELING STATION (PERMITTED)
CONVENIENCE STORE (PERMITTED)
LOT 1.01 RESTAURANT (PERMITTED)

6. BULK SCHEDULE:

	REQUIRED	PROPOSED LOT 10.02	PROPOSED LOT 1.01
MIN. LOT AREA (SF):	65,340	122,627.41	146,083.26
MIN. LOT AREA (AC):	1.5	2.8	3.3
MIN. LOT WIDTH (FT):	100	231.75	147.06
MIN. LOT DEPTH (FT):	175	653.22	630.18
PRINCIPAL BUILDING SETBACKS:			
MIN./MAX. FRONT YARD			
U.S. ROUTE 9 (FROM DTS) (FT):	25	208.42 (BLDG) 85.38 (CANOPY)	8 (E) N/A
NORTH BARNEGAT BLVD (FT):	25	45.36 (BLDG) 61.21 (CANOPY)	N/A N/A
THORN AVENUE (FT):	25	N/A	10.41 (E)
MIN. SIDE YARD (ONE) (FT):	20	61.75	64.97
MIN. SIDE YARDS (BOTH) (FT):	40	N/A	N/A
REAR YARD (FT):			
ACCESSORY BUILDING SETBACKS (TRASH):			
TRASH ENCLOSURE			
MIN. SIDE YARD (FT):	5	64.0	111.25
MIN. REAR YARD (FT):	10	292.4	302.9
CANOPY			
MIN. FRONT YARD (FT):	30	61.21	N/A
MIN. SIDE YARD (FT):	20	57.75	N/A
MIN. COMBINED SIDE YARD YARD (FT):	30	N/A	N/A
MAX. LOT COVERAGE BY BUILDINGS (%)			
CONVENIENCE STORE: = 5,585 SF CANOPY: = 5,280 SF = 10,865 SF (10,865 / 122,627) = 8.86	35	8.86	
RESTAURANT: = 5,422 SF (5,422 / 146,083) = 3.71	35		3.71
MAX. BUILDING HEIGHT			
CONVENIENCE STORE (FT):	35	33.3 PEAK 22.5 PARAPET	
CANOPY (FT):	35	25.17	
RESTAURANT (FT):	35		1/<35

7. BULK SCHEDULE: (TOWN CENTER OVERLAY ZONE)(CHAPTER 55, SECTION 55-34.5(D))

	REQUIRED	PROPOSED LOT 10.02
(9) VENDING MACHINES-PROPANE TANK EXCHANGE ETC. NOT TO OBSTRUCT ANY SW OR PED.& BIKE CIRCULATION ROUTE		COMPLIES
(10) NO OUTDOOR STORAGE IS PERMITTED WITHIN THE FRONT YARD AREA		COMPLIES
(12) MAX. IMPERVIOUS COVERAGE (%):	80	53.5

8. PARKING:
AUTOMOTIVE SERVICE STATION:
5 SP/BAY (MIN. 5) = 5
CONVENIENCE STORE:
1 SP/100 GSF = (1 SP/100) X 5,585 SF = 55.8
RESTAURANT:
1 SP/100 GSF = (1 SP/100) X 5,422 SF = 54.2
TOTAL REQUIRED PARKING = 115
TOTAL PROVIDED PARKING = 149 (+12 SPACES AT DISPENSERS)

9. THERE WILL BE CROSS ACCESS AND PARKING EASEMENTS PROVIDED.

10. SEE SHEET C2.10. "SIGNAGE PLAN" FOR SIGN REQUIREMENTS

LEGEND
NC – NO CHANGE
NA – NOT APPLICABLE
(E) – INDICATES AN EXISTING NON-CONFORMITY
(V) – INDICATES A VARIANCE IS REQUIRED

DRAWING LIST

DWG. #	DRAWING TITLE	DATED/ LAST REVISED	REV. #	DWG. #	DRAWING TITLE	DATED/ LAST REVISED	REV. #
C1.1	COVER SHEET	6-11-25	15	C2.10	SIGNAGE PLAN	4-22-25	8
C2.1	EXISTING CONDITIONS & DEMOLITION PLAN	4-22-25	7	C2.11	NJDEP LAND USE PLAN	4-22-25	5
C2.2	SITE PLAN	4-22-25	9	C3.1	SITE DETAILS – 1	4-22-25	6
C2.3	GRADING & SOIL EROSION SEDIMENT CONTROL PLAN	6-11-25	14	C3.2	SITE DETAILS – 2	4-22-25	5
C2.3A	SOIL EROSION & SEDIMENT CONTROL PLAN	4-22-25	3	C3.3A	DRAINAGE & SESC DETAILS	6-11-25	11
C2.3B	SOIL COMPACTION PLAN	6-11-25	3	C3.3B	DRAINAGE & SESC DETAILS 2	4-22-25	5
C2.4	UTILITY & STORMWATER MANAGEMENT PLAN	6-11-25	12	C3.4	UTILITY DETAILS	4-22-25	5
C2.5	LANDSCAPE & SIGHT TRIANGLE PLAN	6-11-25	8	C3.5	CANOPY & LIGHTING DETAILS	4-22-25	5
C2.6	LIGHTING PLAN	4-22-25	6	C3.6	STRIPING, BOLLARD PLACEMENT, CONTROL JOINT PLAN & DETAILS	4-22-25	5
C2.7	LIGHTING INTENSITIES PLAN	4-22-25	6	C3.7	LANDSCAPE & SESC DETAILS	6-11-25	11
C2.8A	VEHICLE CIRCULATION PLAN – 1	4-22-25	6	C3.8	SOIL EROSION & SEDIMENT CONTROL DETAILS	6-11-25	4
C2.8B	VEHICLE CIRCULATION PLAN – 2	4-22-25	0	C3.9	SOIL EROSION & SEDIMENT CONTROL DETAILS 2	6-11-25	3
C2.9	MINOR SUBDIVISION & LEASE PLAN	4-22-25	6	C4.1	WATER MAIN EXTENSION PLAN	4-22-25	2

WAWA SITE DATA TABLE

PHYSICAL ADDRESS	547 NORTH MAIN STREET BARNEGAT, NJ 08005
WAWA STORE NO.:	C-04289
BUILDING TYPE	W50FB
CANOPY TYPE	SLOPED
CANOPY CONFIGURATION	STAKED=6
NO. OF MPD'S	6
TYPE OF MPD'S	4+1
NO. OF PARKING SPACES	50
NO. OF HANDICAP PARKING SPACES	2
NO. OF TRUCK/OVERSIZE PARKING SPACES	0
SQ. FT. OF ASPHALT (INSIDE R.O.W.)	37,315
SQ. FT. OF LAWN AREA (TO BE MOWED)	13,163
SQ. FT. OF MULCH AREA	9,608
CONTACT INFO: WAWA INC. 260 W. BALTIMORE PIKE WAWA PA. 19063	

* REQUIRED ELECTRIC VEHICLE SUPPLY EQUIPMENT SPACES (EVSE):

NON-RESIDENTIAL

	REQUIRED	PROVIDED
MIN. (EVSE): (101 SP TO 150 SP) = 4	4	4
MIN. HANDICAP (EVSE)(5% OF EVSE SP): (4 SP x .05) = 0.2	1	COMPLIES
TOTAL EVSE SPACES =		4
TOTAL SPACES PROVIDED =		149
EVSE BONUS/CREDIT (2 TO 1)(MAX. 10% OF REQUIRED) =		4
TOTAL ADJUSTED SPACES =		153

APPROVED BY THE TOWNSHIP OF BARNEGAT PLANNING BOARD AT A MEETING HELD ON _____ 2024

CHAIRPERSON DATE

SECRETARY DATE

ENGINEER DATE

APPROVED BY THE COUNTY PLANNING BOARD COUNTY OF OCEAN, NEW JERSEY

ATTESTED TO BY DATE

NO.	DATE	REVISION
15	6-11-25	REVISE DRAWING LIST
14	4-22-25	REVISE DRAWING LIST
13	3-14-25	REVISE DRAWING LIST
12	12-20-24	REVISE DRAWING LIST
11	12-17-24	REVISE DRAWING LIST
10	7-22-24	REVISE DRAWING LIST, ADDED BUILDINGS WITH USES ON RADIUS MAP
9	5-14-24	REVISE DRAWING LIST
8	4-24-24	REVISE DRAWING LIST; ADDED DRAWING 3.3A AND 3.9
7	2-29-24	UPDATE ZONING/ REVISE DRAWING LIST
6	1-31-24	REVISE DRAWING LIST
5	12-11-23	REVISE DRAWING LIST
4	9-28-23	REVISE DRAWING LIST
3	6-21-23	REVISE DRAWING LIST
2	4-12-23	REVISE DRAWING LIST & EVSE CHART
1	12-12-22	REVISE DRAWING LIST & ZONING NOTES, ADDED WAWA SITE DATA TABLE

C.P. | J.A.S. | C.P. | C.P. | V.L. | T.M. | A.D. | C.B. JR | M.K. | V.L. | V.L. | A.R.D. | V. | V.

DRAWING TITLE
COVER SHEET

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION: 24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
C.B. JR	C.J.B.
SCALE: AS SHOWN	PROJECT NO.: 21-312
DATE: 11-8-22	REVISION NO.: 15

DRAWING NO.
C1.1

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PRE-CONSTRUCTION NOTES

1. UTILITY LOCATIONS SHOWN ON PLANS ARE FOR REFERENCE ONLY AND MUST BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION. ON SITE UTILITIES ARE BASED ON FIELD OBSERVATION AND RECORD DRAWINGS. ACTUAL CONDITIONS MAY VARY.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL:
   A) THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE CONDITIONS.
   B) REVIEW THE SURVEY AND SITE PLANS FOR INCONSISTENCIES WITH ACTUAL CONDITIONS.
   C) VERIFY FINISHED FLOOR ELEVATIONS OF EXIST. STRUCTURES TO REMAIN WITH RESPECT TO STREET ELEVATIONS SHOWN.
   D) VERIFY LOCATION, DEPTH AND ELEVATION OF UTILITY CONNECTIONS.
3. STAKE OUT NEW BUILDING AND VERIFY THEIR LOCATION TO PROPERTY LINES WITH RESPECT TO DIMENSIONS SHOWN ON PLANS.
4. MARK LIMIT OF SOIL DISTURBANCE AND TAG ALL TREES TO BE REMOVED.
5. REVIEW ALL LOCAL, COUNTY AND STATE PERMIT REQUIREMENTS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES TO REMAIN. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPAIRED OR RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
7. ALL DEMOLITION AND CONSTRUCTION MUST MEET OSHA REGULATIONS.
8. UTILITY LOCATIONS SHOWN ON PLANS ARE FOR REFERENCE ONLY AND MUST BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION. CALL 1-800-272-1000 FOR UTILITY MARK OUT PRIOR TO EXCAVATION.
9. PROPERTY OWNERS CONTRACTOR SHOULD CONFIRM THE SIZE OF THE EXISTING WATER MAIN ON ROUTE 9 OR NORTH BARNEGAT BLDV BY EXCAVATING A TEST PIT PRIOR TO MAKING ANY CONNECTIONS TO THE WATER SYSTEM.
10. THE PARTY RESPONSIBLE FOR PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURE IS
    M&T AT 547 MAIN, LLC
    1260 STELTON ROAD PISCATAWAY, NEW JERSEY 08854
    (732) 985-1900.

LEGEND

EOP	EXISTING EDGE OF PAVEMENT
	TRAFFIC SIGN
	AREA LIGHT
	FIRE HYDRANT
Ø	UTILITY POLE
x 00.00	SPOT ELEVATION
GV	GAS VALVE
WV	WATER VALVE
S	SANITARY MANHOLE
D	DRAINAGE MANHOLE
	TREELINE
00	EXISTING CONTOUR
OH	EXISTING OVERHEAD WIRE
GAS	EXISTING GAS MARK-OUT
WATER	EXISTING WATER MARK-OUT
E	EXISTING ELECTRIC MARK-OUT
	SILTFENCE & LOD
XXXXXX	SAWCUT LINE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

BERTIN ENGINEERING
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GLEN ROCK, NJ 07452
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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER
CT LIC. NO. 12950 NJ LIC. NO. 28845
MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

NOT VALID UNTIL SIGNED

STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:29:09 -04'00'

NO.	DATE	REVISION	
7	4-22-25	REISSUE	J.A.S.
6	1-31-24	REVISE PLAN TITLE, PRE-CONSTRUCTION NOTES.	M.K.
5	12-11-23	REVISE LIMIT OF DISTURBANCE	V.L.
4	9-28-23	RE-ISSUE	V.L.
3	6-21-23	RE-ISSUE	V.L.
2	4-12-23	REMOVE & RELOCATE UTILITY POLES ON ROUTE 9, ADDED WETLANDS AT THE CORNER	V.L.
1	12-12-22	UPDATED SURVEY	V.L.

DRAWING TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
11-8-22	7

DRAWING NO.
C2.1

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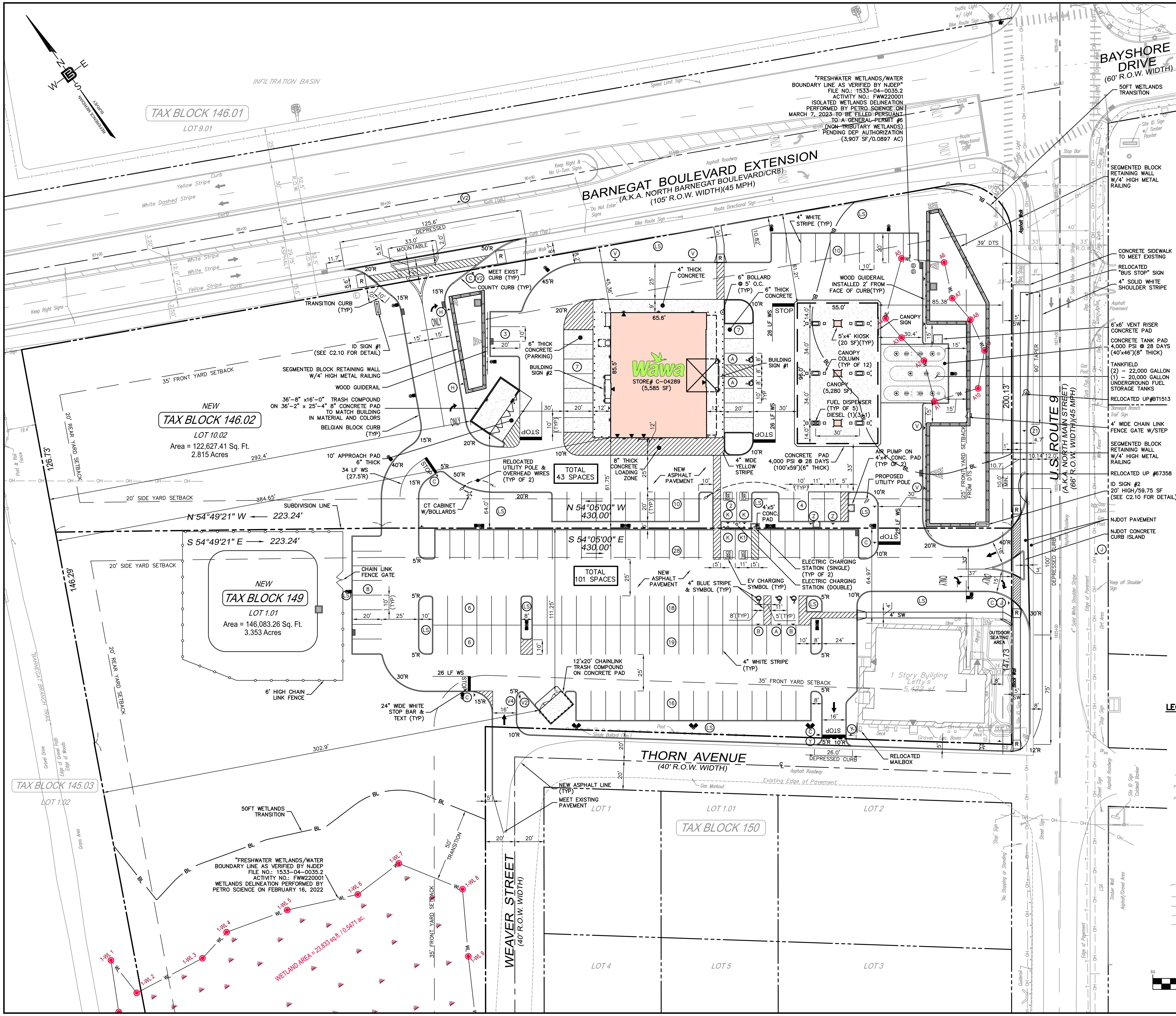
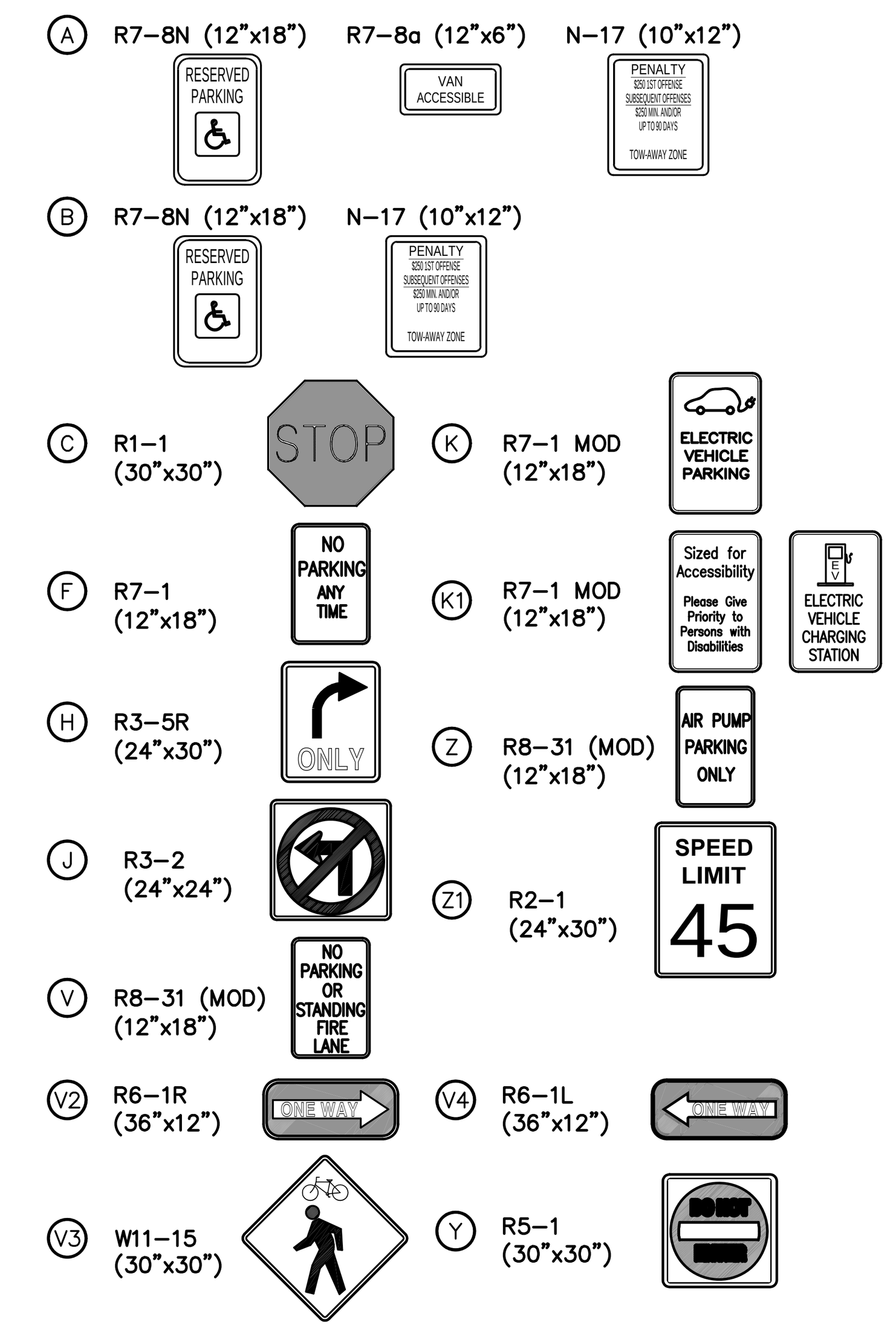


GENERAL NOTES

1. PLAN IS BASED ON A DRAWING TITLED "ALTA/NSPS LAND TITLE SURVEY" "PROJECT EP DESIGN SERVICES, BLOCK 146.02, LOTS 9.02, 10.01, 11 BLOCK 147, LOT 1, BLOCK 148, LOT 1' N.J.S.H. ROUTE 9 AND BARNEGAT BOULEVARD EXTENSION, TOWNSHIP OF BARNEGAT, OCEAN COUNTY, NEW JERSEY", PREPARED BY DYNAMIC SURVEY, LLC, 1904 MAIN STREET, LAKE COMO, NJ 07719, PROJECT NO. 1415-99-005S, SHEET #1 OF 1, DATED APRIL 10, 2020, LAT REVISED OCTOBER 25, 2021.
2. ALL FEATURES ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED. PROPOSED FEATURES ARE SHOWN IN FULL TONE. EXISTING FEATURES ARE SHOWN IN HALF TONE. EXISTING FEATURES TO BE REMOVED ARE SHOWN AS DASHED AND/OR ARE NOTED.
3. LOCATION OF ALL UNDERGROUND UTILITIES IS APPROXIMATE AND SHOULD BE VERIFIED BEFORE EXCAVATION OR CONSTRUCTION BEGINS. CALL DIG HOTLINE 1-800-272-1000.
4. UNLESS OTHERWISE NOTED, MAINTAIN EXISTING YARD GRADES AND SLOPES.
5. ALL UTILITY CONNECTIONS ARE TO BE IN ACCORDANCE WITH LOCAL CODE.
6. THE SITE PLAN(S) SUPERSEDES ALL STANDARD DRAWINGS.
7. UNLESS OTHERWISE NOTED, ALL DIMENSIONS AND RADII ARE SHOWN TO THE FRONT FACE OF CURBS OR FACE OF WALLS.
8. UNLESS OTHERWISE NOTED, ALL RADII ARE 2 FT.
9. ANY DAMAGE INCURRED TO SURROUNDING PUBLIC OR PRIVATE PROPERTY AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED BY THE APPLICANT.
10. BLOCK 146.02 LOTS 9.02, 10.01, 11, BLOCK 147 LOT 1, BLOCK 148 LOT 1, BLOCK 151 LOT 1,TO BE SUBDIVIDED INTO 2 LOTS. TAX ASSESSOR TO CONFIRM BLOCK AND LOT NUMBERS.
11. DESIRED TYPICAL SECTION – 4D; R.O.W. 78'; 4 LANES, DIVIDED W/SHOULDERS OR PARKING
12. VERTICAL DATUM – NAVD 88, BASED ON GPS FIELD OBSERVATIONS PERFORMED BY DYNAMIC SURVEY ON MARCH 22, 2020,UTILIZING THE LEICA RTK CORS NETWORK.
13. THE DEVELOPER IS REQUIRED TO OBTAIN A ROAD OPENING PERMIT FROM THE OCEAN COUNTY ENGINEERING DEPARTMENT PRIOR TO THE START OF CONSTRUCTION OF ANY IMPROVEMENTS OR SOIL EROSION CONTROL MEASURES WITHIN THE COUNTY RIGHT OF WAY .

TRAFFIC SIGN LEGEND

ALL TRAFFIC SIGNS MUST CONFORM IN FACE DESIGN AND CONSTRUCTION TO SPECIFICATIONS FOUND IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, U.S.D.O.T., AND FEDERAL HIGHWAY ADMINISTRATION. SPECIFICALLY, REGULATORY & WARNING SIGNS SHALL BE FABRICATED OF FLAT ALUMINUM SHEETS AND SHALL BE COVERED WITH DIAMOND GRADE REFLECTIVE SHEETING, SERIES 4000 TYPE XI DESIGNATION PER ASTM.



LEGEND

EXISTING		PROPOSED	
EOP	EXIST. EDGE OF PAVEMENT	E.O.P.	PROP. EDGE OF PAVEMENT
	TRAFFIC SIGN	R	HANDICAP RAMP
	AREA LIGHT	L	HANDICAP LANDING
	FIRE HYDRANT	SW	SIDEWALK
	UTILITY POLE	CW	CROSSWALK
x 00.00	SPOT ELEVATION	TD	TRENCH DRAIN
x TC 00.00	TOP OF CURB		TRAFFIC SIGN
x BC 00.00	BOTTOM OF CURB		DIRECTIONAL ARROW
GV	GAS VALVE		FIRE HYDRANT
WV	WATER VALVE		DRAINAGE MANHOLE
S	SANITARY MANHOLE		CURB INLET
D	DRAINAGE MANHOLE		YARD INLET
W	MONITORING WELL	S	SANITARY MANHOLE
	TREELINE	MEG	MEET EXISTING GRADE
00	EXISTING CONTOUR	ETR	EXISTING TO REMAIN
OH	EXISTING OVERHEAD WIRE		TRAFFIC SIGN
GAS	EXISTING GAS MARK-OUT		AREA LIGHT
WATER	EXISTING WATER MARK-OUT	6	# OF PARKING SPACES
E	EXISTING ELECTRIC MARK-OUT	LS	LANDSCAPE
		WS	WHITE STRIPE
		DS	DOWNSPOUT
			BUILDING DOOR

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER

CT LIC. NO.	12950	NJ LIC. NO.	28845
MA LIC. NO.	40595	NY LIC. NO.	60022
NH LIC. NO.	9368	RI LIC. NO.	6694

NOT VALID UNTIL SEALED

STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 *LICENSED* PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:29:33 -04'00'

NO.	DATE	REVISION	
9	4-22-25	REVISE RESTAURANT PARKING LOT LAYOUT AND DRIVEWAYS	J.A.S.
8	7-23-24	ADDED GATE & STEPTO SEGMENTAAL BLOCK WALL	VL
7	5-14-24	REVISE DRAINAGE BASIN AND CHAIN LINK FENCE.	AD
6	2-26-24	UPDATE SETBACKS	CB JR
5	12-11-23	REVISE COUNTY DRIVEWAY INTRANCE. ADD SIGHT TRIANGLES ON COUNTY ROAD. REVISE GENERAL NOTES.	VL
4	9-28-23	ADDED WS TO LEGEND, REVISED SIGN AT BOULEVARD EXTENSION EXIT AND EVSE STRIPE COLOR.	VL
3	6-21-23	REVISE STRIPING & R.O.W.; ADD SHOULDER WIDTHS & RADIUS	VL
2	4-12-23	REDESIGNED DRIVEWAY ENTRANCE & CURBLINE ON ROUTE 9, ADDED WETLANDS	VL
1	12-12-22	UPDATED SURVEY & REVISED BASIN WALLS	VL

DRAWING TITLE
SITE PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY: V.L.	CHECKED BY: C.J.B.
SCALE: 1"=30'	PROJECT NO.: 21-312
DATE: 11-8-22	REVISION NO.: 9

DRAWING NO.
C2.2

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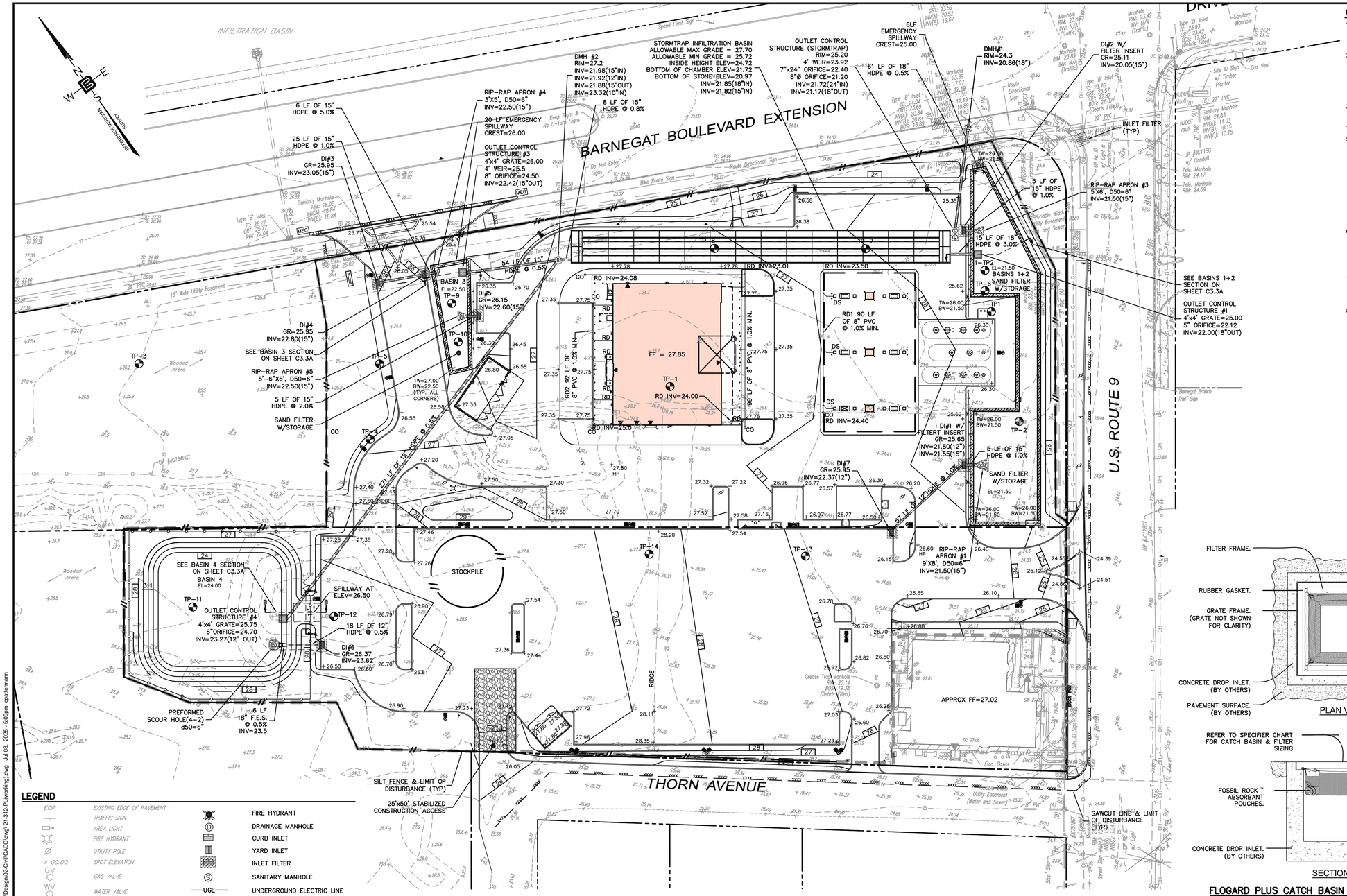

GENERAL NOTES

1. GENERAL CONTRACTOR SHALL EMPLOY AN INDEPENDENT SOIL INSPECTOR FOR 100% CONTINUOUS INSPECTION OF THE BEDDING AND BACKFILL OPERATIONS. COMPACTION TESTS SHALL BE TAKEN AT THE BOTTOM OF TRENCH AND AT EACH LIFT OF BACKFILL.
2. GENERAL CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO RECORD AS-BUILT TOP OF PIPE ELEVATIONS TAKEN WHEN BEDDING APPLICATION IS 75% COMPLETE. THESE ELEVATIONS SHALL BE TAKEN AT POINTS OF CONNECTION, CHANGES IN DIRECTION AND A T MINIMUM 20' INTERVALS ALONG THE LENGTH OF THE PIPE. THESE ELEVATIONS SHALL BE RECOREDED AS AS-BUILT DIMENSIONS ON A SITE PLAN FOR REVIEW BY THE PROJECT CIVIL ENGINEER.
3. ALL SANITARY LINES ARE TO BE FLUSHED PRIOR TO TURNOVER OF THE FACILITY.
4. ALL PROPOSED INLETS TO INCLUDE AN INLET FILTER (FLO-GARD+PLUS).
5. ALL WORK FOR THE WATER SERVICE AND SANITARY SEWER LATERAL PERFORMED IN THE EXISTING UTILITY EASEMENT OR PUBLIC RIGHT-OF-WAY FOR CONNECTION TO THE WATER MAIN AND SANITARY SEWER, ARE UNDER THE JURISDICTION OF THE TOWNSHIP OF BARNEGAT BOARD OF PUBLIC WORKS. CREW ENGINEER'S INC. WILL INSPECT THIS WORK ON BEHALF OF THE BOARD AND WILL REQUIRE 72-HOUR ADVANCE NOTICE FROM THE APPLICANT OR THEIR CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ALL WORK FOR THE WATER SERVICE AND SEWER LATERAL ON THE PROPERTY IS UNDER THE JURISDICTION OF THE TOWNSHIP OF BARNEGAT CONSTRUCTION PLUMBING SUBCODE OFFICIAL, AND THE APPLICANT IS RESPONSIBLE FOR PROVIDING PROPER NOTIFICATION TO THE DEPARTMENT AND TO ENSURE THE REQUIRED PLUMBING PERMIT.
6. BEFORE THE START OF WORK, THE APPLICANT'S CONTRACTOR MUST SUBMIT A CERTIFICATE OF INSURANCE (COI) TO DYNAMIC ENGINEERING, COMPLYING WITH THE TOWNSHIP OF BARNEGAT STANDARDS. THE COI MUST BE REVIEWED AND APPROVED BY THE TOWNSHIP'S INSURANCE CONSULTANT BEFORE THE APPLICANT IS PERMITTED TO CONNECT TO THE WATER DISTRIBUTION SYSTEM AND SANITARY SEWER.
7. BEFORE THE START OF WORK, THE APPLICANT OR THEIR CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO OUR OFFICE FOR ALL REVELANT ITEMS AND PRODUCTS THAT WILL BE USED ON THE PROJECT FOR THE WATER AND SANITARY SEWER CONNECTIONS.
8. VERTICAL DATUM - NAVD 88, BASED ON GPS FIELD OBSERVATIONS PERFORMED BY DYNAMIC SURVEY ON MARCH 22, 2020,UTILIZING THE LEICA RTK CORS NETWORK.

MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT FACILITIES

1. OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES.
2. FREQUENCY OF INSPECTION: AT LEAST TWICE A YEAR AND AFTER EVERY MAJOR STORM EVENT.
3. APPLICABLE STORMWATER MANAGEMENT FACILITIES:
   - DRAINAGE PIPES
   - YARD INLETS
   - MANHOLES
   - TRENCH DRAINS
   - ROOF LEADERS
   - INLET FILTERS
4. REQUIRED MAINTENANCE ACTIVITIES:
   - A. INSPECT STORMWATER MANAGEMENT FACILITIES FOR SEDIMENT, DEBRIS AND LITTER ACCUMULATION, AND REMOVE IT.
   - B. INSPECT PIPES, CHANNELS, INLETS AND OUTLET STRUCTURES FOR BLOCKAGES, AND REMOVE.
   - C. MAINTAIN LAWN AND LANDSCAPING TO PREVENT LEAVES, BRANCHES, ETC. FROM ENTERING STORMWATER MANAGEMENT FACILITIES.
   - D. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING PIPES AND STRUCTURES ARE TO BE CLEANED AT LEAST TWICE A YEAR.
5. SHOULD INSPECTION OF FACILITIES INDICATE THAT REPAIRS ARE NEEDED, THE REQUIRED REPAIR SHALL BE PERFORMED PROMPTLY.

NOTES:
1. Filter insert shall have a high flow bypass feature.
2. Filter support frame shall be constructed from stainless steel Type 304.
3. Filter medium shall be *Fossil Rock* ™, installed and maintained in accordance with manufacturer specifications.
4. Storage capacity reflects 80% of maximum solids collection prior to impeding filtering bypass.
5. Inspections shall be frequent. Maintenance, repair, and replacement shall be made promptly, as needed. The filter shall be removed when the area draining toward the inlet has been stabilized.

FLOGARD PLUS CATCH BASIN INSERT FILTER (DI#1 & DI#2) NOT TO SCALE

LEGEND

EOP	EXISTING EDGE OF PAVEMENT		FIRE HYDRANT
	TRAFFIC SIGN		DRAINAGE MANHOLE
	AREA LIGHT	D	CURB INLET
	FIRE HYDRANT		YARD INLET
	UTILITY POLE		INLET FILTER
x 00.00	SPOT ELEVATION	S	SANITARY MANHOLE
GV	GAS VALVE	UGE	UNDERGROUND ELECTRIC LINE
WV	WATER VALVE	G	GAS LINE
S	SANITARY MANHOLE	W	WATER LINE
D	DRAINAGE MANHOLE	S	PROP. SANITARY LINE
	TREELINE	T&D	PROP. TELEPHONE & DATA LINE
00	EXISTING CONTOUR	D D	DRAINAGE LINE (UNDER 12")
OH	EXISTING OVERHEAD WIRE		DRAINAGE LINE (12" & UP)
GAS	EXISTING GAS MARK-OUT	XXXXXX XXXXXX	SAWCUT LINE
WATER	EXISTING WATER MARK-OUT	+ 14.18	PROPOSED SPOT ELEVATION
E	EXISTING ELECTRIC MARK-OUT	14	PROPOSED CONTOUR LINE
	SILTFENCE & LOD		AREA LIGHT
XXXXXX XXXXXX	SAWCUT LINE		AREA LIGHT W/HOUSE SIDE SHIELD
	SOIL TEST PIT	DS	DOWNSPOUT

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

TEST PIT RESULTS

TEST PITS PERFORMED BY JOHNSON SOILS COMPANY ON 2/2/22 (SEE GEOTECHNICAL ENGINEERING REPORT DATED 2/8/22).

TP-1 SURFACE ELEVATION: 27FT
0"-18" TOPSOIL, BROWN FINE TO COARSE SAND W/ ORGANIC SILT
18"-24" GRAY FINE TO MEDIUM SAND, TRACE SILT
24"-8' LIGHT BROWN/TAN FINE TO MEDIUM SAND, TRACE SILT
WATER @ 8'
SEASONAL HIGH WATER TABLE @ 8' (EL. 17.75±)
THE PERCOLATION RATE AT A DEPTH OF 6' IS 20.5 IN/HR.

TP-2 SURFACE ELEVATION: 24FT
0"-12" COARSE GRAVEL
12"-18" TOPSOIL
18"-4' GRAY FINE TO MEDIUM SAND, TRACE SILT
4'-6'6" LIGHT BROWN/TAN YELLOW FINE TO MEDIUM SAND, TRACE SILT
WATER @ 6'6"
SEASONAL HIGH WATER TABLE @ 6'6" (EL. 17±)
THE PERCOLATION RATE AT A DEPTH OF 4'6" IS 20.7 IN/HR.

TP-3 SURFACE ELEVATION: 26FT
0"-18" TOPSOIL, BROWN FINE TO COARSE SAND W/ ORGANIC SILT AND ROOTS
18"-4' GRAY FINE TO MEDIUM SAND, LITTLE SILT
4'-6'8" LIGHT BROWN/TAN YELLOW FINE TO MEDIUM SAND, TRACE SILT
WATER @ 8'
SEASONAL HIGH WATER TABLE @ 8' (EL. 18±)
THE PERCOLATION RATE AT A DEPTH OF 6' IS 20.3 IN/HR.

TP-4 SURFACE ELEVATION: 25.5FT
0"-12" TOPSOIL, BROWN FINE TO COARSE SAND, W/ ORGANIC SILT
12"-30" GREY FINE TO MEDIUM SAND, LITTLE SILT
30"-7' LIGHT BROWN FINE TO MEDIUM SAND, TRACE SILT
7'-8'6" LIGHT BROWN FINE TO COARSE SAND, TRACE SILT, LITTLE COARSE TO FINE GRAVEL
WATER @ 8'
SEASONAL HIGH WATER TABLE @ 7' (EL. 18.5±)
THE PERCOLATION RATE AT A DEPTH OF 5' IS 20.3 IN/HR.

TP-5 SURFACE ELEVATION: 25FT
0"-6" TOPSOIL, BROWN FINE TO COARSE SAND, W/ ORGANIC SILT
6"-24" GREY FINE TO MEDIUM SAND, LITTLE SILT
24"-8' LIGHT BROWN/TAN FINE TO MEDIUM SAND, TRACE SILT
8'-9'6" LIGHT BROWN FINE TO COARSE SAND, TRACE SILT, LITTLE COARSE TO FINE GRAVEL
WATER @ 8'
SEASONAL HIGH WATER TABLE @ 8' (EL. 17±)
THE PERCOLATION RATE AT A DEPTH OF 6' IS 20.6 IN/HR.

TP-6 SURFACE ELEVATION: 22FT
0"-8" TOPSOIL
8"-20" GREY FINE TO MEDIUM SAND, LITTLE SILT
20"-3' BLACK FINE SAND W/ ORGANIC SILT
3'-7' GRAY FINE TO MEDIUM SAND, LITTLE SILT
7'-8'6" LIGHT BROWN FINE TO COARSE SAND, TRACE SILT, LITTLE COARSE TO FINE GRAVEL
WATER @ 7'
SEASONAL HIGH WATER TABLE @ 7' (EL. 15.3 ±)
THE PERCOLATION RATE AT A DEPTH OF 7' IS 20.6 IN/HR.

TEST PITS PERFORMED BY EP DESIGN ON 2/5/24 (SEE GEOTECHNICAL ENGINEERING REPORT DATED 2/5/24).

TP-7 SURFACE ELEVATION: 23.10FT
0"-8" TOPSOIL, BROWN FINE TO COARSE SAND W/ ORGANIC SILT
8"-21" LIGHT GRAY, COURSE TO FINE SAND, TRACE SILT
21"-58" BROWNISH-YELLOW MEDIUM TO FINE SAND, LITTLE SILT
58"-11' YELLOWISH-BROWN MEDIUM TO FIND GRAVEL @ 7'6" BGS
SEASONSAL HIGH WATER TABLE @ 4'-10" BGS (EL=18.27±)
THE PERCOLATION RATE AT A DEPTH OF 2'6" IS 20+ IN/HR.
(EL=21.7)

TP-8 SURFACE ELEVATION: 23.80FT
0"-8" TOPSOIL, DARK BROWN W/ROOTS
8"-24" LIGHT GRAY, COURSE TO FINE SAND, TRACE SILT
24"-54" BROWNISH-YELLOW, MEDIUM TO FINE SAND, LITTLE SILT
@ 2'6"BGS PERMEABILITY 20+ IN/HR (EL=21.3)
54"-10' YELLOWISH BROWN, MEDIUM TO FINE GRAVEL @ 7'6" BGS
SEASONAL HIGH WATER TABLE @ 4'10" BGS (EL. 18.97±)
THE PERCOLATION RATE AT A DEPTH OF 6' IS 20.6 IN/HR.

TP-9 SURFACE ELEVATION: 24.30FT
0"-12" TOPSOIL, DARK BROWN W/ AND ROOTS
12"-26" LIGHT GRAY, COURSE TO FINE SAND, TRACE SILT
26"-54" BROWNISH YELLOW, MEDIUM TO FINE SAND, LITTLE SILT
@ 2'6"BGS PERMEABILITY 20+ IN/HR (EL.21.7)
54"-9' BROWNISH YELLOW, MEDIUM TO FINE GRAVEL @ 7'0" BGS
SEASONAL HIGH WATER TABLE @ 4'8" BGS (EL. 19.80±)

TP-10 SURFACE ELEVATION: 24.20FT
0"-8" TOPSOIL, DARK BROWN, W/ ROOTS
8"-24" LIGHT GREY, COURSE TO FINE SAND, TRACE SILT
24"-58" BROWNISH YELLOW, MEDIUM TO FINE SAND, LITTLE SILT
@ 2'6"BGS PERMEABILITY 20+ IN/HR (EL=21.7)
58"-10' BROWNISH YELLOW, MEDIUM TO FINE GRAVEL @ 7'6" BGS
SEASONAL HIGH WATER TABLE @ 4'10" BGS (EL. 19.37±)

TP-11 SURFACE ELEVATION: 27.00FT
0"-8" TOPSOIL, DARK BROWN, W/ ROOTS
8"-24" LIGHT GREY, COURSE TO FINE SAND, TRACEE SILT
24"-66" BROWNISH-YELLOW, MEDIUM TO FINE SAND, LITTLE SILT
@ 3'0" BGS PERMEABILITY 20+ IN/HR (EL=24.0)
66"-10' BROWNISH-YELLOW, MEDIUM TO FINE GRAVEL @ 8'0" BGS
SEASONAL HIGH WATER TABLE @ 5'6" BGS (EL. 21.5±)

TP-12 SURFACE ELEVATION: 32.50FT
0"-48" FILL: SANDY TOPSOIL, DARK BROWN, MEDIUM TO FINE SAND, LITTLE SILT
48"-57" DARK BROWN, TOPSOIL W/ ROOTS
57"-72" LIGHT GREY, COURSE TO FINE SAND, TRACE SILT
@ 5'0" BGS PERMEABILITY 20+ IN/HR (EL=27.5)
6'-10' BROWNISH-YELLOW, MEDIUM TO FINE SAND, LITTLE SILT,
@ 6'6" BGS PERMEABILITY 20+ IN/HR (EL=26.0)
10"-13' BROWNISH-YELLOW, MEDIUM TO FINE GRAVEL @ 11'6" BGS
SEASONAL HIGH WATER TABLE @ 9'0" BGS (EL=23.50)

TP-13 SURFACE ELEVATION: 25FT
0"-12" COARSE GRAVEL
12"-18" TOPSOIL
18"-4' GRAY FINE TO MEDIUM SAND, TRACE SILT
4'-6'6" LIGHT BROWN/TAN YELLOW FINE TO MEDIUM SAND, TRACE SILT
WATER @ 6'6"
SEASONAL HIGH WATER TABLE @ 6'6" (EL. 18.5±)
THE PERCOLATION RATE AT A DEPTH OF 4'6" IS 20.7 IN/HR.

TP-14 SURFACE ELEVATION: 27FT
0"-8" COARSE GRAVEL
8"-24" TOPSOIL
24"-66" GRAY FINE TO MEDIUM SAND, TRACE SILT
66"-10' LIGHT BROWN/TAN YELLOW FINE TO MEDIUM SAND, TRACE SILT
WATER @ 5'0"
SEASONAL HIGH WATER TABLE @ 5'6" (EL. 19.25±)

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NOT VALID UNTIL SIGNED

STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:30:01 -04'00'

NO.	DATE	REVISION
13	4-25-25	REVISE PER NEW RESTAURANT PARKING LOT LAYOUT
12	4-8-25	REVISE STORMTRAP
11	12-30-24	REVISE DRAINAGE SYSTEM PER DOT COMMENTS
10	12-17-24	REVISE GRADING AND DRAINAGE SYSTEM PER DEP COMMENTS
9	5-14-24	UPDATE TEST PITS AND NOTES, REVISE DRAINAGE BASINS & PIPES, REVISE FENCE.
8	2-28-24	MOVED SOIL STOCKPILE
7	1-30-24	REVISE INLET FILTER DETAIL AND TESTS PITS.
6	12-11-23	REVISED PLAN AND DRAINAGE FACILITIES, ADD FLOGARD PLUS CATCH BASIN INSERT FILTER (DI#1 & DI#2) DETAIL.
5	9-28-23	REVISED BASINS 1 & 2.
4	7-11-23	REVISED DRIVEWAY ENTRANCE GRADING PER DOT
3	6-21-23	ADD INLET ALONG RT 9, REVISE BASIN & DRIVEWAY GRADING
2	4-13-23	ADDED WETLANDS & TEST PIT LOCATIONS
1	12-15-22	UPDATED SURVEY

M.B.(L)	CP	CP	CP	CP	AD	CB JR	M.K.	CP	CP	CP	CP	VL	VL	VL	

DRAWING TITLE
GRADING & SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
11-8-22	13

DRAWING NO.
C2.3

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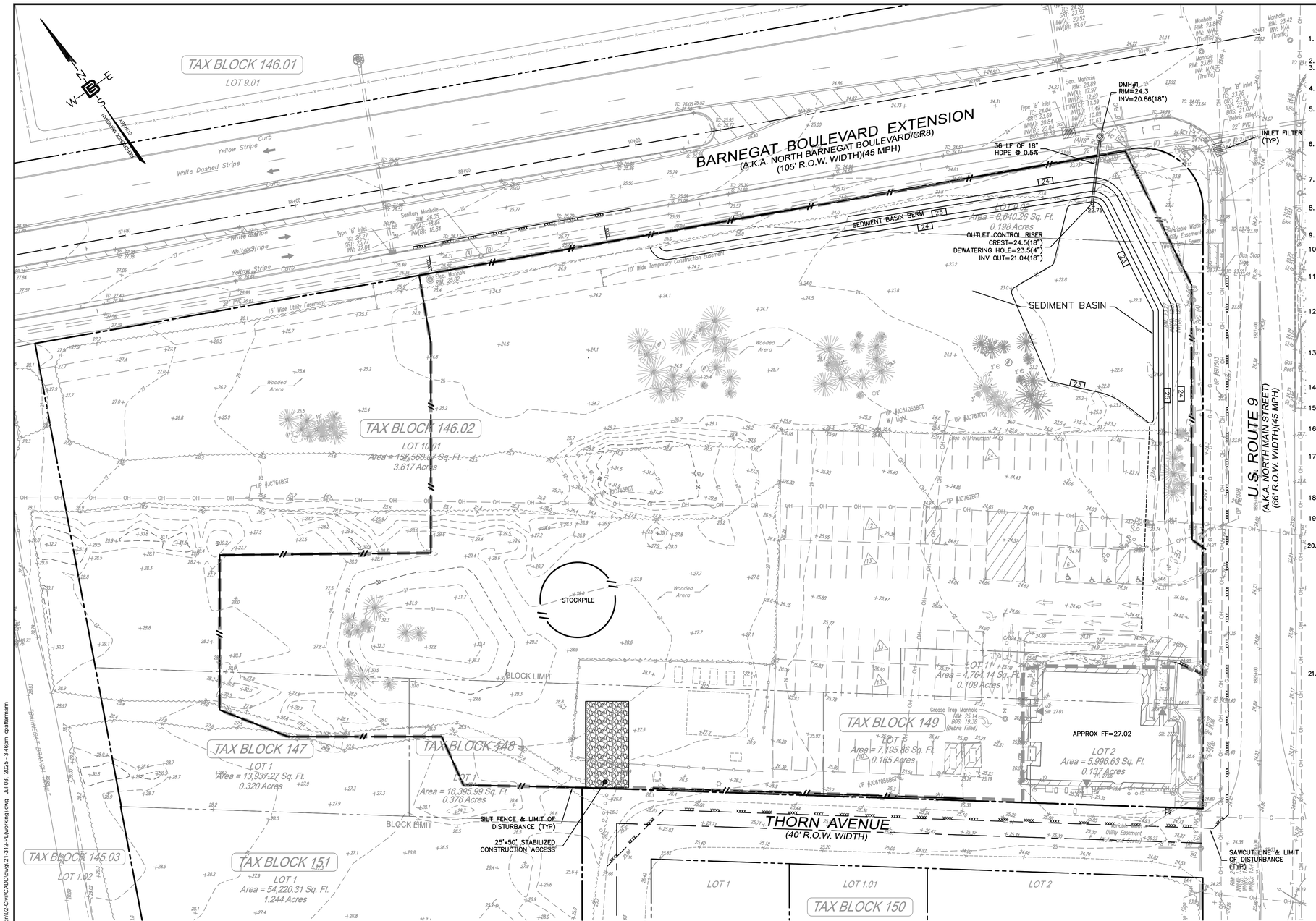


OCEAN COUNTY SOIL CONSERVATION DISTRICT
SOIL EROSION AND SEDIMENT CONTROL NOTES

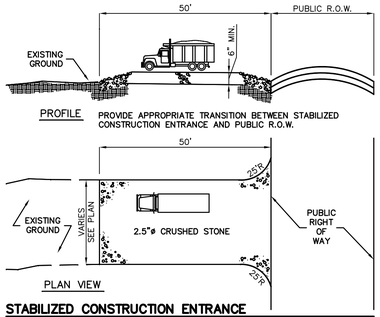
1. THE DISTRICT INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH "THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION, JANUARY 2014, REVISED JULY 2017."(SESC STANDARDS)
2. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE SESC STANDARDS.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT. THE REVISED PLANS MUST MEET ALL CURRENT SESC STANDARDS.
5. N.J.S.A. 4:24–39 ET SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THERE HAS BEEN COMPLIANCE WITH PROVISIONS OF A CERTIFIED PLAN FOR PERMANENT MEASURES. ALL SITE WORK, AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
6. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR MORE THAN (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE TEMPORARY VEGETATIVE COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL WITHIN 14 DAYS, AT A RATE OF 2 TO 2 ½ TONS PER ACRE AND ANCHORED IN PLACE ACCORDING TO THE SESC STANDARD FOR STABILIZATION WITH MULCH ONLY.
7. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E., STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF 1 ½ TO 2 TONS PER ACRE AND ANCHORED IN PLACE ACCORDING TO THE SESC STANDARDS.
8. A SUB–BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB–BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
9. ANY STEEP SLOPES (3:1 OR GREATER) OR ANY EXISTING ROADWAYS RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION CONTINUES.
10. THE SESC STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A STONE PAD USING CLEAN, CRUSHED, ANGULAR STONE – ASTM C–33, SIZE NO 2 OR 3 – AT ALL CONSTRUCTION DRIVEWAYS WHERE VEHICLES WILL ACCESS PAVED ROADWAYS FROM UNPAVED AREAS OF THE SITE.
11. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. AT THE TIME OF THE FINAL INSPECTION, YOU ARE REQUIRED TO PROVIDE CONFIRMATION THAT THE PROPER TYPE AND AMOUNT OF SEED, LIME AND FERTILIZER HAVE BEEN USED FOR PERMANENT STABILIZATION WORK. STRAW MULCH PROPERLY ANCHORED IN PLACE IS REQUIRED ON ALL SEEDING IN ACCORDANCE TO THE SESC STANDARDS.
12. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON–VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
13. IN ACCORDANCE WITH THE SESC STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TWO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY–FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.
14. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL. CONDUIT OUTLET PROTECTION INSTALLATION SHALL BE POSTPONED IN BASINS ACTING AS SEDIMENT BASINS DURING CONSTRUCTION.
15. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE SESC STANDARDS FOR DEWATERING.
16. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED, MULCH SHALL BE APPLIED AND ANCHORED IN PLACE, OR OTHER DUST CONTROL METHOD SHALL BE EMPLOYED AS REQUIRED BY SESC STANDARD FOR DUST CONTROL.
17. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF AN AMENDED SOIL EROSION AND SEDIMENT CONTROL PLAN. THE DISTRICT RESERVES THE RIGHT TO DETERMINE WHEN CERTIFICATION OF A NEW AND SEPARATE SOIL EROSION AND SEDIMENT CONTROL PLAN WILL BE REQUIRED FOR THESE ACTIVITIES.
18. ALL SOIL STOCKPILES ARE TO BE SURROUNDED WITH A SEDIMENT BARRIER AND STABILIZED IN ACCORDANCE WITH THE SESC STANDARDS. STOCKPILES SHOULD BE SITUATED SO AS TO NOT OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF–SITE ENVIRONMENTAL DAMAGE.
19. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORM–WATER OUTFALLS OR OFF–SITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
20. REQUIREMENTS FOR SILT FENCE:
    1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER–TO–CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND (FIG. 23–2). POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1 ½ INCHES.
    2. "SUPER" SILT FENCE – A METAL FENCE WITH 6 INCH OR SMALLER MESH OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC. POSTS MAY BE SPACED LESS THAN 8 FEET ON CENTER AND MAY BE CONSTRUCTED OF HEAVIER WOOD OR METAL AS NEEDED TO WITHSTAND HEAVIER SEDIMENT LOADING. THIS PRACTICE IS APPROPRIATE WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED. "SUPER" SILT FENCE IS NOT TO BE USED IN PLACE OF PROPERLY DESIGNED DIVERSIONS (PG.15–1) WHICH MAY BE NEEDED TO CONTROL SURACE RUNOFF RATES AND VELOCITIES.
    3. A GEOTEXTILE FABRIC, RECOMMENED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHER ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.
21. REQUIREMENTS FOR STONE BARRIER:
    1. THE STONE SHALL BE PILED TO A NATURAL ANGLE OF REPOSE WITH A HEIGHT OF AT LEAST 2 FEET.
    2. THE STONE SHALL MEET ASTM C–33 SIZE NO.2(2.5 TO 1.5) OR 3 (2 TO 1 INCH).

SEQUENCE OF CONSTRUCTION:

	TIME
1. INSTALL SILT FENCE, STABILIZED CONSTRUCTION ENTRANCE, AND INLET PROTECTION TO ADJACENT INLETS.	2 DAYS
2. CLEAR DEVELOPMENT AREA.	4 DAYS
3. CLEAR TREES TO BE REMOVED	2 WEEKS
4. CONSTRUCT SEDIMENT BASIN	2 WEEKS
5. CLEAR DEMOLISHED MATERIAL	2 DAYS
DEMOLITION TO LAST APPROXIMATELY 5 WEEKS	
6. INSTALL BUILDING FOUNDATION.	1 MONTH
7. INSTALL UNDERGROUND UTILITIES.	3 WEEKS
8. CONSTRUCT NEW BUILDING.	2 MONTHS
9. INSTALL CURBING AND DRAINAGE STRUCTURES.	1 MONTH
10. INSTALL INLET FILTERS.	1 DAY
11. INSTALL PAVEMENT.	2 WEEKS
12. INSTALL LANDSCAPING & LIGHTING FIXTURES.	3 WEEKS
13. REMOVE ALL SOIL EROSION CONTROL DEVICES.	1 DAY

NOTES:

a. NOTIFY THE OCEAN COUNTY SOIL CONSERVATION DISTRICT IN WRITING AT LEAST 48 HOUR PRIOR TO LAND DISTURBANCE.
b. ALL STORMWATER DRAINAGE SYSTEM STRUCTURES MUST BE INSTALLED PRIOR TO INSTALLING BUILDING FOUNDATIONS AND CONSTRUCTING NEW BUILDINGS. BASIN SLOPES MUST BE STABILIZED PRIOR TO DRAINAGE SYSTEM BECOMING OPERATIONAL. BASINS SHALL ACT AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION. PROVIDE CLEAR INSTRUCTION ON HOW THE SITE WILL BE CONVERTED TO THE FINAL STORMWATER MANAGEMENT SYSTEM DESIGN.
c. CONDUCT SOIL COMPACTION TESTS IN LOCATIONS SHOWN ON SOIL COMPACTION MITIGATION PLAN. TESTING MUST BE WITNESSED BY OCSCD INSPECTOR. IF TESTS PASS, SUBMIT TEST RESULTS TO OCEAN COUNTY SOIL CONSERVATION DISTRICT. IF TESTS FAIL, RESTORATION OF COMPACTED SOILS SHALL BE CONDUCTED THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH).
d. TOPSOIL WITH A MINIMUM DEPTH OF 5" AND FINAL GRADING OF THE LOT.
e. PERMANENT STABILIZATION OF ALL DISTURBED AREAS.
f. CONDUIT OUTLET PROTECTION AND K5 SAND INSTALLATION AT THE END OF CONSTRUCTION TO AVOID CONTAMINATION OF THE SAND DURING ITS USE AS A SEDIMENT BASIN.
g. MUST OBTAIN A FINAL REPORT OF COMPLIANCE FROM THE OCSCD.
h. TOTAL LIMIT OF DISTURBANCE = 3.95 ACRES (172,062 SF) (OVERALL)
   TOTAL LIMIT OF DISTURBANCE = 3.53 ACRES (153,719.29 SF) (WITHIN PROPERTY LINE)
i. INSTALL SILT FENCE, STABILIZED CONSTRUCTION ENTRANCE, AND INLET PROTECTION TO ADJACENT INLETS.



STABILIZED CONSTRUCTION ENTRANCE

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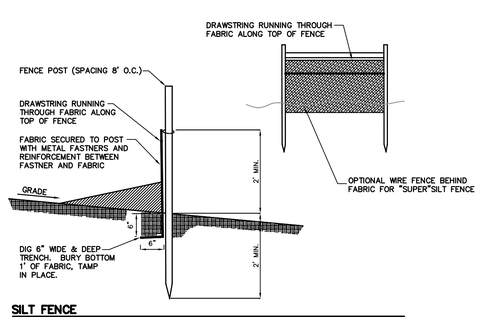
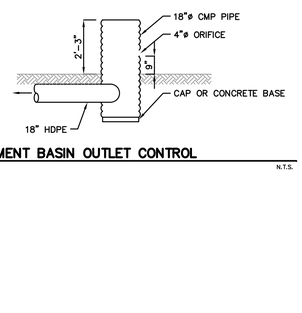


SILT FENCE

NOT TO SCALE



SEDIMENT BASIN OUTLET CONTROL

N.T.S.

MAINTENANCE FOR SEDIMENT BARRIER

1. SEDIMENT SHALL BE REMOVED FROM THE UPSTREAM FACE OF THE BARRIER WHEN IT HAS REACHED A DEPTH OF ½ THE BARRIER HEIGHT.
2. REPAIR OR REPLACE BARRIER (FABRIC, POSTS, BALES ETC.) WHEN DAMAGED.
3. BARRIERS SHALL BE INSPECTED DAILY FOR SIGNS OF DETERIATION AND SEDIMENT REMOVAL.

REQUIREMENT & MAINTENANCE FOR STABILIZED CONSTRUCTION ENTRANCE

1. INDIVIDUAL LOT ENTRANCE AND EGRESS – AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOT INGRESS/EGRESS POINTS MAY REQUIRE STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF NO.3 STONE (1" TO 2") TO PREVENT OR MINIMIZE TRACKING OF SEDIMENTS. WIDTH OF THE STONE INGRESS/EGRESS SHALL BE EQUAL TO LOT ENTRANCE WIDTH AND SHALL BE MINIMUM OF TEN FEET IN LENGTH.
2. TIRE WASHING– IF SPACE IS LIMITED, VEHICLE TIRES MAY BE WASHED WITH CLEAN WATER BEFORE ENTERING A PAVED AREA. A WASH STATION MUST BE LOCATED SUCH THAT WASH WATER WILL NOT FLOW ONTO PAVED ROADWAYS OR INTO UNPROTECTED STORM DRAINAGE SYSTEMS.
3. WHEN THE CONSTRICTION ACCESS EXISTS ONTO A MAJOR ROADWAY, A PAVED TRANSITION AREA MAY BE INSTALLED BETWEEN THE MAJOR ROADWAY AND THE STONED ENTRANCE TO PREVENT LOOSE STONES FROM BEING TRANSPORTED OUT ONTO THE ROADWAY BY HEAVY EQUIPMENT ENTERING OR LEAVING THE SITE.
4. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTHS AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.
5. WHERE ACCUMULATION OF DUST/SEDIMENT IS INADEQUTELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS WHICH ARE NOT STABILIZED SHALL BE BLOCKED OFF.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:30:30 -04'00'

NO.	DATE	REVISION
3	4-22-25	REISSUE
2	5-14-24	REMOVE TEMPORARY BERM AND SWALE
1	2-26-24	MOVED SOIL STOCKPILE

J.A.S. CB JR CB JR

DRAWING TITLE
SOIL EROSION SEDIMENT CONTROL PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
1-31-24	3

DRAWING NO.
C2.3A

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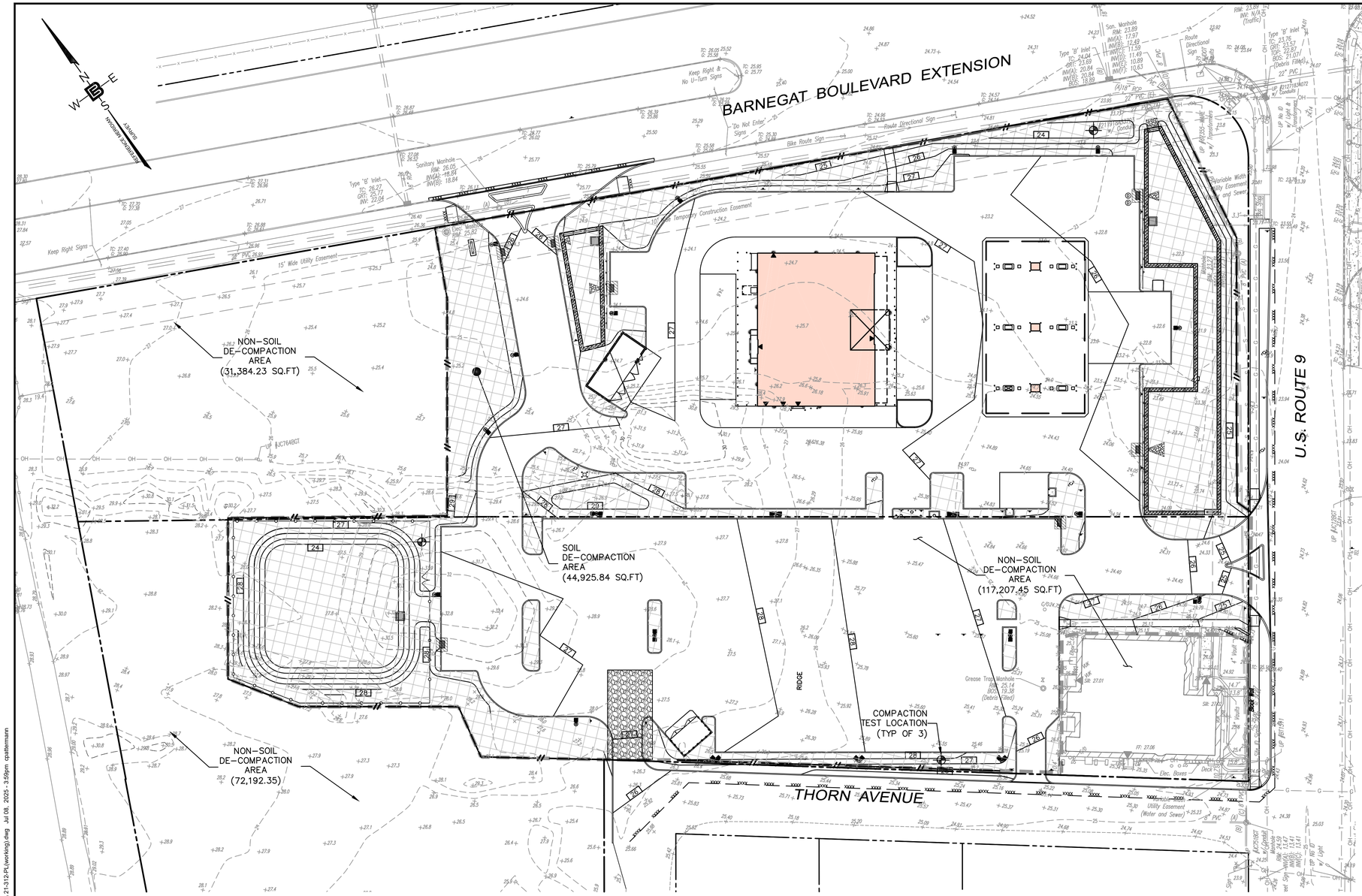


LEGEND

EOP	EXISTING EDGE OF PAVEMENT
	TRAFFIC SIGN
	AREA LIGHT
	FIRE HYDRANT
	UTILITY POLE
x 00.00	SPOT ELEVATION
GV	GAS VALVE
WV	WATER VALVE
S	SANITARY MANHOLE
D	DRAINAGE MANHOLE
	TREELINE
00	EXISTING CONTOUR
OH	EXISTING OVERHEAD WIRE
GAS	EXISTING GAS MARK-OUT
WATER	EXISTING WATER MARK-OUT
E	EXISTING ELECTRIC MARK-OUT
	SILTFENCE & LOD
	SAWCUT LINE
	SOIL DE-COMPACTION AREA
	COMPACTION TEST LOCATION (APPROX. 1 PER 0.5 ACRE)

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

A. SOIL COMPACTION TESTING REQUIREMENTS

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

B. COMPACTION TESTING METHODS

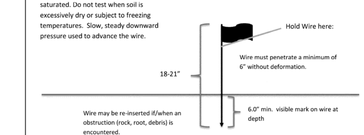
1. PROBING WIRE TEST (SEE DETAIL)
2. HAND-HELD PENETROMETER TEST (SEE DETAIL)
3. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL REQUIRED)
4. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL REQUIRED)
5. NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.
6. DETAILED REQUIREMENTS FOR EACH COMPACTION TESTING METHOD CAN BE FOUND IN SECTION 19 "STANDARD FOR LAND GRADING" OF THE NJ STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION.
7. SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

C. PROCEDURES FOR SOIL COMPACTION MITIGATION

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

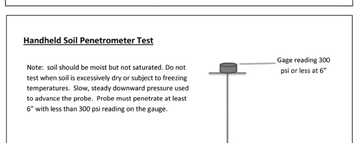
Probing Wire Test- 15.5 ga steel wire (survey flag)

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gauge.



PROBING WIRE/PENETROMETER TESTING DETAILS

NOT TO SCALE

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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STATE OF NEW JERSEY — SHAN-PEI FANCHIANG — No. GE37073 — LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:31:01 -04'00'

NO.	DATE	REVISION	
2	4-25-25	REVISE PER NEW SITE LAYOUT	J.A.S.
1	5-14-24	MODIFY COMPACT TEST LOCATIONS	E.M.H.

DRAWING TITLE
SOIL COMPACTION PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

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E.M.H.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
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1-31-24	2

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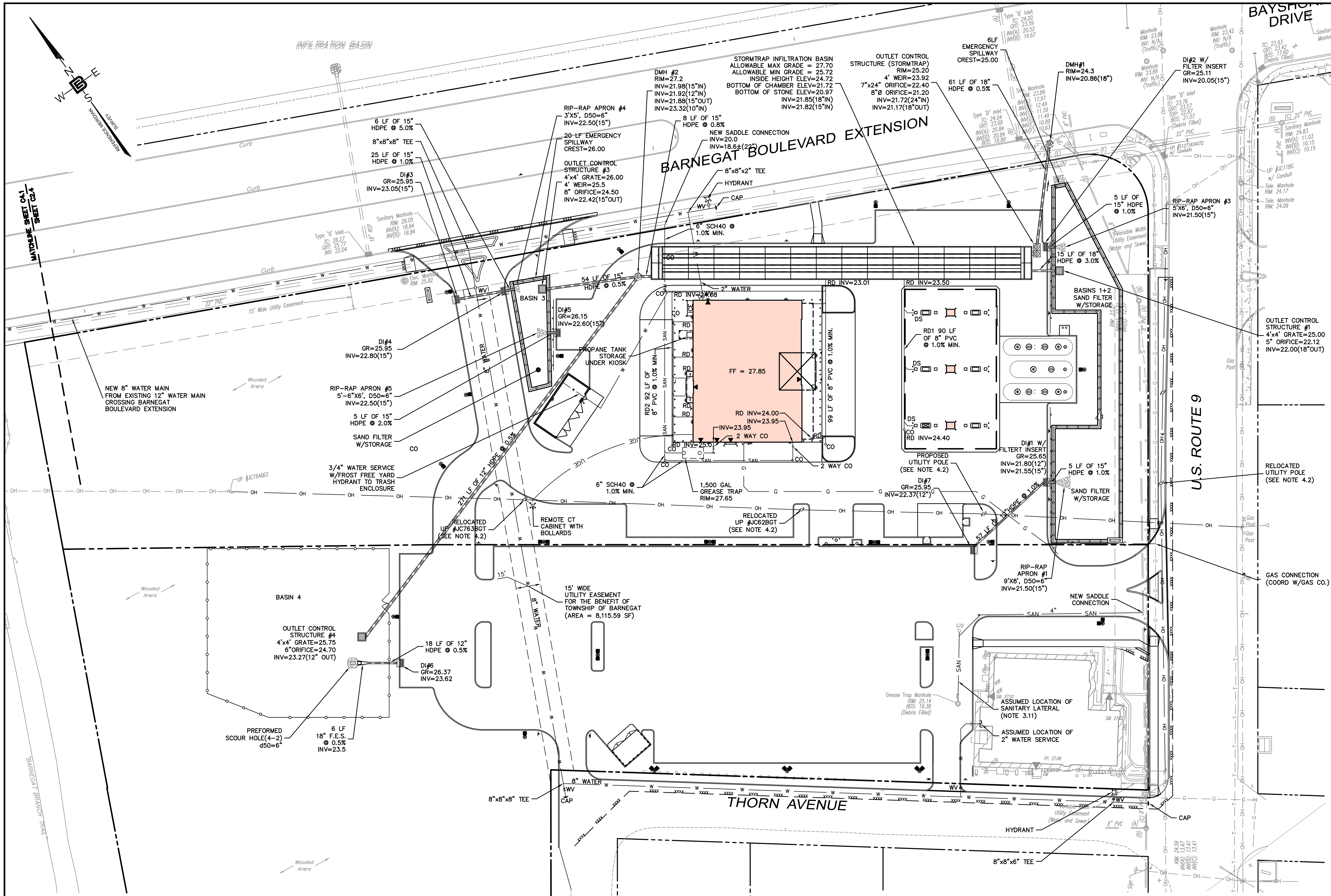

LEGEND

EOP	EXISTING EDGE OF PAVEMENT		FIRE HYDRANT
	TRAFFIC SIGN		DRAINAGE MANHOLE
	AREA LIGHT		CURB INLET
	FIRE HYDRANT		YARD INLET
	UTILITY POLE		INLET FILTER
x 00.00	SPOT ELEVATION		SANITARY MANHOLE
GV	GAS VALVE	—UGE—	UNDERGROUND ELECTRIC LINE
WV	WATER VALVE	—G—	GAS LINE
	SANITARY MANHOLE	—W—	WATER LINE
	DRAINAGE MANHOLE	—S—	PROP. SANITARY LINE
	TREELINE	—T&D—	PROP. TELEPHONE & DATA LINE
00	EXISTING CONTOUR	—D—D—	DRAINAGE LINE (UNDER 12")
—OH—	EXISTING OVERHEAD WIRE		DRAINAGE LINE (12" & UP)
—GAS—	EXISTING GAS MARK-OUT	XXXXXX XXXXXX	SAWCUT LINE
—WATER—	EXISTING WATER MARK-OUT	+ 14.18	PROPOSED SPOT ELEVATION
—E—	EXISTING ELECTRIC MARK-OUT	14	PROPOSED CONTOUR LINE
—//—	SILTFENCE		AREA LIGHT
	LIMIT OF DISTURBANCE		AREA LIGHT W/HOUSE SIDE SHIELD
XXXXXX XXXXXX	SAWCUT LINE	DS	DOWNSPOUT
	SOIL TEST PIT		

WATER DEMANDS

NEW BUILDING

RETAIL: 0.125 GPD/SF x 5,585 SF =	698.1 GPD
ISLANDS: 125 GPD/FUELING POSITION x 12 POSITIONS =	1,500.0 GPD
NEW BUILDING TOTAL =	2,198.1 GPD

EXISTING BUILDING / LEFTY'S

RESTAURANT: 100 SEATS x 35 GPD =	3,500 GPD
OVERALL TOTAL =	5,698.1 GPD

SEWER DEMANDS

NEW BUILDING

RETAIL: 0.1 GPD/SF x 5,585 SF =	558.5 GPD
ISLANDS: 125 GPD/FUELING POSITION x 12 POSITIONS =	1,500.0 GPD
NEW BUILDING TOTAL =	2,058.5 GPD

** LEFTY'S/RESTAURANT ALREADY TIED INTO SEWER LINE*

UTILITY NOTES

1.0 GENERAL

1.1 ALL UTILITIES TO BE INSTALLED IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.

1.2 METER LOCATIONS SHOWN HERE ARE SCHEMATIC. ACTUAL LOCATIONS TO BE DETERMINED BY UTILITY & ARCHITECT.

1.3 REFER TO PLUMBING PLANS FOR LOCATION OF DOWNSPOUTS, SANITARY LATTERALS & UTILITY SERVICE ENTRANCES.

1.4 CONTRACTOR IS TO OBTAIN NECESSARY ROAD/UTILITY OPENING PERMITS.

2.0 WATER

2.1 ALL WATER SYSTEM FACILITIES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWNSHIP STANDARDS FOR THE INSTALLATION OF WATER SYSTEM FACILITIES.

2.2 WATER LATERALS TO BE SIZED BY MECHANICAL ENGINEER.

2.3 THE WATER METER SHALL BE INSTALLED INSIDE THE BUILDING AGAINST AN OUTSIDE WALL WITH BALL VALVES ON EITHER SIDE OF THE METER.

2.4 IRRIGATION SYSTEM TO BE DESIGNED BY THE LANDSCAPE CONTRACTOR AND WILL REQUIRE METERS AND RPZ VALVES. WATER SERVICE FOR THE IRRIGATION SYSTEM WILL BE MADE AFTER THE CUSTOMER METER AND WILL CONFORM TO RAMSEY WATER STANDARDS, INCLUDING THE INSTALLATION OF A REDUCED BACKFLOW PREVENTER AND RAIN SENSORS.

2.5 LANDSCAPE AREAS TO BE IRRIGATED.

3.0 SANITARY SEWER

3.1 COORDINATE SEWER CONNECTIONS WITH PLUMBING PLANS.

3.2 THE TOWNSHIP OF BARNEGAT SHALL BE NOTIFIED AT THE COMMENCEMENT OF WORK AND 24 HOURS PRIOR TO FINAL CONNECTION TO THE COLLECTION SYSTEM AND BACKFILL.

3.3 INFILTRATION SHALL NOT EXCEED FIFTY (50) GALLONS PER INCH OF NOMINAL DIAMETER PER TWENTY FOUR (24) HOURS PER MILE OF PIPE.

3.4 THE APPLICANT/OWNER SHALL BE RESPONSIBLE FOR THE PROPOSED SEWER UP TO THE POINT OF CONNECTION TO THE TOWNSHIP OF BARNEGET SYSTEM.

3.5 MANHOLE SECTIONS TO CONFORM TO ASTM C-478

3.6 CONNECTION OF STORM WATER SOURCES TO THE SANITARY SEWER OR COMBINED SEWER ARE PROHIBITED.

3.7 PROVIDE SANITARY CLEANOUTS AT 75' O.C. MAX. SPACING.

3.8 ASTM DESIGNATION D 3034 WHEN REFERING TO SDR-35 PVC PIPE.

3.9 ALL SANITARY SEWER WORK WILL CONFORM TO THE TOWNSHIP STANDARDS FOR THE INSTALLATION OF SANITARY SEWERS,

3.10 GREASE TRAP, MONITORING MANHOLE, AND ALL ASSOCIATED FACILITIES WILL CONFORM TO TOWNSHIP OF BARNEGAT REQUIREMENTS.

3.11 LOCATE & INSPECT EXISTING SANITARY LATERAL. CLEAN OR REPLACE, AS REQUIRED. REROUTE SANITARY SEWER MAIN, REMOVE LIFT STATION AND CAP OUTLET PIPE.

4.0 ELECTRIC/COMMUNICATIONS

4.1 COORDINATE CONDUIT SIZES WITH BUILDING DRAWINGS.

4.2 COORDINATE PROPOSED & RELOCATED UTILITY POLE LOCATIONS WITH UTILITY COMPANY.

5.0 NATURAL GAS

5.1 NATURAL GAS PIPES TO BE SIZED BY UTILITY COMPANY.

6.0 STORM

6.1 OPERATOR TO ANNUALY CLEAN INLETS AND PROPERLY DISPOSE OF ALL SEDIMENT.

6.2 COORDINATE BUILDING DOWNSPOUT CONNECTIONS WITH PLUMBING PLANS.

6.3 SEE STORMWATER MANAGEMENT PLAN FOR MAINTENANCE REQUIREMENTS.

6.4 CORRUGATED POLYETHYLENE PIPE SHALL CONFORM TO AASHTO M252 FOR 3"-10" AND AASHTO M294 FOR SIZES 12" AND LARGER.

6.5 UNLESS NOTED, ALL RCP SHALL BE CLASS III AND SHALL MEET ASTM C76.

GENERAL NOTES

1. GENERAL CONTRACTOR SHALL EMPLOY AN INDEPENDENT SOIL INSPECTOR FOR 100% CONTINUOUS INSPECTION OF THE BEDDING AND BACKFILL OPERATIONS. COMPACTION TESTS SHALL BE TAKEN AT THE BOTTOM OF TRENCH AND AT EACH LIFT OF BACKFILL.
2. GENERAL CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO RECORD AS-BUILT TOP OF PIPE ELEVATIONS TAKEN WHEN BEDDING APPLICATION IS 75% COMPLETE. THESE ELEVATIONS SHALL BE TAKEN AT POINTS OF CONNECITON, CHANGES IN DIRECTION AND A T MINIMUM 20' INTERVALS ALONG THE LENGTH OF THE PIPE. THESE ELEVATIONS SHALL BE RECOREDED AS AS-BUILT DIMENSIONS ON A SITE PLAN FOR REVIEW BY THE PROJECT CIVIL ENGINEER.
3. ALL SANITARY LINES ARE TO BE FLUSHED PRIOR TO TURNOVER OF THE FACILITY.
4. ALL PROPOSED INLETS TO INCLUDE AN INLET FILTER (FLO-GARD+PLUS).
5. ALL WORK FOR THE WATER SERVICE AND SANITARY SEWER LATERAL PERFORMED IN THE EXISTING UTILITY EASEMENT OR PUBLIC RIGHT-OF-WAY FOR CONNECTION TO THE WATER MAIN AND SANITARY SEWER, ARE UNDER THE JURISDICTION OF THE TOWNSHIP OF BARNEGAT BOARD OF PUBLIC WORKS. CREW ENGINEER'S INC. WILL INSPECT THIS WORK ON BEHALF OF THE BOARD AND WILL REQUIRE 72-HOUR ADVANCE NOTICE FROM THE APPLICANT OR THEIR CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ALL WORK FOR THE WATER SERVICE AND SEWER LATERAL ON THE PROPERTY IS UNDER THE JURISDICTION OF THE TOWNSHIP OF BARNEGAT CONSTRUCTION PLUMBING SUBCODE OFFICIAL, AND THE APPLICANT IS RESPONSIBLE FOR PROVIDING PROPER NOTIFICATION TO THE DEPARTMENT AND TO ENSURE THE REQUIRED PLUMBING PERMIT.
6. BEFORE THE START OF WORK, THE APPLICANT'S CONTRACTOR MUST SUBMIT A CERTIFICATE OF INSURANCE (COI) TO CREW ENGINEERING, COMPLYING WITH THE TOWNSHIP OF BARNEGAT STANDARDS. THE COI MUST BE REVIEWED AND APPROVED BY THE TOWNSHIP'S INSURANCE CONSULTANT BEFORE THE APPLICANT IS PERMITTED TO CONNECT TO THE WATER DISTRIBUTION SYSTEM AND SANITARY SEWER.
7. BEFORE THE START OF WORK, THE APPLICANT OR THEIR CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO OUR OFFICE FOR ALL REVELANT ITEMS AND PRODUCTS THAT WILL BE USED ON THE PROJECT FOR THE WATER AND SANITARY SEWER CONNECTIONS.
8. CONTRACTOR TO COORDINATE WITH BARNEGAT WATER AND SEWER FOR 12" WATERMAIN EXTENSION.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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BERTIN ENGINEERING

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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER

CT LIC. NO. 12950	NJ LIC. NO. 28845
MA LIC. NO. 40595	NY LIC. NO. 60022
NH LIC. NO. 9368	RI LIC. NO. 6694

NOT VALID UNTIL SEALED

STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED · PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:31:32 -04'00'

NO.	DATE	REVISION	
11	4-22-25	REVISE PER GRADING PLAN	J.A.S.
10	12-30-24	REVISE PER GRADING PLAN	C.P
9	12-17-24	REVISE PER GRADING PLAN	C.P
8	7-23-24	ADDED WATER LINE INFORMAATION	VL
7	5-14-24	REVISE DRAINAGE BASIN AND CHAIN LINK FENCE.	AD
6	2-26-24	ADD MACHLINE/ RELOCATE WATER MAIN	CB JR
5	1-11-24	DESIGN NEW WATER MAIN ALONG BARNEGAT BOULEVARD EXTENSION	R.M.C.
4	9-28-23	REVISE STORM SEWER	VL
3	6-21-23	REISSUE	VL
2	4-12-23	ADDED RESTAURANT WATER DEMAND & WATERLINE	VL
1	12-12-22	UPDATED SURVEY & REVISE SANITARY & DRAINAGE CONNECTIONS AROUND NEW BUILDING	VL

DRAWING TITLE

UTILITY & STORMWATER MANAGEMENT PLAN

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY: V.L.	CHECKED BY: C.J.B.
SCALE: 1"=30'	PROJECT NO.: 21-312
DATE: 11-8-22	REVISION NO.: 11

DRAWING NO.

C2.4

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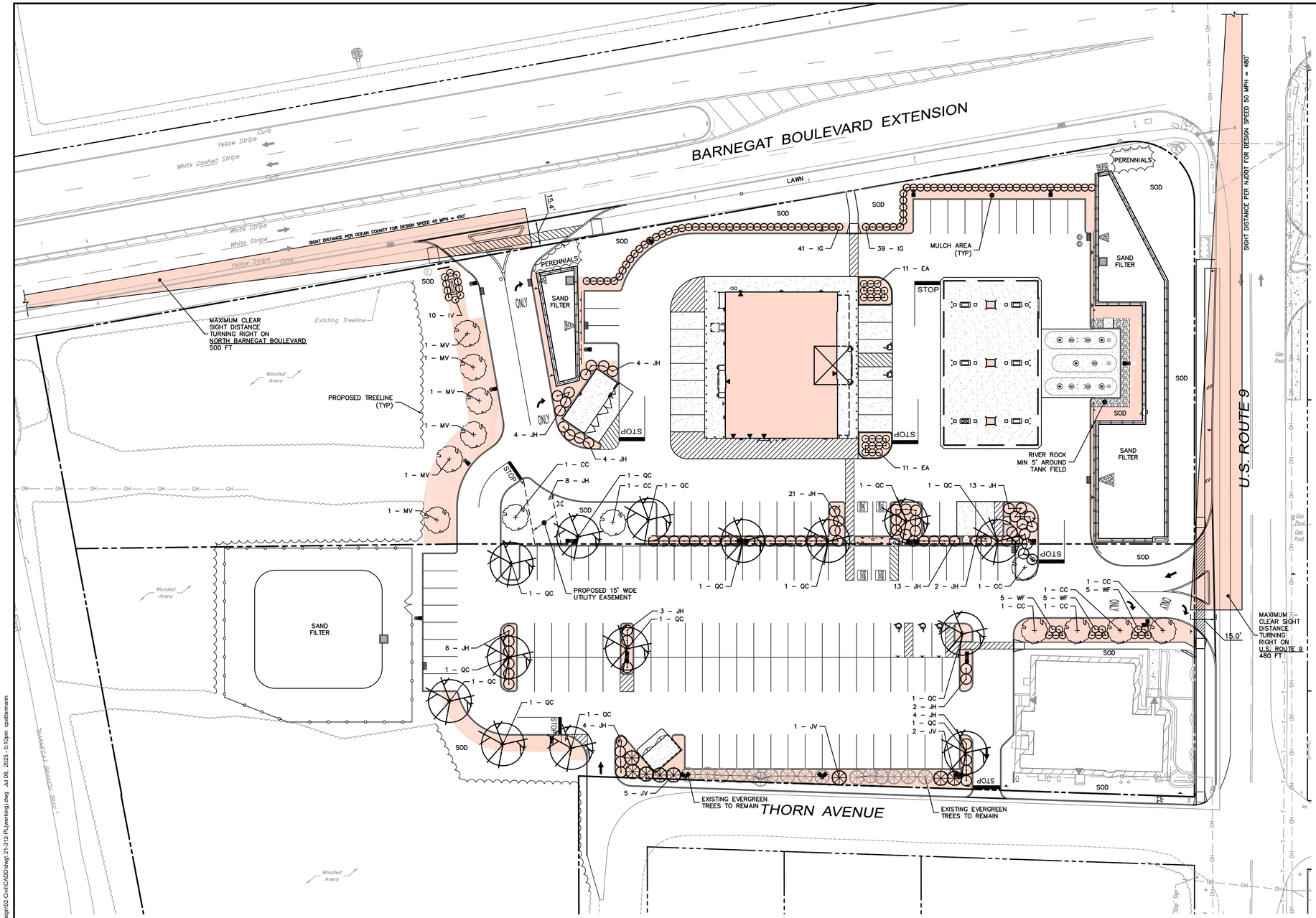


LANDSCAPE NOTES

1. ALL TOPSOIL SHALL BE A MINIMUM 5" ON ALL SOD AREAS AND 8" IN TREE, SHRUB AND GROUNDCOVER BEDS, INCLUDING PARKING LOT ISLAND BEDS. IT SHALL BE APPROVED BY A STORE CONSTRUCTION REPRESENTATIVE, PRIOR TO INSTALLATION.
2. PLANTING BEHIND PERPENDICULAR PARKING IS TO BE LOCATED A MINIMUM 5' BEHIND THE CURB LINE.
3. ALL LANDSCAPE AND GRASS AREAS ARE TO BE HAND RAKED AND LEFT CLEAR OF ALL STONES, ROCK, CONSTRUCTION DEBRIS AND ANY UNSUITABLE MATERIALS.
4. ALL LANDSCAPE AND GRASS AREAS ARE TO BE IRRIGATED BY AUTOMATIC SPRINKLER SYSTEM. (SEE IRRIGATION SPECIFICATION).
5. LANDSCAPE CONTRACTOR WILL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION AND PLANTING INSTALLATION.
6. ALL AREAS TO BE LANDSCAPED OR COVERED WITH STONE MUST BE TREATED WITH A PRE-EMERGENCE HERBICIDE (SURFLAN, DACTAL OR APPROVED EQUAL) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE REGULATIONS AND THE MANUFACTURER'S INSTRUCTIONS.
7. ALL LANDSCAPE BEDS ARE TO BE DELINEATED WITH 5 1/2" ALUMINUM LANDSCAPE EDGING, STAKED AT 3' INTERVALS. ALUMINUM EDGING IS TO BE CLEANLINE 3/16" X 5 1/2" x 16' BY PERMALOC. (800-356-9660, //WWW.PERMALOC.COM) FOLLOW MANUFACTURER'S INSTALLATION DIRECTIONS INCLUDED AT THE END OF THIS SECTION.
8. LANDSCAPE CONTRACTOR TO SUPPLY AND INSTALL A PERVIOUS WEED BARRIER (DEWITT, DUPONT OR APPROVED EQUAL) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WITHIN ALL LANDSCAPES, INCLUDING STONE AND MULCH BEDS. ALL WEED BARRIER WILL BE OVERLAPPED A MINIMUM OF 6" AT ALL SEAMS. AT PLAN LOCATIONS, BARRIER SHOULD BE CUT IN A "X" PATTERN SO TO ACCOMMODATE ROOT BALL AND REPLACED AFTER PLANT HAS BEEN INSTALLED.
9. WEED BARRIER SHALL NOT BE VISIBLE IN AREAS DESIGNATED FOR STONE MULCH. WHEN STONE IS CALLED FOR ADJACENT TO CURB OR SIDEWALKS, IT SHALL BE FEATHERED DOWN TO CURB LEVEL FROM A DISTANCE 24" FROM THE CURB.
10. ALL PROPOSED LANDSCAPING TO BE NURSERY GROWN, TYPICAL OF THEIR SPECIES OR VARIETY. THEY ARE TO HAVE NORMAL VIGOROUS ROOT SYSTEMS, FREE FROM DEFECTS AND INFECTIONS AND IN ACCORDANCE WITH ANSI Z60.1.
11. ALL PROPOSED PLANTINGS SHOULD BE INSTALLED PER STANDARDS OF THE "AMERICAN ASSOCIATION OF NURSERYMEN" AND STATE NURSERY/LANDSCAPE ASSOCIATIONS WITH REGARD TO PLANTING, PIT SIZE, BACKFILL MIXTURE, STAKING AND GUYING.
12. ALL PLANTING CONTAINERS AND BASKETS SHALL BE REMOVED DURING PLANTING. ALL PLANTS SHALL BE SET PLUMB AND POSITIONED SO THAT THE TOP OF THE ROOT COLLAR MATCHES, OR IS NO MORE THAN TWO (2") INCHES ABOVE, FINISHED GRADE. REPLACE AMENDED BACKFILL IN 6-INCH LAYERS AND COMPACT BACKFILL TO ELIMINATE VOIDS. CONTRACTOR SHALL PROVIDE A FOUR-INCH HIGH EARTHEN WATERING SAUCER ALONG THE PERIMETER OF EACH PLANTING PIT. CONTRACTO SHALL WATER NEWLY PLANTED VEGETATION PRIOR TO MULCHING PLANTING PIT. ALL VOIDS SHALL BE FILLED AND SETTLING MITIGATED AS REQUIRED. ALUMINUM EDGING SHALL BE INSTALLED AROUND ALL PLANTING AREAS TO DELINEATE BETWEEN DIFFERENT LANDSCAPE MATERIALS.
13. AFTER INTITIAL WATERING AND PRIOR TO MULCHING, CONTRACTOR SHALL ALPPLY HERBICIDES AND PRE-EMERGENT HERBICIDES AS REQUIRED TO ELIMINATE ANY WEED SEEDS OR PLANTS PRESENT ON ROOT BALL.
14. ALL PLANTING BEDS AND PITS EXCEPT FOR LANDSCAPE ISLANDS ADJACENT TO THE BUILDING AND DESIGNATED AREA AT THE FUEL VENT STACKS, SHALL BE MULCHED WITH DOUBLE GROUND HARDWOOD MULCH AT A MINIMUM DEPTH OF 3". LANDSCAPE ISLANDS ADJACENT TO DESIGNATED AREA AT FUEL STACKS SHALL BE MULCHED WITH 1"-3" "RIVER STONE" MULCH. FOR LANDSCAPES ADJACENT TO BUILDING, CONTACT PROJECT ENGINEER.
15. PLANT MATERIAL SHALL BE QUARANTEED FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETENESS. THE CONTRACTOR SHALL REPLACE PLANTS, DEAD, UNHEALTY, DYING OR DAMAGED THROUGH LOSS OF BRANCHES AND/OR FOLIAGE. LAWNS THAT AREA NOT IN GOOD CONDITION AT THE END OF THE GUARANTEE PERIOD SHALL BE REPAIRED UNTIL A GOOD LAWN RESULTS. IT IS UNDERSTOOD THAT THE OWNER SHALL ASSUME RESPONSIBILITY FOR WATERING ALL PLANT MATERIAL AND LAWN AREAS BEGINNING WITH THE DATE OF SUBSTANTIAL COMPLETENESS.

LANDSCAPE MAINTENANCE NOTES

1. PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL LANDSCAPING.
2. TREES AND SHRUBS: MAINTAIN FOR THE FOLLOWING MAINTENANCE PERIOD BY PRUNING, CULTIVATING, WATERING, WEEDING, FERTILIZING, RESTORING PLANTING SAUCERS, TIGHTENING AND REPAIRING STAKES AND GUY SUPPORTS, AND RESETTING TO PROPER GRADES OR VERTICAL POSITION, AS REQUIRED TO ESTABLISH HEALTHY, VIABLE PLANTINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. RESTORE OR REPLACE DAMAGED TREE WRAPPINGS.

   GROUND COVER AND PLANTS: MAINTAIN FOR THE FOLLOWING MAINTENANCE PERIOD BY WATERING, WEEDING, FERTILIZING, AND OTHER OPERATIONS AS REQUIRED TO ESTABLISH HEALTHY, VIABLE PLANTINGS.

   THOSE PERFORMING SUCH WORK BE PROFESSIONALS CERTIFIED IN SUCH WORK. (ISA CERTIFIED, CERTIFIED TREE EXPERT CERTIFICATION AND/OR SHOW PROOF OF NOT LESS THAN 5 YEARS EXPERIENCE IN SUCH HORTICULTURAL WORK HAS BEEN OBTAINED).
3. MAINTENANCE PERIOD: 24 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE BOROUGH'S LANDSCAPE ARCHITECTAND/OR BOROUGH OFFICIAL HAVING JURISDICTION.
4. NORMAL MAINTENAANCE AND CARE OF ALL PLANT MATERIAL, (WATERING, ETC.) SHALL TAKE PLACE PRIOR TO THE DETERMINATION OF SUBSTANTIAL COMPLETION AS WELL IN ORDER TO PLANTED MATERIAL HEALTHY.

SIGHT TRIANGLE CHART

POSTED SPEED LIMIT = 45 M.P.H.
DESIGN SPEED LIMIT = 50 M.P.H.

LANDSCAPE KEY

- DECIDUOUS SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS

PLANT LIST

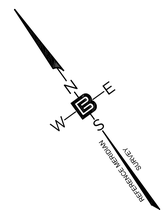
KEY	QTY.	BOTANICAL NAME	COMMON NAME	PLANTING SIZE HEIGHT	ROOT	MATURE SIZE HEIGHT	MATURE SIZE SPREAD	SPACING
DECIDUOUS SHADE TREES								
QC	14	QUERCUS COCCINEA	SCARLET OAK	8' – 10' 2 1/2" CAL (MIN.)	B&B	50'-70'	40'-50'	AS SHOWN (40' O.C. MIN.)
DECIDUOUS ORNAMENTAL TREES								
CC	7	CERCIS CANADENSIS	EASTERN REDBUD	4' – 6' 1" CAL. (MIN.)	B&B	20'-30'	25'-35'	AS SHOWN
MV	6	MAGNOLIA VIRGINIANA	SWEETBAY	4' – 6' 1" CAL. (MIN.)	B&B	10'-35'	10'-35'	20' O.C.
EVERGREEN TREES								
JV	6	JUNIPERUS VIRIGINIANA	EASTERN RED CEDAR	6' – 8'	B&B	30'-65'	10'-25'	8' O.C.
EVERGREEN SHRUBS								
IG	80	ILEX GLABRA	INKBERRY	18" – 24"	2 GAL.	5'-8'	5'-8'	4' O.C.
JH	82	JUNIPERUS HORIZONTALIS "BAR HARBOR"	BAR HARBOR JUNIPER	3" – 6"	3 GAL.	8'-12'	6'-8'	6' O.C.
DECIDUOUS SHRUBS								
EA	22	EUONYMOUS ALATUS "COMPACTUS"	DWARF BURNING BUSH	18" – 24"	2 GAL.	4'-'6	4'-'6	4' O.C.
WF	15	WEIGELA FLORIDA "BOKRASPIWI"	SPILLED WINE WEIGELA	18" – 24"	2 GAL.	2'-3'	3'-4'	4' O.C.

NOTE: DWARF BURNING BUSH (EA) TO BE KEPT PRUNED TO A HEIGHT OF 36"-40"

IRRIGATION NOTES

IRRIGATION SYSTEM TO BE DESIGN ED BY RAIN BIRD

1. ALL IRRIGATION SUPPLY, LATERAL WATER LINES AND SPRINKLER HEADS ARE TO BE LOCATED A MINIMUM OF 3' BEHIND CURB LINE.
2. ALL ZONES ARE TO BE DESIGNED NOT TO EXCEED 20 GPM DEMAND.
3. MINIMUM BURIAL DEPTH FOR ALL SUPPLY AND LATERALS ARE 18"
4. ALL LANDSCAPE AREAS ADJACENT TO BUILDING AND PARKING AREAS AROUND BUILDINGS ARE TO BE IRRIGATED BY DRIP SYSTEMS.
5. LAWN AREAS OUTSIDE OF PERIMETER SIDEWALKS ARE TO BE DESIGNED AND CONTROLLER PROGRAMMED TO IRRIGATE AT OFF-PEAK HOURS.
6. SPRINKLER HEADS ARE TO BE THE FOLLOWING; RAIN BIRD 5000 SERIES, RAIN BIRD 1804 AND RAIN BIRD 1812.
7. DRIP SYSTEMS ARE TO BE NETAFIN DRIPLINE, 18"x18" SPACING WITH 9GPH EMITTERS.
8. IRRIGATION CONTROLLER IS TO BE RAIN BIRD, ESP-16LX, AUTOMATIC CONTROLLER, LOCATED IN THE MECHANICAL ROOM OF THE BUILDING.
9. NO SUBSTITUTIONS OR DEVIATION FROM IRRIGATION PLAN WILL BE ALLOWED.
10. IRRIGATION SYSTEMS ARE TO BE WARRANTED BY INSTALLING CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF CERTIFICATE OF OCCUPANCY. IRRIGATION CONTRACTOR IS TO PROVIDE ALL MAINTENANCE, ADJUSTMENTS, PROGRAMMING AND WINTERIZATION DURING THE FIRST YEAR WARRANTY.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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NH LIC. NO. 9368 RI LIC. NO. 6694

STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:32:10 -04'00'

NO.	DATE	REVISION	DRWN	CHKD
8	6-11-25	ADD LANDSCAPE ISLANDS AT FRONT OF WAWA BUILDING	J.A.S.	AD
7	4-22-25	REVISE LANDSCAPING PER NEW SITE LAYOUT	J.A.S.	M.K.
6	5-14-24	REVISE DRAINAGE BASIN AND CHAIN LINK FENCE.	AD	V.L.
5	1-31-24	REVISE LANDSCAPING NOTES, ADD PERENNIALS.	M.K.	V.L.
4	9-28-23	RE-ISSUE	V.L.	V.L.
3	8-21-23	REVISED SITE TRIANGLE & ADDED TABLE	V.L.	V.L.
2	4-12-23	REVISED PER SITE PLAN	V.L.	V.L.
1	10-12-22	UPDATED PER NEW SURVEY & ADDED MULCH	V.L.	V.L.

DRAWING TITLE
LANDSCAPE & SIGHT TRIANGLE PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
11-8-22	8

DRAWING NO.
C2.5

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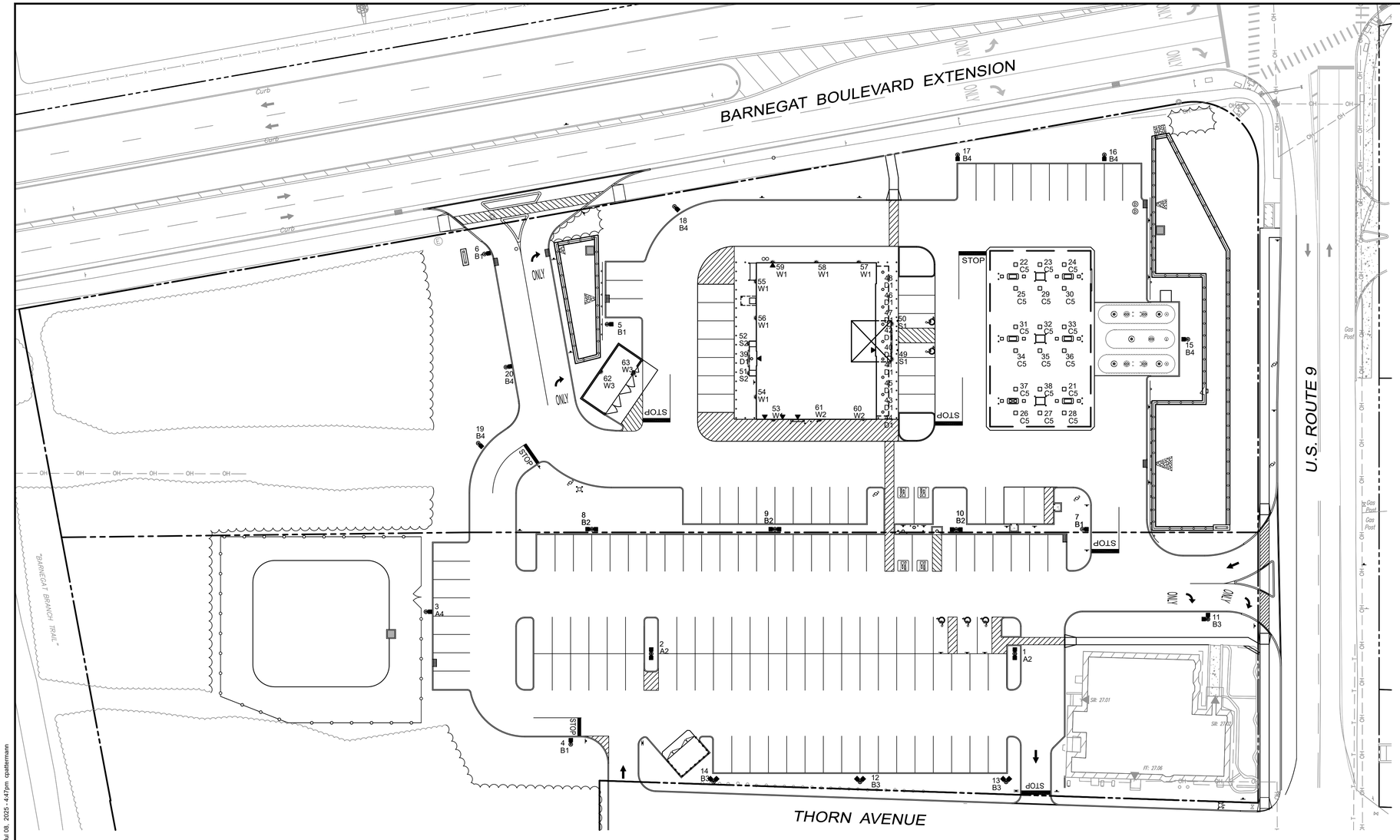

LUMINAIRE LOCATION SUMMARY		
LUM NO.	LABEL	MTG. HT.
1	A2	20.5
2	A2	20.5
3	A4	20.5
4	B1	20.5
5	B1	20.5
6	B1	20.5
7	B1	20.5
8	B2	20.5
9	B2	20.5
10	B2	20.5
11	B3	20.5
12	B3	20.5
13	B3	20.5
14	B3	20.5
15	B4	20.5
16	B4	20.5
17	B4	20.5
18	B4	20.5
19	B4	20.5
20	B4	20.5
21	C5	17.11
22	C5	21.53
23	C5	19.32
24	C5	17.11
25	C5	21.53
26	C5	21.53
27	C5	19.32
28	C5	17.11
29	C5	19.32
30	C5	17.11
31	C5	21.53
32	C5	19.32
33	C5	17.11
34	C5	21.53
35	C5	19.32
36	C5	17.11
37	C5	21.53
38	C5	19.32
39	D1	9
40	D1	9
41	D1	9
42	D1	9
43	D1	9
44	D1	9
45	D1	9
46	D1	9
47	D1	9
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49	S1	9
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51	S2	8.5
52	S2	8.5
53	W1	15
54	W1	15
55	W1	15
56	W1	15
57	W1	15
58	W1	15
59	W1	15
60	W2	15
61	W2	15
62	W3	8
63	W3	8

LIGHTING NOTES

1. LIGHTING DESIGN PREPARED BY RED LEONARD ASSOCIATES, INC., 1340 KEMPER MEADOW DRIVE, FOREST PARK, OH 45240.
2. ALL AREA LIGHTS ON 20 FOOT POLES MOUNTED ON 6" CONCRETE BASES
3. ALL CONCRETE BASES TO BE LOCATED 5 FEET BEHIND CURB FACE
4. FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	DIMMING FACTOR	BUG RATING	WATTS/LUMINAIRE	TOTAL WATTS	MANUFACTURER	CATALOG LOGIC
	2	A2	Back-Back	17468	1.030	0.730	B3-U0-G4	90.42	361.68	Lithonia Lighting	DSX0LED-P6-50K-70CRI-T3M-MVOLT-FAO-XX (SW. POS. 5)
	1	A4	SINGLE	15141	1.030	0.730	B2-U0-G3	90.42	90.42	Lithonia Lighting	DSX0LED-P6-50K-70CRI-T3M-MVOLT-FAO-HS-XX (SW. POS. 5)
	4	B1	SINGLE	17728	1.030	0.730	B3-U0-G5	90.42	361.68	Lithonia Lighting	DSX0LED-P6-50K-70CRI-T4M-MVOLT-FAO-XX (SW. POS. 5)
	3	B2	Back-Back	17728	1.030	0.730	B3-U0-G5	90.42	542.52	Lithonia Lighting	DSX0LED-P6-50K-70CRI-T4M-MVOLT-FAO-XX (SW. POS. 5)
	4	B3	2 @ 90 degrees	17728	1.030	0.730	B3-U0-G5	90.42	723.36	Lithonia Lighting	DSX0LED-P6-50K-70CRI-T4M-MVOLT-FAO-XX (SW. POS. 5)
	6	B4	SINGLE	15251	1.030	0.730	B2-U0-G3	90.42	542.52	Lithonia Lighting	DSX0LED-P6-50K-70CRI-T4M-MVOLT-FAO-HS-XX (SW. POS. 5)
	18	C5	Single	15758	1.030	1.000	B3-U0-G1	89.4982	1610.968	Lithonia Lighting	RCNYLED-ALO2-50K-80CRI-SYMC-MVOLT-BZS-XX (SW. POS. 5)
	10	D1	Single	1939	1.000	1.000	B2-U0-G0	19.7	197	Gotham Architectural Lighting	EV06 35/20 AR LSS WD MVOLT GZ10
	2	S1	SINGLE	2659	1.000	1.000	B0-U5-G2	20	40	FC/SSL Lighting	FCWS7170-XXX-35K-2500-CRI85-XX-D
	2	S2	SINGLE	2542	1.000	1.000	B0-U4-G2	20	40	FC/SSL Lighting	FCWS7168-XXX-35K-2500-CRI85-XX-D
	7	W1	Single	3604	1.010	1.000	B1-U0-G1	28.68	200.76	Lithonia Lighting	DSXW1 LED- P4-50K-70CRI-T4M-MVOLT-XXX-HS
	2	W2	Single	8745	1.010	1.000	B1-U0-G2	70.9	141.8	Lithonia Lighting	DSXW2 LED-P6-50K-70CRI-T4M-MVOLT-XXX-HS
	2	W3	Single	1994	1.010	1.000	B0-U0-G1	14.58	29.16	Lithonia Lighting	DSXW1 LED- P2-50K-70CRI-T3M-MVOLT-XXX-HS

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

red leonard ASSOCIATES
1340 KEMPER MEADOW DRIVE
FOREST PARK, OH 45240
Ph: 513-574-9500

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MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

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STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:32:43 -04'00'

NO.	DATE	REVISION	
6	4-22-25	REVISE LIGHTING PER NEW SITE LAYOUT	J.A.S.
5	5-14-24	REVISE DRAINAGE BASIN AND CHAIN LINK FENCE.	AD
4	9-28-23	RE-ISSUE	V.L.
3	6-21-23	RE-ISSUE	V.L.
2	4-12-23	REVISED PER SITE PLAN	V.L.
1	12-12-22	UPDATED SURVEY	V.L.

DRAWING TITLE
LIGHTING PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
11-8-22	6

DRAWING NO.
C2.6

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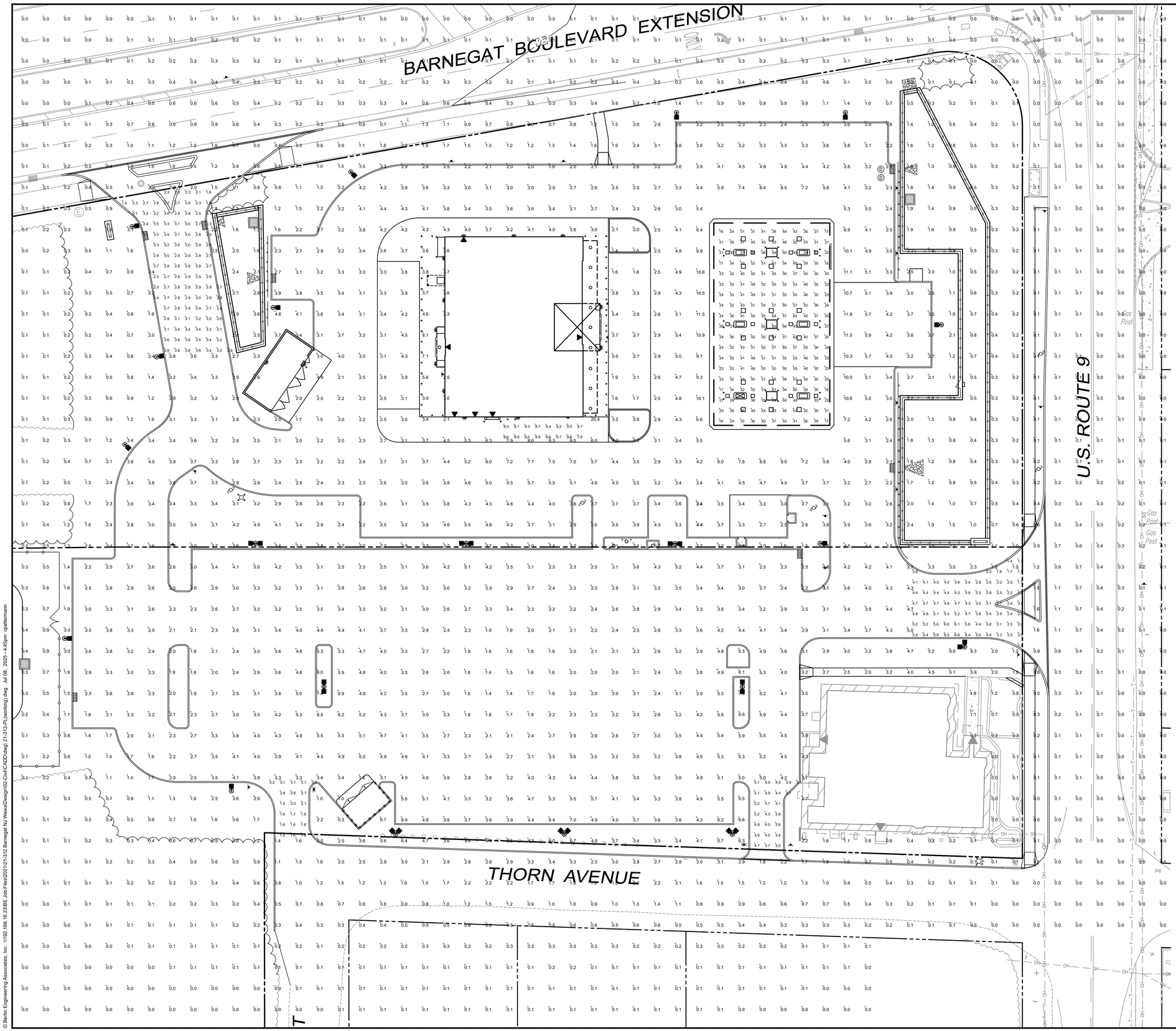

CALCULATION SUMMARY					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
CANOPY	40.77	66	16	2.55	4.13
DELIVERY	8.71	9.5	7.8	1.12	1.22
ENTRANCES & EXITS	3.28	6.8	1.3	2.52	5.23
PAVED, OTHER	3.35	7.0	1.4	2.39	5.00
PAVED, WAWA	3.92	11.8	1.5	2.61	7.87
UNDEFINED	0.69	20.4	0.0	N.A.	N.A.

LIGHTING NOTES

1. LIGHTING DESIGN PREPARED BY RED LEONARD ASSOCIATES, INC., 1340 KEMPER MEADOW DRIVE, FOREST PARK, OH 45240.
2. ALL AREA LIGHTS ON 20 FOOT POLES MOUNTED ON 6" CONCRETE BASES
3. ALL CONCRETE BASES TO BE LOCATED 5 FEET BEHIND CURB FACE
4. FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

red leonard ASSOCIATES
1340 KEMPER MEADOW DRIVE
FOREST PARK, OH 45240
Ph: 513-574-9500

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NH LIC. NO. 9368 RI LIC. NO. 6694

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Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:33:20 -04'00'

NO.	DATE	REVISION	
6	4-22-25	REVISE PER NEW SITE LAYOUT	J.A.S.
5	1-31-24	ADD GRAPHIC SCALE	V.L.
4	9-28-23	RE-ISSUE	V.L.
3	6-21-23	RE-ISSUE	V.L.
2	4-12-23	REVISED PER SITE PLAN	V.L.
1	12-12-22	REVISED PER SITE PLAN	V.L.

DRAWING TITLE
LIGHTING INTENSITIES PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=20'	21-312
DATE	REVISION NO.
11-8-22	6

DRAWING NO.
C2.7

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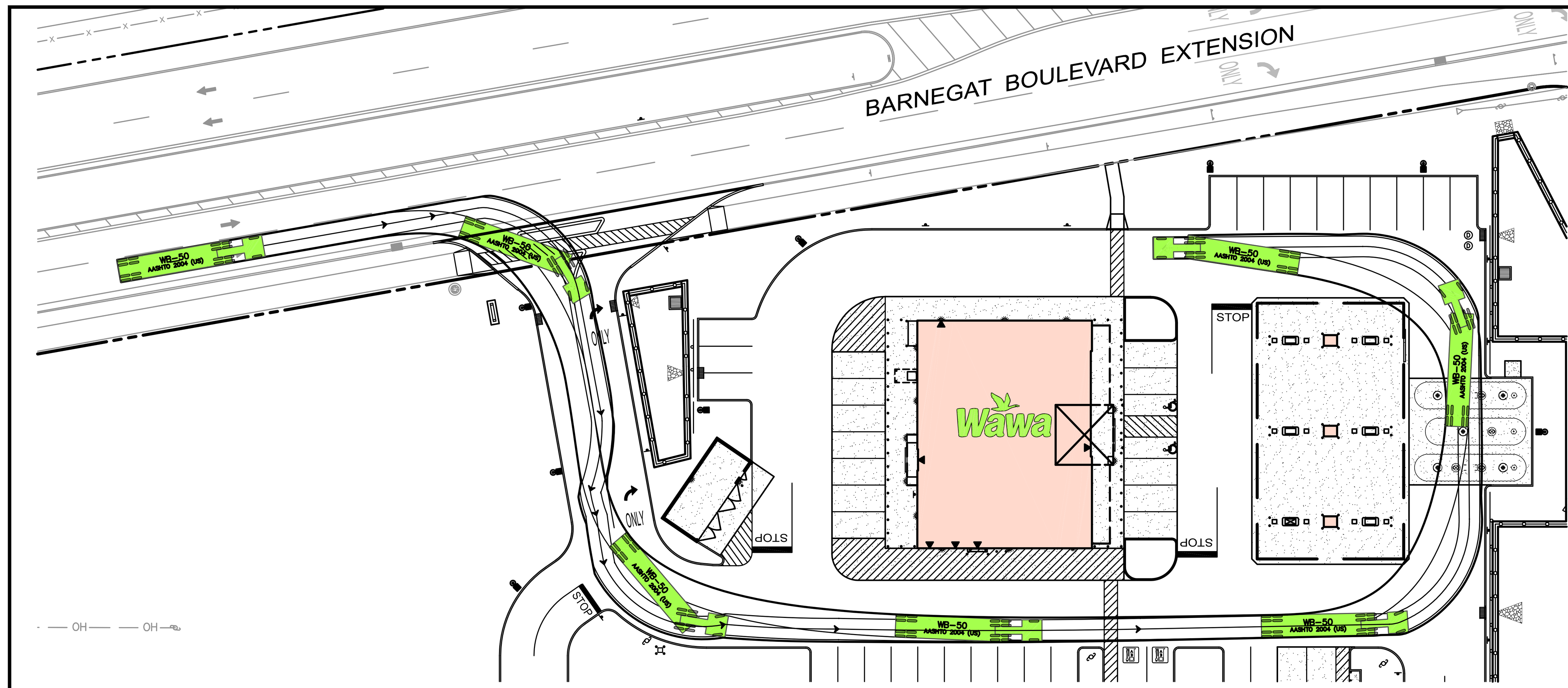
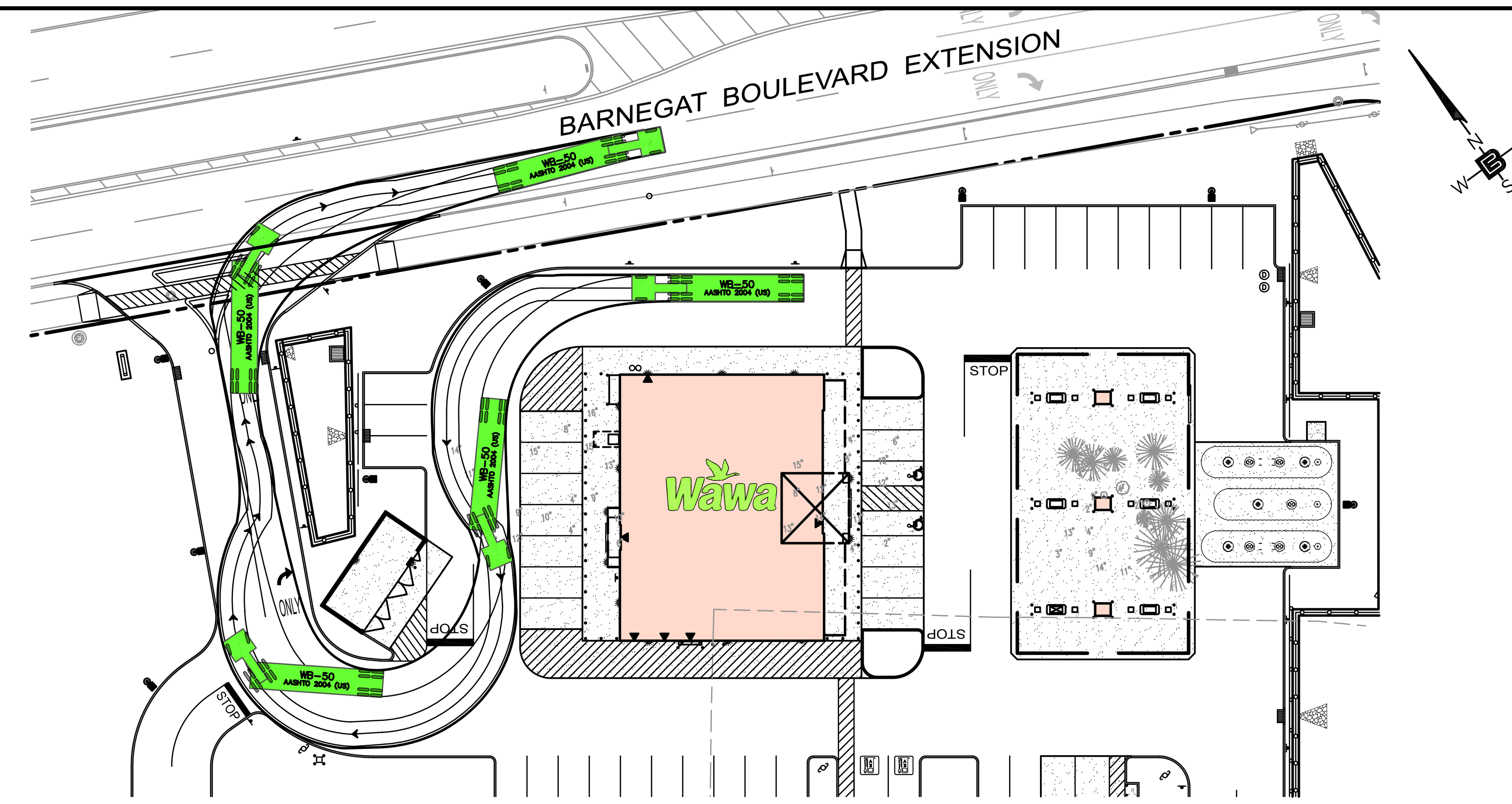


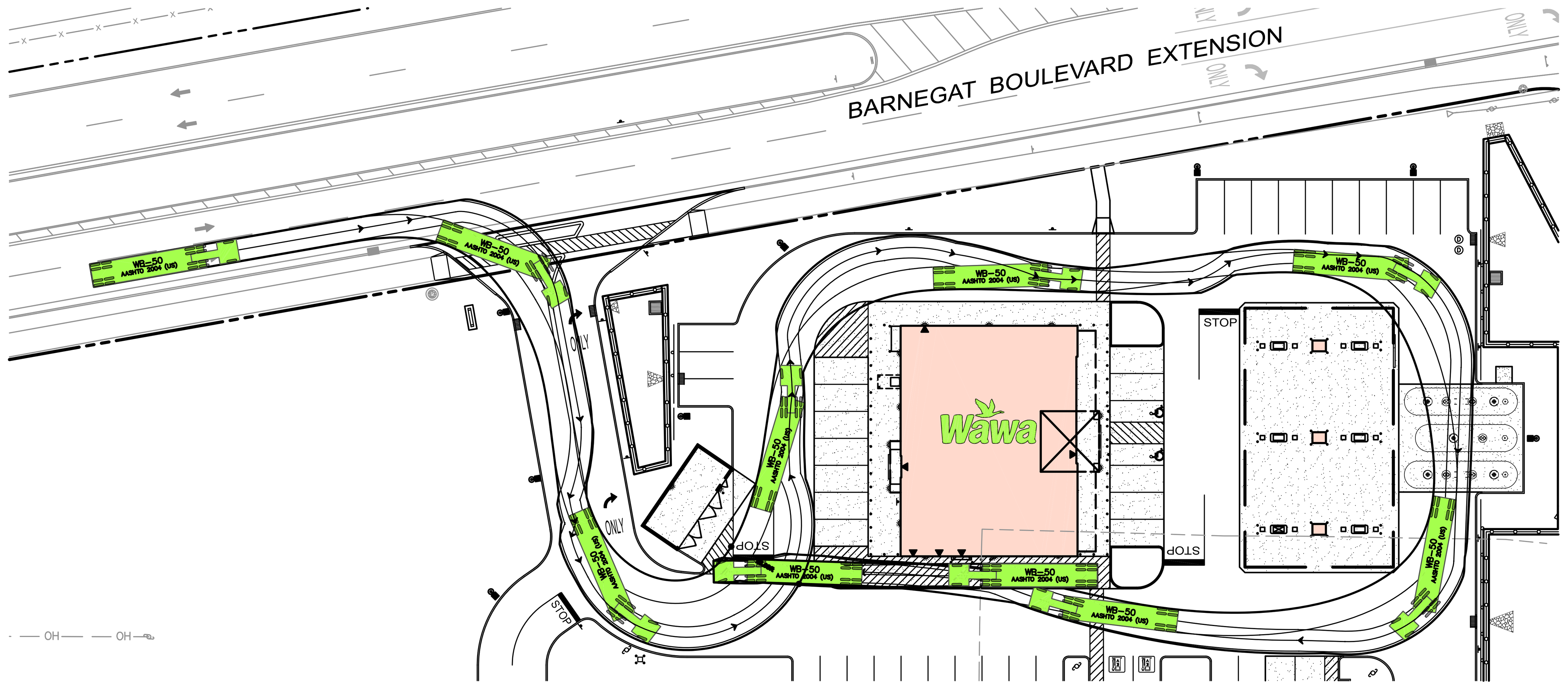
WB-50 FUEL DELIVERY TRUCK CIRCULATION PATH – ENTERING FROM BARNEGAT BOULEVARD EXTENSION (ALTERNATE)

SCALE: 1" = 40'



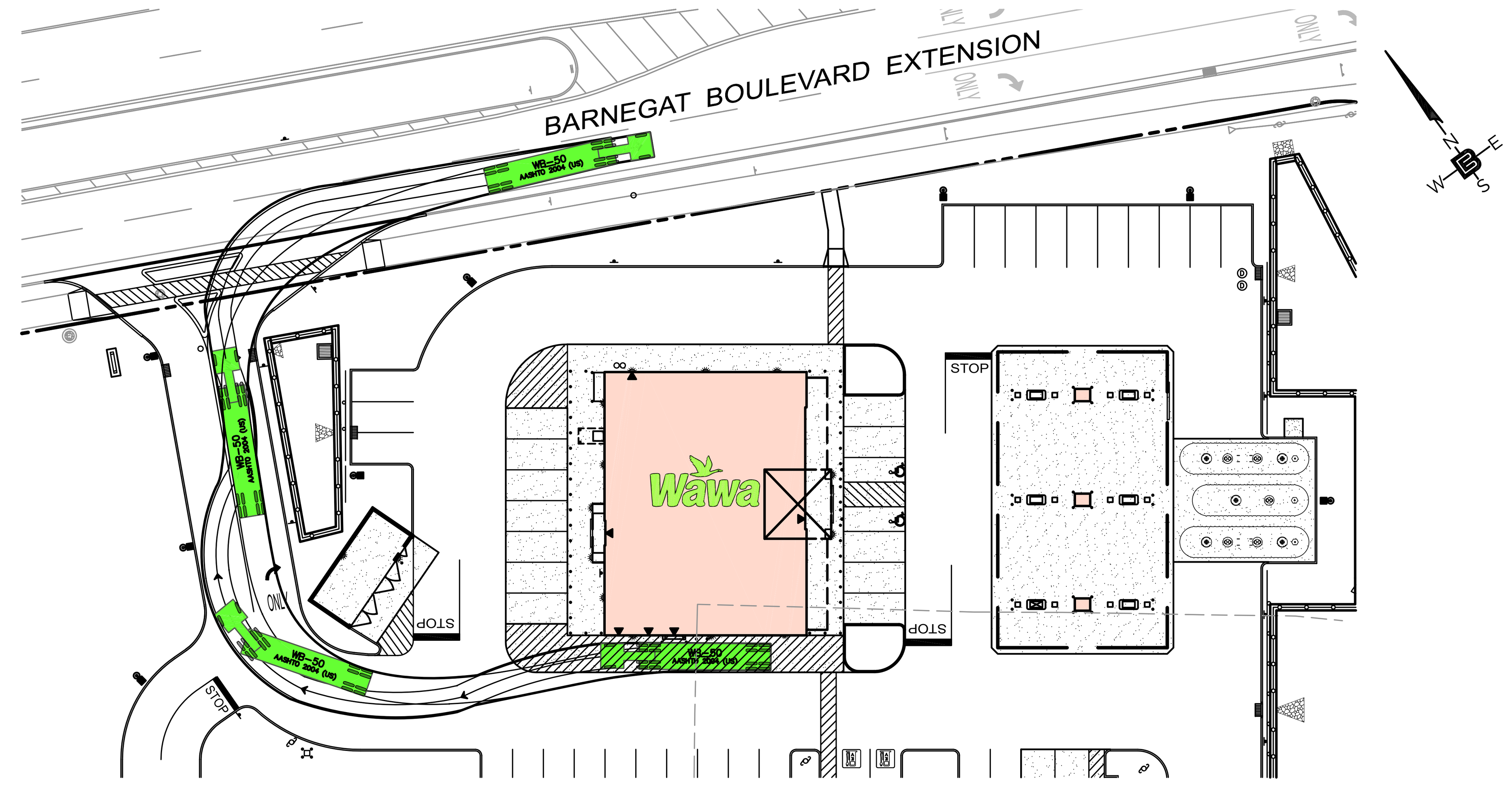
WB-50 FUEL DELIVERY TRUCK CIRCULATION PATH –EXITING ONTO BARNEGAT BOULEVARD EXTENSION (ALTERNATE)

SCALE: 1" = 40'



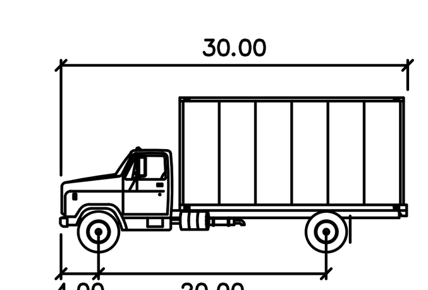
WB-50 STORE DELIVERY TRUCK CIRCULATION PATH – ENTERING FROM BARNEGAT BOULEVARD EXTENSION (ALTERNATE)

SCALE: 1" = 40'



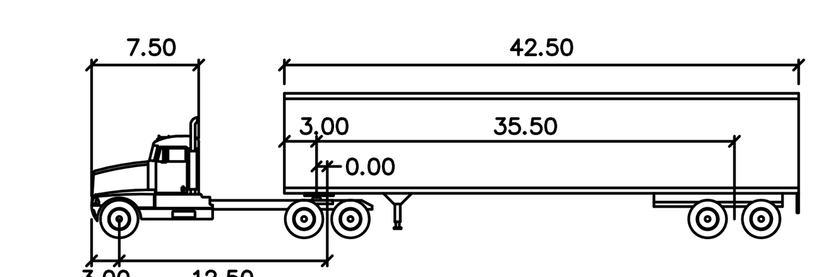
WB-50 STORE DELIVERY TRUCK CIRCULATION PATH – EXITING ONTO BARNEGAT BOULEVARD EXTENSION (ALTERNATE)

SCALE: 1" = 40'



SU-30

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



WB-50

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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MA LIC. NO.	40595	NY LIC. NO.	60022
NH LIC. NO.	9368	RI LIC. NO.	6694

STATE OF NEW JERSEY
SHAN-PEI FANCHIANG
No. GE37073
★LICENSED★
PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:33:58 -04'00'

NO.	DATE	REVISION	
7	XX-XX-XX	REVISED WB-50 STORE DELIVERY TRUCK CIRCULATION PATH ENTERING LOADING ZONE	J.A.S.
6	4-22-25	REMOVED FUEL DELIVERY TRUCK PATH FROM THORN AVE; REVISE & MOVED SU-30 DELIVERY TRUCK PATHS TO SHT C2.8b	J.A.S.
5	12-11-23	REVISE TRUCK PATH.	J.A.S.
4	9-28-23	RE-ISSUE	VL
3	7-11-23	REMOVE WB-50 CIRCULATION PATH RIGHT TURN FROM RTE 9 PER DOT	J.A.S.
2	6-21-23	REVISED TRACTOR-TRAILER CIRCULATION PATHS	J.A.S.
1	4-12-23	REVISED PER SITE PLAN	VL

DRAWING TITLE

VEHICLE CIRCULATION PLAN - 1

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY: J.A.S.	CHECKED BY: C.J.B.
SCALE: 1"=40'	PROJECT NO.: 21-312
DATE: 12-12-22	REVISION NO.: 7

DRAWING NO.

C2.8A

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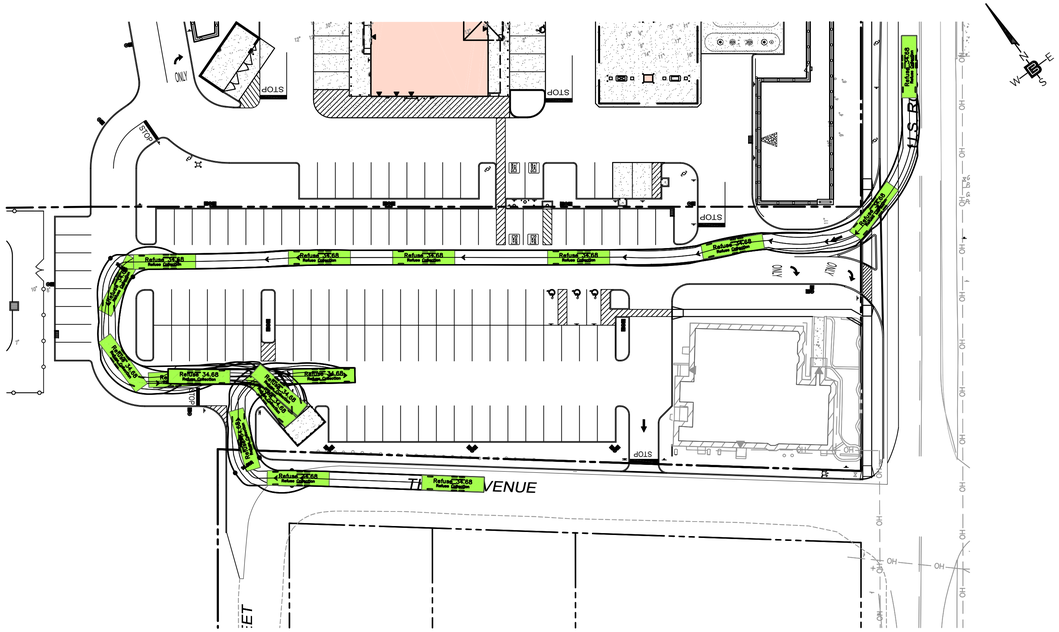
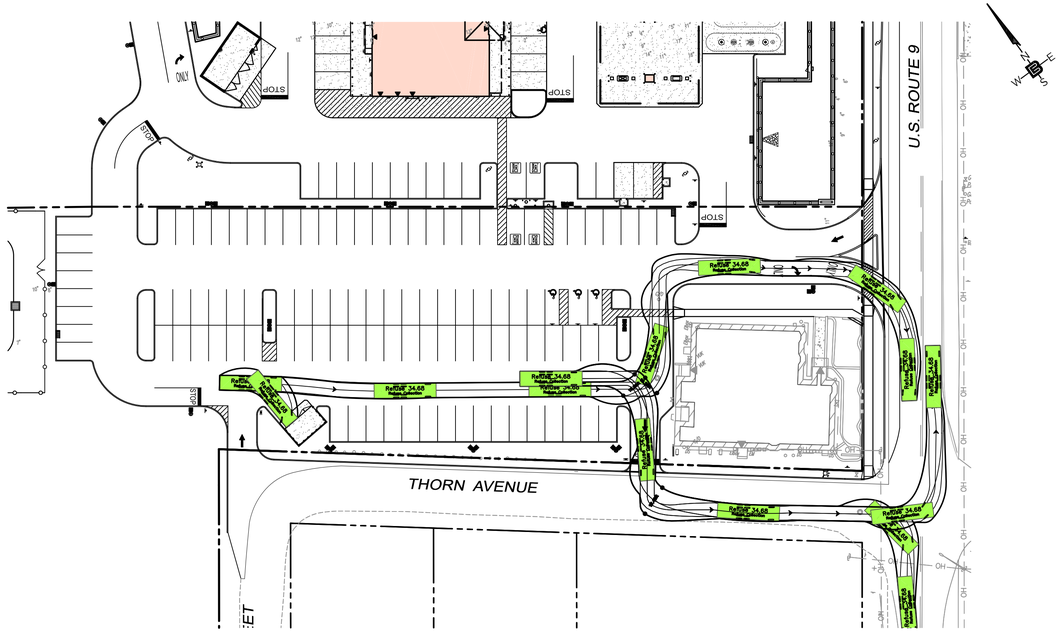


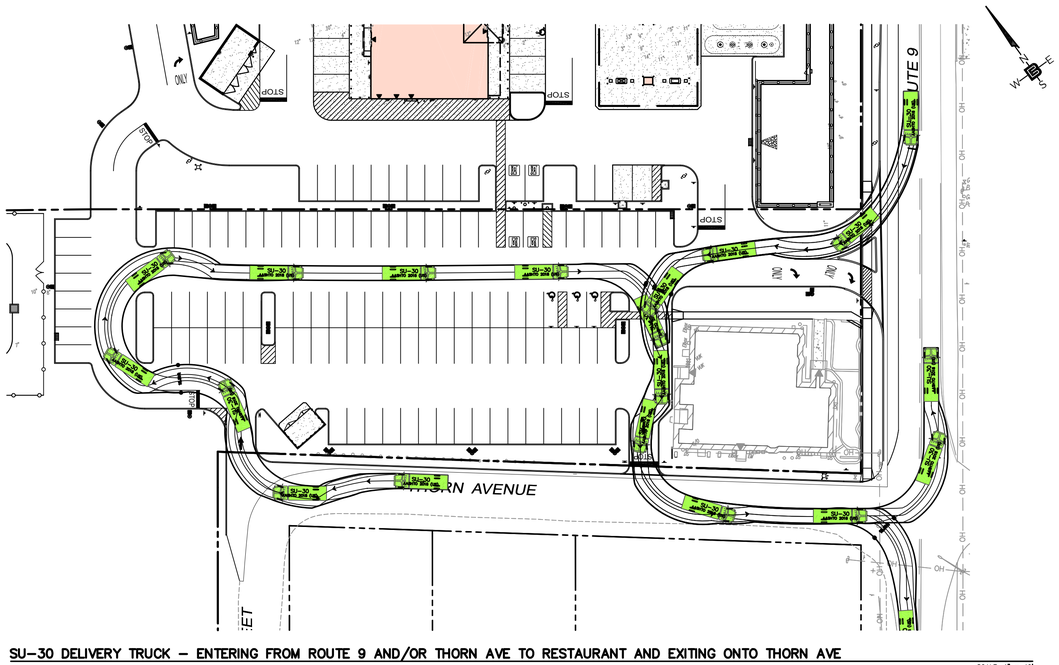
GARBAGE TRUCK CIRCULATION PATH TO RESTAURANT DUMPSTERS – ENTERING FROM ROUTE 9 AND/OR THORN AVE

SCALE: 1" = 40'



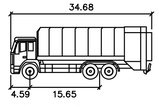
GARBAGE TRUCK CIRCULATION PATH FROM RESTAURANT DUMPSTERS – EXITING ONTO ROUTE 9 AND/OR THORN AVE

SCALE: 1" = 40'



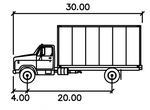
SU–30 DELIVERY TRUCK – ENTERING FROM ROUTE 9 AND/OR THORN AVE TO RESTAURANT AND EXITING ONTO THORN AVE

SCALE: 1" = 40'



Garbage Truck

	feet
Width	: 8.20
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 41.8



SU–30

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 ft.

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MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

THIS SHEET LISTS, REVISED

STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:34:37 -04'00'

NO.	DATE	REVISION

DRAWING TITLE
VEHICLE CIRCULATION PLAN - 2

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
J.A.S.	C.J.B.
SCALE	PROJECT NO.
1"=40'	21-312
DATE	REVISION NO.
4-22-25	0

DRAWING NO.
C2.8B

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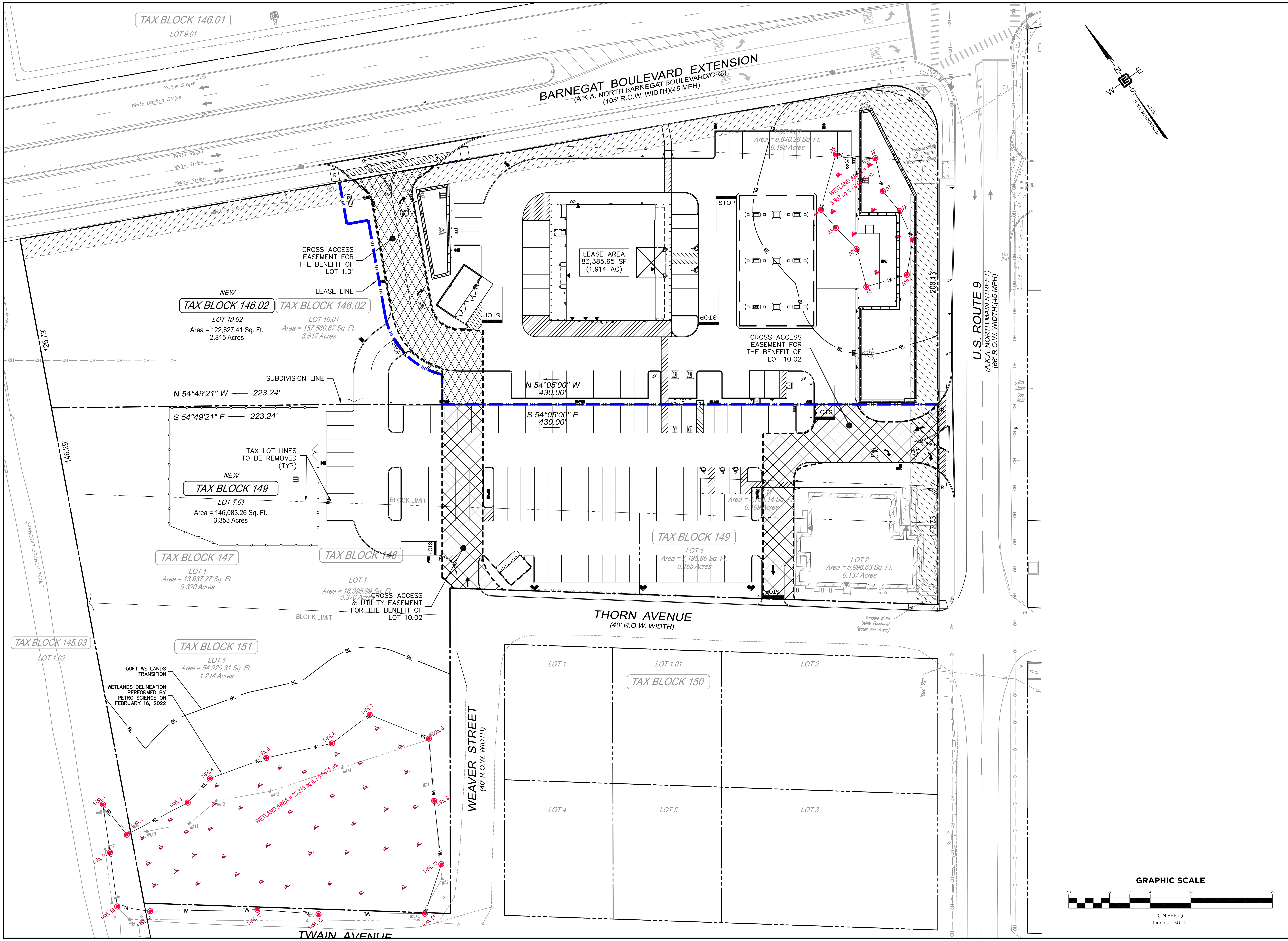
TAX BLOCK 146.01
LOT 9.01
BARNEGAT BOULEVARD EXTENSION
(A.K.A. NORTH BARNEGAT BOULEVARD/CR8)
(105' R.O.W. WIDTH)(45 MPH)
Yellow Stripe
White Dashed Stripe
White Stripe
Curb
CROSS ACCESS EASEMENT FOR THE BENEFIT OF LOT 1.01
LEASE LINE
NEW
TAX BLOCK 146.02
LOT 10.02
Area = 122,627.41 Sq. Ft.
2.815 Acres
TAX BLOCK 146.02
LOT 10.01
Area = 157,560.87 Sq. Ft.
3.617 Acres
LEASE AREA
83,385.65 SF
(1.914 AC)
LOT 9.02
Area = 8,640.26 Sq. Ft.
0.198 Acres
WETLAND AREA = 3,907 sq.ft./0.0897 ac.
STOP
CROSS ACCESS EASEMENT FOR THE BENEFIT OF LOT 10.02
SUBDIVISION LINE
N 54°49'21" W 223.24'
S 54°49'21" E 223.24'
N 54°05'00" W 430.00'
S 54°05'00" E 430.00'
TAX LOT LINES TO BE REMOVED (TYP)
NEW
TAX BLOCK 149
LOT 1.01
Area = 146,083.26 Sq. Ft.
3.353 Acres
126.73'
146.29'
200.13'
147.73'
BLOCK LIMIT
TAX BLOCK 149
LOT 1
Area = 7,195.86 Sq. Ft.
0.165 Acres
Area = 4,... Sq. Ft.
0.109 Acres
LOT 2
Area = 5,996.63 Sq. Ft.
0.137 Acres
U.S. ROUTE 9
(A.K.A. NORTH MAIN STREET)
(66' R.O.W. WIDTH)(45 MPH)
TAX BLOCK 147
LOT 1
Area = 13,937.27 Sq. Ft.
0.320 Acres
TAX BLOCK 148
LOT 1
Area = 16,395.99 Sq. Ft.
0.376 Acres
CROSS ACCESS & UTILITY EASEMENT FOR THE BENEFIT OF LOT 10.02
"BARNEGAT BRANCH TRAIL"
THORN AVENUE
(40' R.O.W. WIDTH)
Variable Width Utility Easement (Water and Sewer)
TAX BLOCK 145.03
LOT 1.02
TAX BLOCK 151
LOT 1
Area = 54,220.31 Sq. Ft.
1.244 Acres
50FT WETLANDS TRANSITION
WETLANDS DELINEATION PERFORMED BY PETRO SCIENCE ON FEBRUARY 16, 2022
WETLAND AREA = 23,833 sq.ft./0.5471 ac.
WEAVER STREET
(40' R.O.W. WIDTH)
TWAIN AVENUE
LOT 1
LOT 1.01
TAX BLOCK 150
LOT 2
LOT 4
LOT 5
LOT 3
GRAPHIC SCALE
0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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STATE OF NEW JERSEY
SHAN-PEI FANCHIANG
No. GE37073
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:35:37 -04'00'

NO.	DATE	REVISION	
6	4-22-25	REVISE PER NEW SITE LAYOUT	J.A.S.
5	5-14-24	REVISE CHAIN LINK FENCE.	AD
4	9-28-23	RE-ISSUE	VL
3	6-21-23	RE-ISSUE	VL
2	4-12-23	REVISED PER SITE PLAN	VL
1	12-12-22	REVISED PER SITE PLAN	VL

DRAWING TITLE

MINOR SUBDIVISION & LEASE PLAN

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE: 1"=30'	PROJECT NO.: 21-312
DATE: 11-8-22	REVISION NO.: 6

DRAWING NO.

C2.9

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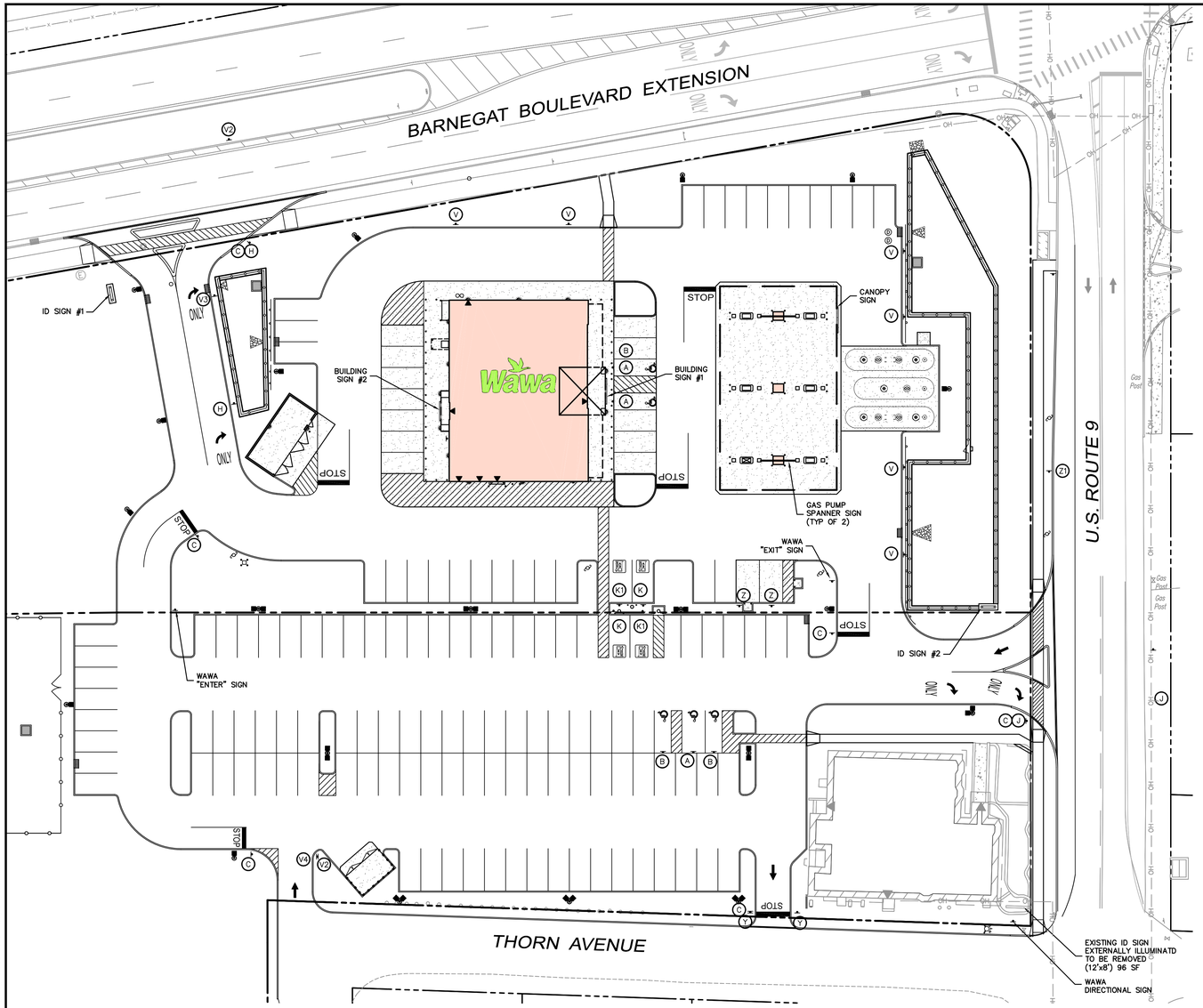
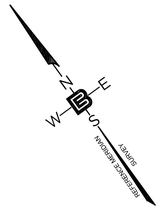
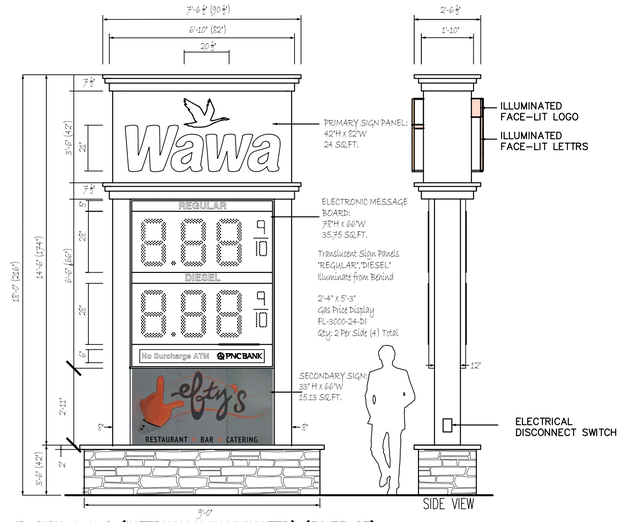
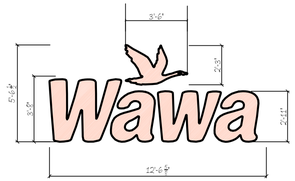


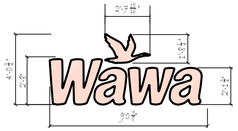




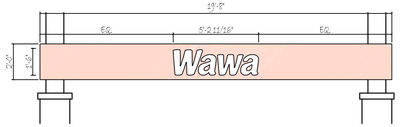
ID SIGN 1 & 2 (INTERNALLY ILLUMINATED) (59.75 SF) NOT TO SCALE



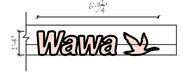
BUILDING SIGN #1
(INTERNALLY ILLUMINATED) (67.71 SF) NOT TO SCALE



BUILDING SIGN #2
(INTERNALLY ILLUMINATED) (36.85 SF) NOT TO SCALE



GAS PUMP SPANNER SIGN (2)
(NON- ILLUMINATED) (39.3 SF)(78.6 SF TOTAL) NOT TO SCALE

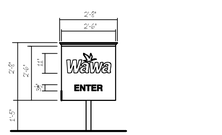


CANOPY SIGN
(INTERNALLY ILLUMINATED) (9.02 SF) NOT TO SCALE

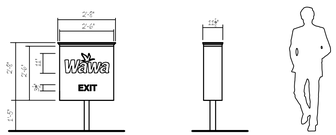
TRAFFIC SIGN LEGEND

ALL TRAFFIC SIGNS MUST CONFORM IN FACE DESIGN AND CONSTRUCTION TO SPECIFICATIONS FOUND IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, U.S.D.O.T., AND FEDERAL HIGHWAY ADMINISTRATION. SPECIFICALLY, REGULATORY & WARNING SIGNS SHALL BE FABRICATED OF FLAT ALUMINUM SHEETS AND SHALL BE COVERED WITH DIAMOND GRADE REFLECTIVE SHEETING, SERIES 4000 TYPE XI DESIGNATION PER ASTM.

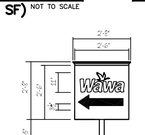
- (A) R7-8N (12"x18") — RESERVED PARKING
- R7-8a (12"x6") — VAN ACCESSIBLE
- N-17 (10"x12") — PENALTY $250 MINIMUM FINE
- (B) R7-8N (12"x18") — RESERVED PARKING
- N-17 (10"x12") — PENALTY $250 MINIMUM FINE
- (C) R1-1 (30"x30") — STOP
- (F) R7-1 (12"x18") — NO PARKING ANY TIME
- (H) R3-5R (24"x30") — ONLY
- (J) R3-2 (24"x24")
- (V) R8-31 (MOD) (12"x18") — NO PARKING OR STANDING FIRE LANE
- (V2) R6-1R (36"x12") — FIRE LANE
- (V3) W11-15 (30"x30")
- (V4) R6-1L (36"x12") — FIRE LANE
- (K) R7-1 MOD (12"x18") — ELECTRIC VEHICLE PARKING
- (K1) R7-1 MOD (12"x18") — Sized for Accessibility. Please Give Priority to Persons with Disabilities — ELECTRIC VEHICLE CHARGING STATION
- (Y) R5-1 (30"x30") — DO NOT ENTER
- (Z) R8-31 (MOD) (12"x18") — AIR PUMP PARKING ONLY
- (Z1) R2-1 (24"x30") — SPEED LIMIT 45



"ENTER" SIGN
(NON- ILLUMINATED) (6.25 SF) NOT TO SCALE



"EXIT" SIGN
NOT TO SCALE



DIRECTIONAL SIGN
(NON- ILLUMINATED) (6.25 SF) NOT TO SCALE

SIGN REQUIREMENTS

CHAPTER 55: LAND USE, ARTICLE VII, 55-181(C)

FREE-STANDING	REQUIRED	PROPOSED LOT 10.02
MIN. SETBACK (FT):	10	10
MAX. HEIGHT (FT):	18	18
MAX. WIDTH (FT):	10	9
MAX. AREA, PRIMARY (SF):	24	24
MAX. AREA, ELECTRONIC DISPLAY (SF):	36	35.75
MAX. AREA, SECONDARY (SF):	32	15.13
MAX. QUANTITY PER STREET FRONTAGE:	1	1
WALL		
MAX. PROJECTION (IN):	6	6
MAX. AREA TO WALL (%/SF): (SIGN AREA/BLDG WALL AREA)	20	
BUILDING SIGN #1 (67.71/1,924) =		3.5
BUILDING SIGN #2 (36.85/1,924) =		1.9

SIGN AREA CHART

SIGN	QUANTITY	AREA (SF)
ID #1	1	59.75
ID #2	1	59.75
BLDG #1	1	67.71
BLDG #2	1	36.85
SPANNER	2	39.3
CANOPY	1	9.02
	TOTAL =	311.6

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

66 GLEN AVENUE
GLEN ROCK, NJ 07452
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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER
CT LIC. NO. 12950 NJ LIC. NO. 28845
MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:36:28 -04'00'

NO.	DATE	REVISION	
8	4-22-25	REVISE PER NEW SITE LAYOUT	A.K.S.
7	5-14-24	REVISE CHAIN LINK FENCE, REVISE SIGNAGE AT NORTHERN CORNER OF PROPERTY.	AD
6	2-26-24	REVISED SIGN DETAIL/ SIGN NOTES	GB JR
5	9-28-23	RE-ISSUE	V.L.
4	8-21-23	REVISE ID SIGN, ADD DIRECTIONAL SIGN	C.P.
3	6-21-23	REVISED SIGNS & TRAFFIC SIGN LEGEND	V.L.
2	4-12-23	REVISED PER SITE PLAN	V.L.
1	12-15-22	UPDATED SURVEY & REVISED PER SITE PLAN	V.L.

DRAWING TITLE
SIGNAGE PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21M10002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
11-8-22	8

DRAWING NO.
C2.10

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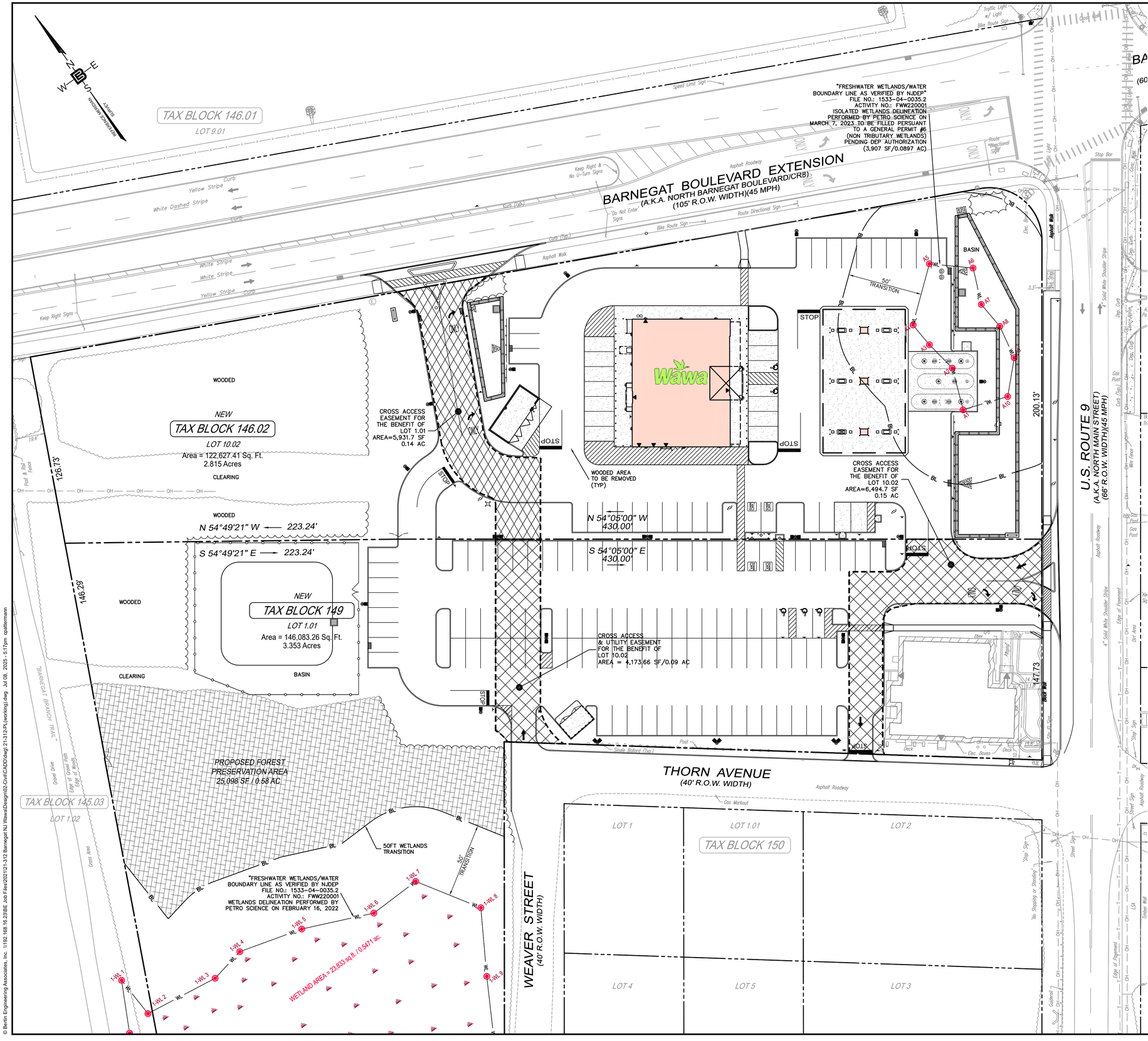

ITEMS	EXISTING (ACRES)	PROPOSED (ACRES)	PERCENTAGE	PERMITTED
IMPERVIOUS COVERAGE (Bldg's, Asphalt & Pavement)	1.14 AC (49,500 SF)	2.77 AC (120,823 SF)	44.96% (total land area)	MAX. 80% of total land area or 4.94 AC
UPLAND FORESTED LAND (outside of wetlands & transition area)	2.93 AC (127,589 SF)	0.58 AC (25,078 SF)	19.7% (NOTE 1)	10% MIN. of existing forested area
REMAINING FORESTED LANDS (NOT SUBJECT TO DEED RESTRICTION)		0.67 AC (29,197 SF)		
UNFORESTED, CLEARED AREAS (exist. or prop. stormwater basin, lawns, etc.)	0.7 AC (30,670 SF)	1.25 AC (54,395 SF)		
WETLANDS & WETLANDS TRANSITION AREA	1.4 AC (60,951 SF)	0.9 AC (39,217 SF)		
TOTAL	6.17 AC (268,710 SF)	6.17 AC (268,710 SF)		

NOTES

1. THIS NUMBER DOES NOT INCLUDE THE FORESTED AREA WITHIN THE WETLAND AND TRANSITION AREA TO BE REMOVED AT THE NORTHEAST CORNER OF THE SITE.

LEGEND

EOP	EXIST. EDGE OF PAVEMENT	E.O.P.	PROP. EDGE OF PAVEMENT
	TRAFFIC SIGN	R	HANDICAP RAMP
	AREA LIGHT	L	HANDICAP LANDING
	FIRE HYDRANT	SW	SIDEWALK
	UTILITY POLE	CW	CROSSWALK
x 00.00	SPOT ELEVATION	TD	TRENCH DRAIN
x TC 00.00	TOP OF CURB		TRAFFIC SIGN
x BC 00.00	BOTTOM OF CURB		DIRECTIONAL ARROW
GV	GAS VALVE		FIRE HYDRANT
WV	WATER VALVE	D	DRAINAGE MANHOLE
S	SANITARY MANHOLE		CURB INLET
D	DRAINAGE MANHOLE		YARD INLET
M	MONITORING WELL	S	SANITARY MANHOLE
	TREELINE	MEG	MEET EXISTING GRADE
00	EXISTING CONTOUR	E.T.R.	EXISTING TO REMAIN
OH	EXISTING OVERHEAD WIRE		TRAFFIC SIGN
GAS	EXISTING GAS MARK-OUT		AREA LIGHT
WATER	EXISTING WATER MARK-OUT	6	# OF PARKING SPACES
E	EXISTING ELECTRIC MARK-OUT	LS	LANDSCAPE
		DS	DOWNSPOUT
			BUILDING DOOR

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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CALISTO J. BERTIN, P.E.
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NH LIC. NO. 9368 RI LIC. NO. 6694

STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 ~~15:37:19~~ -04'00'

NO.	DATE	REVISION
5	4-22-25	REVISE PER NEW SITE LAYOUT
4	5-14-24	REVISE DRAINAGE BASIN AND CHAIN LINK FENCE.
3	1-31-24	RE-ISSUE
2	9-28-23	RE-ISSUE
1	6-21-23	RE-ISSUE

DRAWING TITLE
NJDEP
LAND USE PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
V.L.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
4-12-23	5

DRAWING NO.
C2.11

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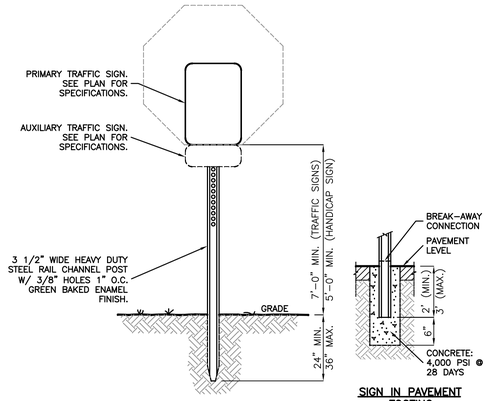
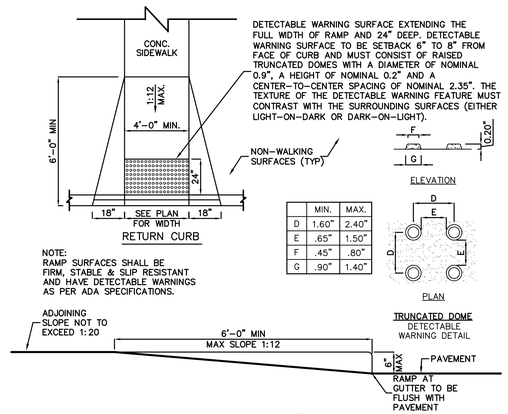


TRAFFIC SIGN

NOT TO SCALE

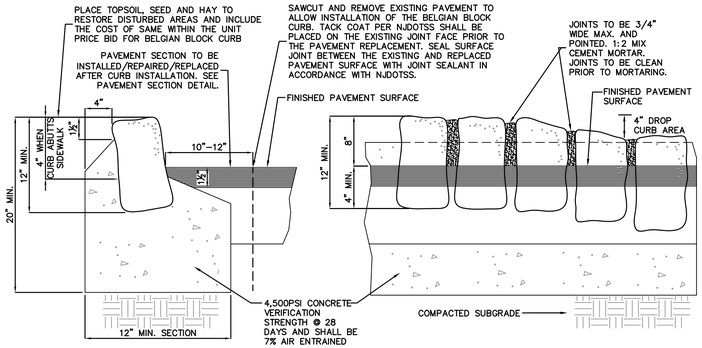
SIGN IN PAVEMENT FOOTING



	MIN.	MAX.
D	1.60"	2.40"
E	.65"	1.50"
F	.45"	.80"
G	.90"	1.40"

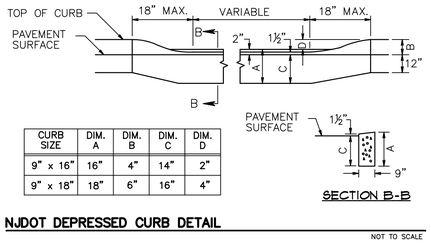
CONCRETE CURB RAMP (ADA REQUIREMENTS)

NOT TO SCALE



GRANITE BLOCK CURB

NOT TO SCALE

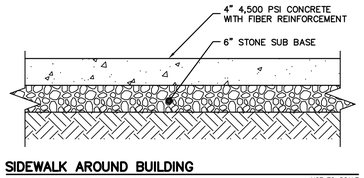


CURB SIZE	DIM. A	DIM. B	DIM. C	DIM. D
9" x 16"	16"	4"	14"	2"
9" x 18"	18"	6"	16"	4"

SECTION B-B

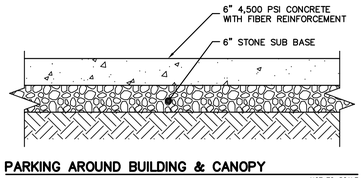
NJDOT DEPRESSED CURB DETAIL

NOT TO SCALE



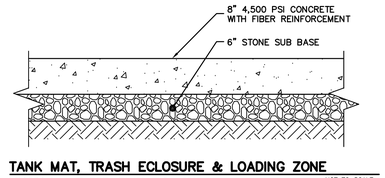
SIDEWALK AROUND BUILDING CONCRETE PAVEMENT DETAIL

NOT TO SCALE



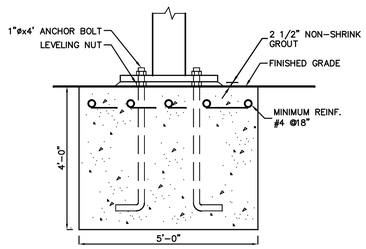
PARKING AROUND BUILDING & CANOPY CONCRETE PAVEMENT DETAIL

NOT TO SCALE



TANK MAT, TRASH ECLOSURE & LOADING ZONE CONCRETE PAVEMENT DETAIL

NOT TO SCALE



CANOPY FOOTING

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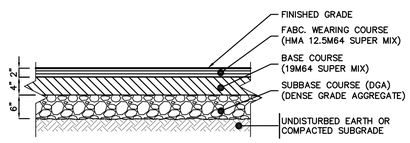
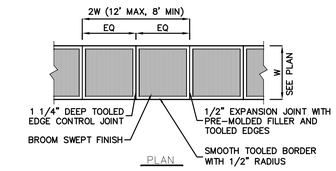
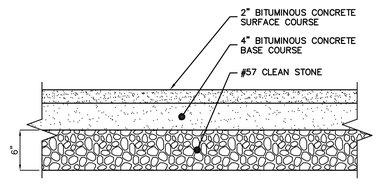


ASPHALT PAVEMENT DETAIL

NOT TO SCALE





ASPHALT DETAIL

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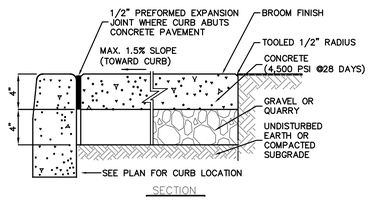
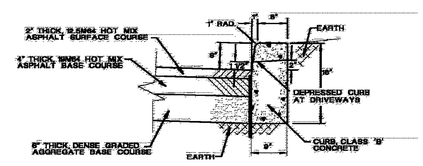


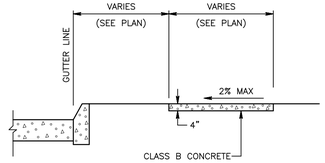
CONCRETE SIDEWALK DETAIL

NOT TO SCALE



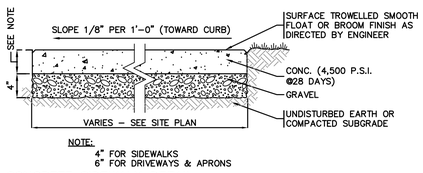
9" X 18" CONCRETE VERTICAL CURB

NOT TO SCALE



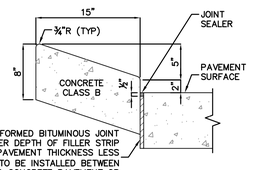
CONCRETE SIDEWALK — NJDOT

NOT TO SCALE



CONCRETE SIDEWALK DETAIL

NOT TO SCALE



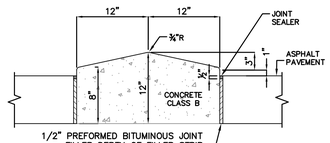
1/2" PREFORMED BITUMINOUS JOINT FILLER DEPTH OF FILLER STRIP EQUALS PAVEMENT THICKNESS LESS 1/2". TO BE INSTALLED BETWEEN CURB AND CONCRETE PAVEMENT OR CONCRETE BASE COURSE.

1/2" PREFORMED EXPANSION JOINT FILLER, BITUMINOUS TYPE, TO BE INSTALLED BETWEEN THE CURB AND CONCRETE PAVEMENT OR CONCRETE BASE COURSE.

TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH BPERFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB.

MOUNTABLE CONCRETE CURB

NOT TO SCALE

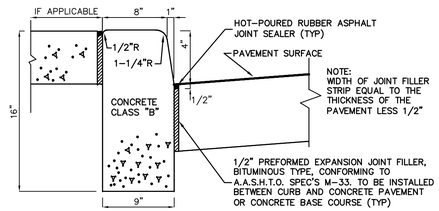


1/2" PREFORMED BITUMINOUS JOINT FILLER DEPTH OF FILLER STRIP EQUALS PAVEMENT THICKNESS LESS 1/2". TO BE INSTALLED BETWEEN CURB AND CONCRETE PAVEMENT OR CONCRETE BASE COURSE.

1/2" PREFORMED EXPANSION JOINT FILLER, BITUMINOUS TYPE, TO BE INSTALLED BETWEEN THE CURB AND CONCRETE PAVEMENT OR CONCRETE BASE COURSE.

MOUNTABLE CONCRETE CURB

NOT TO SCALE

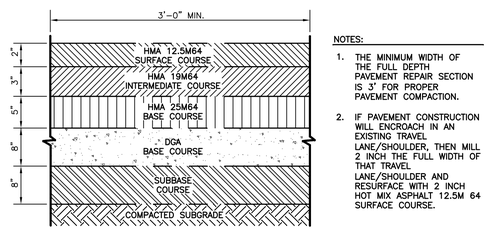


9" X 16" CONCRETE VERTICAL CURB

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 A.A.S.H.O. SPEC. M-213, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

N.J.D.O.T. CURB DETAIL

NOT TO SCALE



NOTES:

1. THE MINIMUM WIDTH OF THE FULL DEPTH PAVEMENT REPAIR SECTION IS 3' FOR PROPER PAVEMENT COMPACTION.
2. IF PAVEMENT CONSTRUCTION WILL ENCROACH IN AN EXISTING TRAVEL LANE/SHOULDER, THEN MILL 2 INCH THE FULL WIDTH OF THAT TRAVEL LANE/SHOULDER AND RESURFACE WITH 2 INCH HOT MIX ASPHALT 12.5M 64 SURFACE COURSE.

NJDOT PAVEMENT DETAIL — WIDENING 3 FEET

NOT TO SCALE

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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER
CT LIC. NO. 12950 NJ LIC. NO. 28845
MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

NOT VALID UNTIL SIGNED

STATE OF NEW JERSEY — SHAN-PEI FANCHIANG — No. GE37073 — LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:38:07 -04'00'

NO.	DATE	REVISION
6	4-22-25	REISSUE
5	12-11-23	ADD 9"X18" CONCRETE VERTICAL CURB AND ASPHALT PAVEMENT DETAILS.
4	9-28-23	RE-ISSUE
3	6-21-23	REVISED CONC. CURB RAMP, NJDOT DEPRESSED CURB, CURB & PAVEMENT DETAILS
2	4-12-23	RE-ISSUE
1	12-13-22	REVISED CONCRETE PAVEMENT DETAILS

DRAWING TITLE
SITE DETAILS - 1

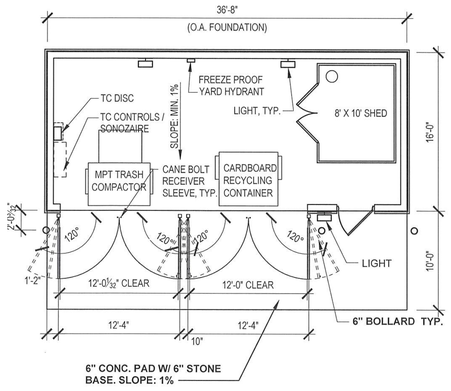
PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
VL	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	6

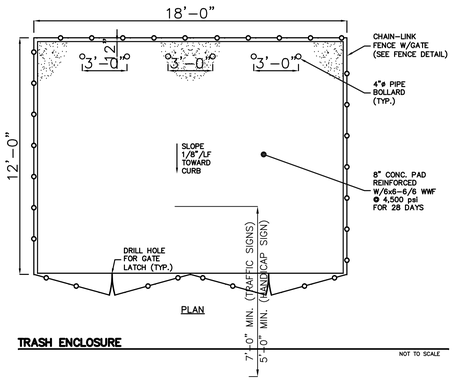
DRAWING NO.
C3.1



NOTE:
MASONRY ENCLOSURE TO MATCH BUILDING IN MATERIAL AND COLORS.

TRASH COMPOUND DETAIL

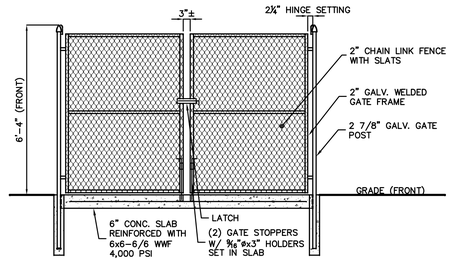
NOT TO SCALE



PLAN

TRASH ENCLOSURE

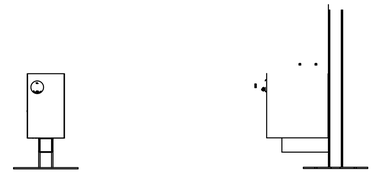
NOT TO SCALE

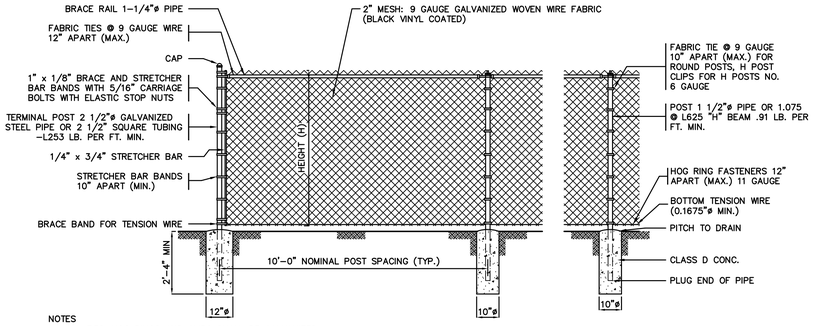


FRONT ELEVATION

TRASH ENCLOSURE CHAIN LINK GATE

NOT TO SCALE





NOTES
1. ALL TIES, HOG RINGS AND CLIPS SHALL BE GALVANIZED.
2. CAP NOT REQUIRED FOR "H" BEAMS.
3. FABRIC SHALL BE GALVANIZED WIRE, ALL PIPE TO CONFORM TO CURRENT ASTM DESIGNATION F 1083, SCHEDULE 40, PLAIN END.
4. BRACE RAIL AND ROD AT CORNER AND END SECTION ONLY.
5. ALL REFERENCES TO PIPE DIAMETER ARE ASTM NOMINAL SIZE.
6. WITH THE APPROVAL OF THE ENGINEER, IN SOFT MARSHY GROUND, POSTS MAY BE DRIVEN, THE CONCRETE FOOTING DELETED AND APPROVED DRIVE ANCHORS USED.

CHAIN LINK FENCE DETAIL

NOT TO SCALE

NOTES:
1. POST SHALL BE 6"x4"x6" STEEL I, ALL HOLES 13/16" DIA
2. WOOD BEAM GUIDE RAIL SHALL BE 4"x12", 30-YEAR PRESSURE TREATED TIMBER BEAR GUIDE RAIL
3. SUBMIT SHOP DRAWINGS FOR APPROVAL
4. POST SHALL BE INSTALLED 2' FROM FACE OF CURB

WOOD GUIDE RAIL

NOT TO SCALE

CT4000 Family

ChargePoint® Charging Stations

The CT4000 is the latest generation of ChargePoint charging stations. Refined yet rugged, the CT4000 family sets the industry standard for functionality and aesthetics. A robust cord retraction system comes standard on all CT4000 models to eliminate unsightly cords on the ground, and to keep your drivers from having to touch charging cables.

The CT4000 full motion color LCD display instructs drivers while supporting dynamic updates of custom branded videos and advertisements.

The intelligent power sharing feature of the CT4000 doubles the number of parking spaces served by allowing two charging ports to share a single circuit. Sites with single port EV stations can upgrade to dual port stations without requiring additional electrical services.

All CT4000 models offer one or two standard SAE J1772™ Level 2 charging ports with locking holsters, each port supplying up to 7.2kW.

Available in bollard and wall mount configurations, the CT4000 supports easy installation anywhere. To future proof your investment, all stations are fully software upgradeable over the air. All ChargePoint stations are networked and managed through ChargePoint Service Plans[1] and backed by ChargePoint's world class 24/7 driver phone support.

Corporate Branding and Video Advertising

- Download full motion color videos to your stations[2]
- Custom replaceable signage to project your brand
- Custom "cap" printing available[3]

Clean Cord Technology™

- Maintenance-free, light-weight, self-retracting cords come standard on all models
- Keep charging cords off the ground and out of your and drivers' hands
- Flexible over entire -22°F to +122°F product temperature range

Intelligent Power Sharing (patent pending)

- Reduced installation and operating costs
- Dynamically share one 40A circuit between two parking spaces
- Double the number of parking spaces for a given site's power capacity
- Upgrade a single port station to dual port with no electrical upgrade

[1] ChargePoint Service Plans are sold separately
[2] Download fees apply
[3] Minimum order quantities apply

Driver Friendly User interface

- Instructional video shows how to use the station
- Multi-language: English, French, Spanish
- Touch button interface; works in rain, ice and with gloves
- Backed by ChargePoint's world class 24/7 driver phone support

Energy Measurement and Management

- Real-time energy measurement
- 15 minute interval recording
- Time of Day (TOD) pricing
- Load shed by ½ of running average or to fixed power output

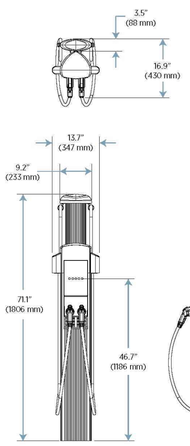
The standard *EV Charging Only* sign is easily replaceable with your branding.

The cap of the CT4000 family is also available for custom branding.

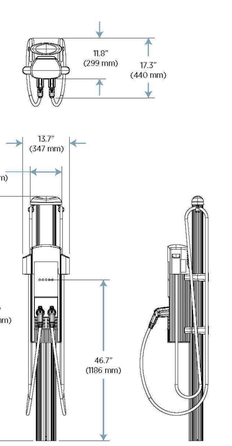
The 5.7" LCD display provides full motion charging instructions in a clear and simple format. It also allows station owners to deliver advertising messaging.

Driver interaction is supported in any weather by five rugged, back-lit buttons with audio feedback.

CT4021 Bollard



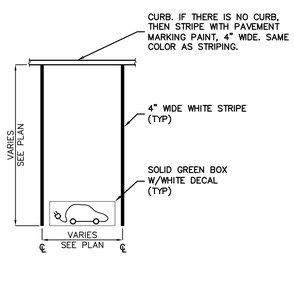
CT4023 Wall Mount



MANUFACTURER:
CHARGEPOINT INC.
1692 DELL AVENUE
CAMPBELL, CA 95008-6901
(877) 370-36802
OR EQUAL

ELECTRIC VEHICLE BOLLARD CHARGE STATION - DUAL

NOT TO SCALE



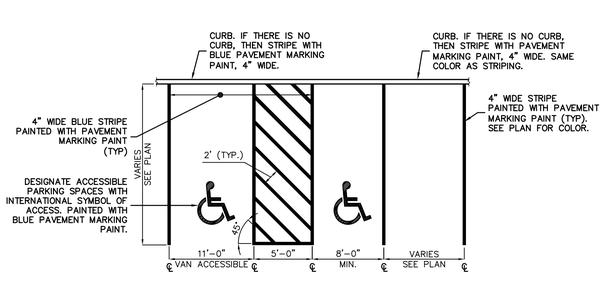
NOTES:
1. MANUFACTURED BY MONUMENTAL IRON WORKS BY MASTER HALCO, INC. MODEL "IMPERIAL FENCE - STYLE 8" OR EQUAL.
2. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
3. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER-HALCO ONLY.
4. FOOTING WIDTH TO BE (4)X POST WIDTH.
5. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
6. INSTALL FOOTING AS PER MANUFACTURER'S INSTRUCTIONS.
7. COLOR TO BE BLACK.

4' HIGH METAL RAILING

NOT TO SCALE

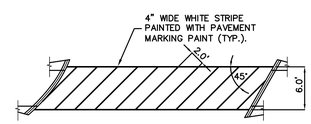
ELECTRIC VEHICLE PARKING SPACE STRIPING

NOT TO SCALE



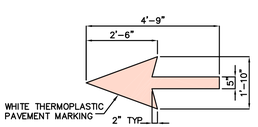
PARKING SPACE STRIPING

NOT TO SCALE



INTERIOR CROSSWALK STRIPING DETAIL

NOT TO SCALE



TRAFFIC ARROW

NOT TO SCALE

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CALISTO J. BERTIN, P.E.
PROFESSIONAL ENGINEER
CT LIC. NO. 12950 NJ LIC. NO. 28845
MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:39:48 -04'00'

NO.	DATE	REVISION
5	4-22-25	REISSUE
4	9-28-23	REVISED EVSE STRIPING COLOR
3	6-21-23	RE-ISSUE
2	4-12-23	RE-ISSUE
1	12-12-22	REMOVED FIRE LANE STRIPING DETAIL

DRAWING TITLE
SITE DETAILS - 2

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
VL	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	5

DRAWING NO.
C3.2

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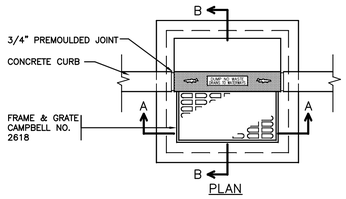
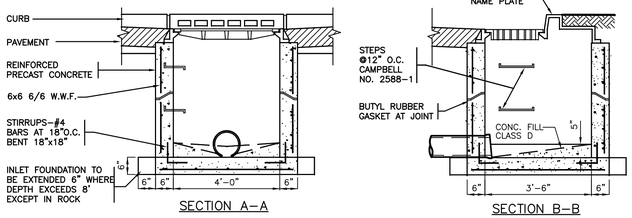


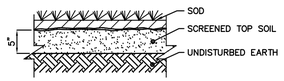
NOTES

1. CONSTRUCT INLET WITH CONCRETE BLOCK. BOTTOM SHALL BE AS SHOWN FOR CONCRETE AND THE OUTSIDE WALL SHALL BE PLASTERED WITH A 1/2" THICK COAT OF F2 CEMENT, SAND MORTAR.
2. ALTERNATE CONSTRUCTION OF INLET TO BE PRECAST REINFORCED 4,000 PSI CONCRETE.
3. THE INTERIOR WALL AND FLOOR OF ALL INLETS SHALL BE COATED WITH LIQUID ASPHALT.
4. SEE GRADING OR UTILITY PLAN FOR DEPTH OF INLETS, PIPE LOCATION AND PIPE SIZE.



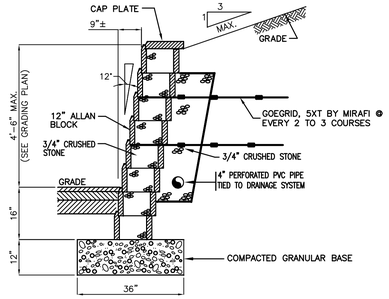
CURB INLET (TYPE B)

NOT TO SCALE



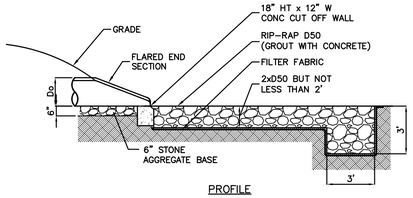
SOD DETAIL

NOT TO SCALE



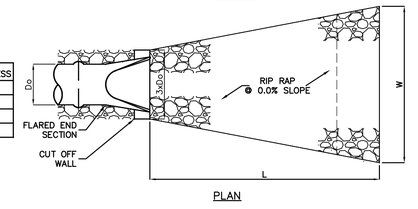
4'-6" MAX RETAINING WALL DETAIL (ALLAN BLOCK)

NOT TO SCALE



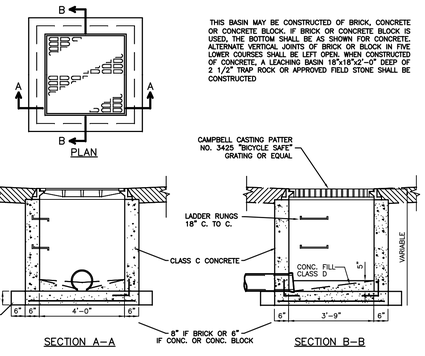
APRON SCHEDULE

APRON	Do	W	L	D50	THICKNESS
1	15"	8'	9'	6"	12"
3	15"	6'	5'	6"	12"
4	15"	5'	3'	6"	12"
5	15"	6'	5'-6"	6"	12"



RIP RAP APRON

NOT TO SCALE

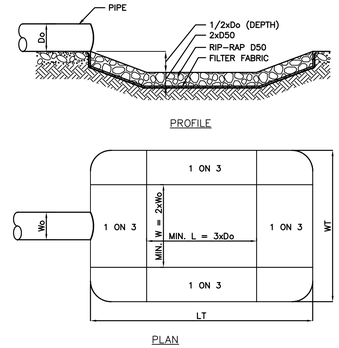


CATCH BASIN DETAIL (TYPE "E")

NOT TO SCALE

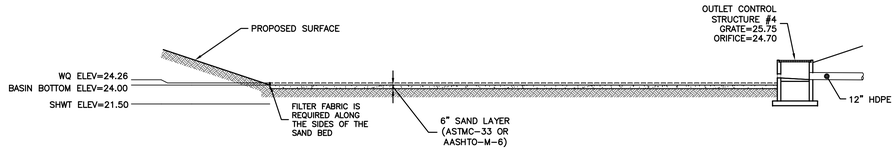
OUTLET SCHEDULE

OUTLET	Do	Wo	L	W	LT	WT	D50	DEPTH
#4-2	18"	18"	4.50'	3'	9'	7.5	6"	9"



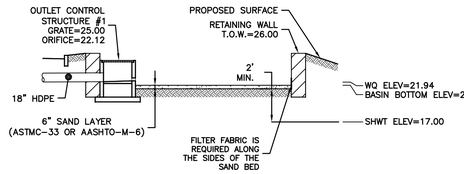
PREFORMED SCOUR HOLE DETAIL

NOT TO SCALE



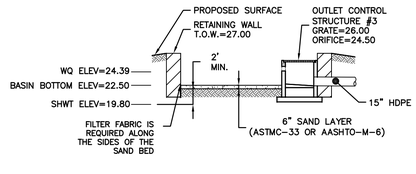
SAND FILTER SECTION (BASIN 4)

SCALE: 1"=10'



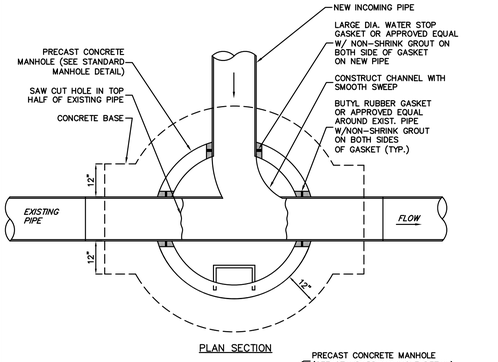
SAND FILTER SECTION (BASINS 1+2)

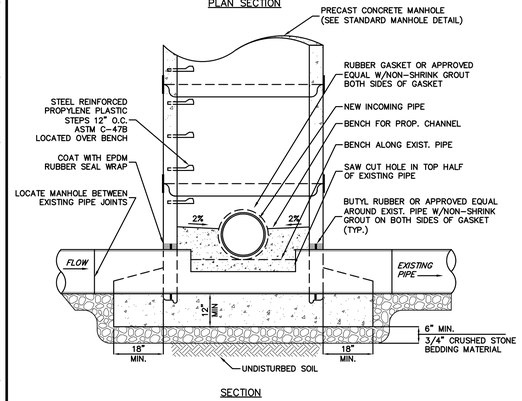
SCALE: 1"=10'



SAND FILTER SECTION (BASIN 3)

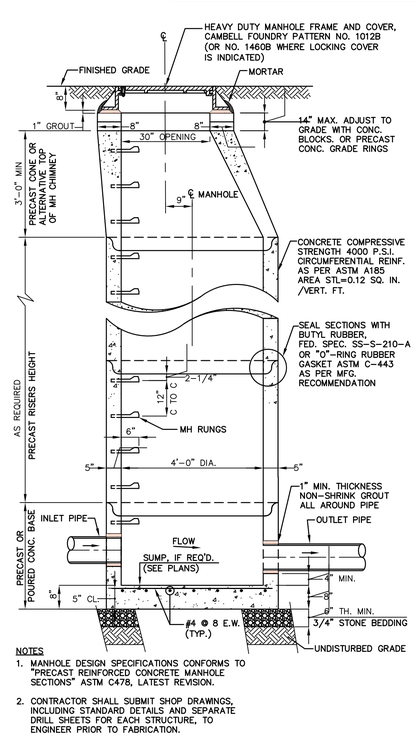
SCALE: 1"=10'





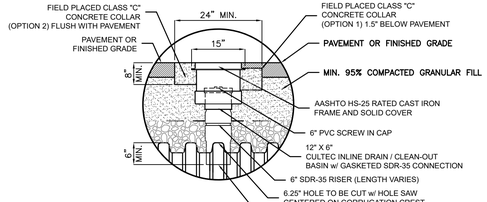
DOGHOUSE MANHOLE

NOT TO SCALE



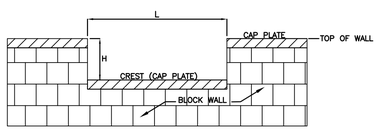
DRAINAGE MANHOLE

SCALE: 1/2" = 1'-0"



INSPECTION PORT DETAIL

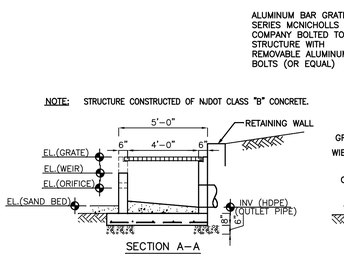
NOT TO SCALE



STRUCTURE ID	TOP OF WALL ELEVATION	CREST ELEVATION	CREST LENGTH, L	CREST DEPTH, H
BASINS 1+2	26.00	25.00	6'	1'
BASIN 3	27.00	26.00	20'	1'

EMERGENCY SPILLWAY DETAIL

NOT TO SCALE



BASIN ID	STRUCTURE ID	GRATE		WEIR		ORIFICE		OUTLET PIPE		SAND BED	SHWT	WQ STORM
		ELEV	SIZE	ELEV	LENGTH	INV.	SIZE	INV.	SIZE	ELEV.	ELEV.	ELEV.
BASINS 1+2	OCS #1	25.00	4'X4'	–	–	22.12	5"	22.00	18"	21.50	17.00	21.94
BASIN 3	OCS #3	26.00	4'X4'	25.50	4'	24.50	8"	22.42	15"	22.50	19.80	24.39
BASIN 4	OCS #4	25.75	4'X4'	–	–	24.70	6"	23.27	12"	24.00	21.50	24.26

BASIN ID	Q2 ELEV	Q10 ELEV	Q100 ELEV
BASINS 1+2	23.31	23.58	25.01
BASIN 3	25.19	25.61	25.85
BASIN 4	25.02	25.42	25.98

INFILTRATION BASIN OUTLET CONTROL STRUCTURES

NOT TO SCALE

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STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:41:04 -04'00'

NO.	DATE	REVISION
11	6-11-25	REVISE OUTLET CONTROL STRUCTURES, RIP RAP APRON SCHEDULE & ADD SAND FILTER SECTIONS
10	4-22-25	REVISE DRAWING NUMBER
9	12-20-24	REVISE OUTLET STRUCTURES
8	10-17-24	REVISE RIP RAP APRON & SCHEDULE; REVISE SOD DETAIL & DRAWING TITLE REMOVE AQUA-PONIC DETAIL.
7	5-14-24	REVISE OUTLET CONTROL STRUCTURE SCHEDULE; REMOVE CULTEC DETAILS. ADD AQUAPONIC DETAIL.
6	1-31-24	REVISE INFILTRATION BASIN OUTLET STRUCTURES, RIP RAP APRON & SCHEDULE; REVISE DETAILS.
5	12-11-23	REVISE INFILTRATION BASIN OUTLET STRUCTURES, RIP RAP APRON, EMERGENCY SPILLWAY, & PERFORMED SCOUR HOLE DETAILS.
4	9-28-23	REVISE OUTLET STRUCTURES, RIP RAP APRONS, ADD EMERGENCY SPILLWAY & DOUBLE INLET DETAILS.
3	6-21-23	REVISE BASIN OUTLET STRUCTURES & APRON SCHEDULE; ADD RIP-RAP 1-1.
2	4-12-23	RE-ISSUE
1	12-12-22	RE-ISSUE

BY	J.A.S.	CP	CP	AD	VL	VL	VL	VL	VL	VL	VL	VL

DRAWING TITLE

DRAINAGE & SESC DETAILS

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
VL	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	11

DRAWING NO.

C3.3A

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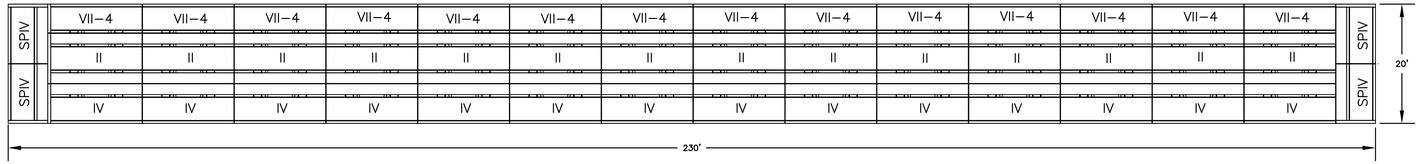
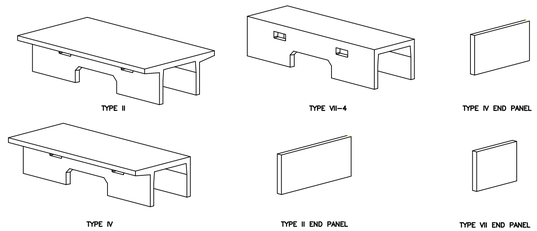


STORMTRAP BASIN LAYOUT



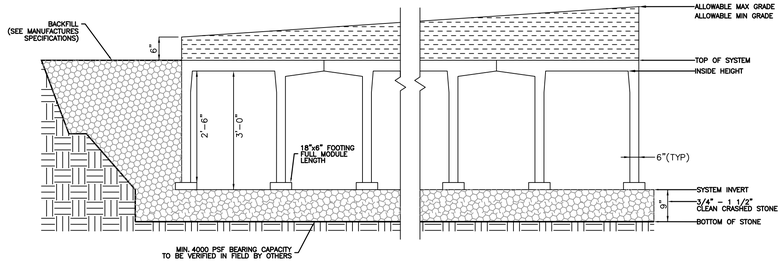
STORMTRAP BASIN MODULE TYPES

NOT TO SCALE

SITE SPECIFIC DESIGN CRITERIA

1. STORMTRAP UNITS SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/ OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN. 0.50' MAX. 2.48' CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE IS ASSUMED TO BELOW INVERT OF SYSTEM IF WATER TABLE IS DIFFERENT THAN ASSUMED, CONTACT STORMTRAP.

STORM BASIN ID	SINGLETRAP SIZE	ALLOWABLE MAX GRADE	ALLOWABLE MIN GRADE	INSIDE HEIGHT	SYSTEM INVERT	BOTTOM OF STONE
STORM TRAP BASIN	3'–0"	27.70'	25.72'	24.72'	21.72'	20.97'

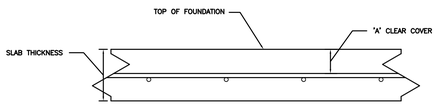


STORMTRAP SINGLETRAP DETAIL

NOT TO SCALE

NOTES:

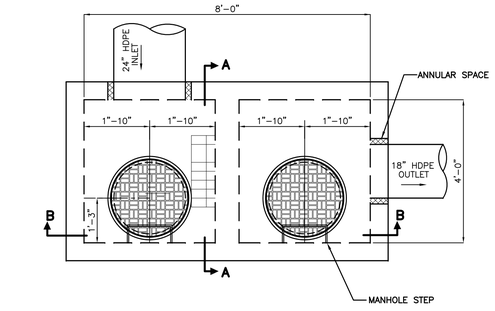
1. DIMENSIONING OF STORMTRAP SYSTEM SHOWN BELOW ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
2. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
3. SEE MANUFACTURES PLANS FOR INSTALLATION SPECIFICATIONS.
4. SP – INDICATES A MODULE WITH MODIFICATIONS.
5. P – INDICATES A MODULE WITH A PANEL ATTACHMENT.
6. CONTRACTORS RESPONSIBILITY TO ENSURE CONSISTENCY/ACCURACY TO FINAL ENGINEER OF RECORD PLAN SET.
7. IN ORDER FOR STORMTRAP TO GENERATE APPROVAL DRAWINGS, CIVIL ENGINEERING DRAWINGS MUST BE PROVIDED TO STORMTRAP AND SHALL INCLUDE ALL PIPE SIZES, PIPE MATERIAL, PIPE INVERT ELEVATIONS, ACCESS OPENING SIZE AND SHAPE. IN ADDITION, FINAL GRADING PLANS SHALL ALSO INCLUDE MINIMUM AND MAXIMUM GRADES OVER THE TOP OF THE STORMTRAP SYSTEM.



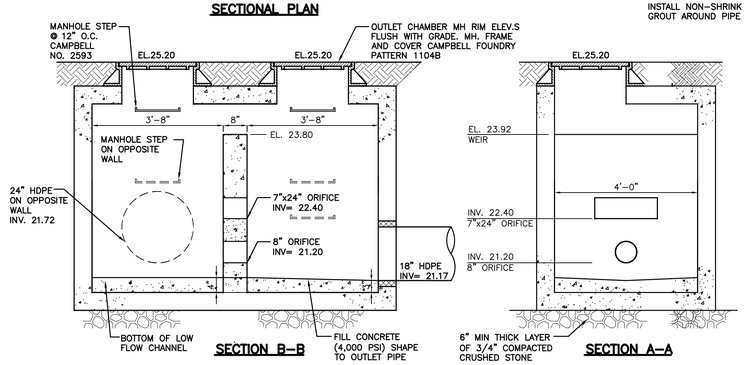
STORMTRAP FOUNDATION DETAIL

CONCRETE FOUNDATION NOTES:

1. CONCRETE FOUNDATION TO BE SUPPLIED AND INSTALLED BY OTHERS.
2. CONCRETE STRENGTH @ 28 DAYS, 5%–8% ENTRAINED AIR, 3"–5" MAX SLUMP.
3. NET ALLOWABLE SOIL PRESSURE AS INDICATED BY MANUFACTURER.
4. SOIL CONDITIONS TO BE VERIFIED ON SITE BY OTHERS.
5. REBAR: ASTM A615 GRADE 60, BLACK BAR.
6. DIMENSION OF FOUNDATION MUST HAVE 1'–0" OVERHANG BEYOND EXTERNAL FACE OF MODULE.
7. DIMENSION OF STORMTRAP SYSTEM ALLOW FOR A 3/4" GAP BETWEEN EACH MODULE.
8. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
9. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.



SECTIONAL PLAN



OUTLET CONTROL STRUCTURE

NOT TO SCALE

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Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:41:59 -04'00'

NO.	DATE	REVISION
5	4-22-25	REVISE DRAWING NUMBER
4	4-9-25	REVISE OUTLET STRUCTURE
3	12-30-24	REVISE OUTLET STRUCTURE, STORMTRAP & DRAWING TITLE
2	12-17-24	REMOVE STORM TRAP B
1	5-14-24	ADDED REVISE OUTLET CONTROL STRUCTURE SCHEDULE

J.A.S | CP | CP | CP | TM

DRAWING TITLE
DRAINAGE & SESC DETAILS 2

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

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AD	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
4-24-24	5

DRAWING NO.
C3.3B

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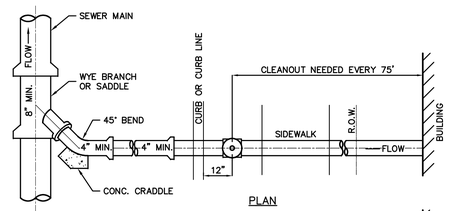
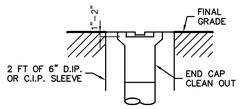
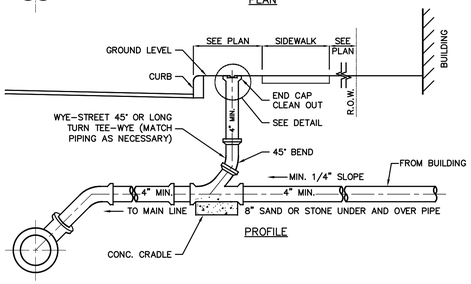




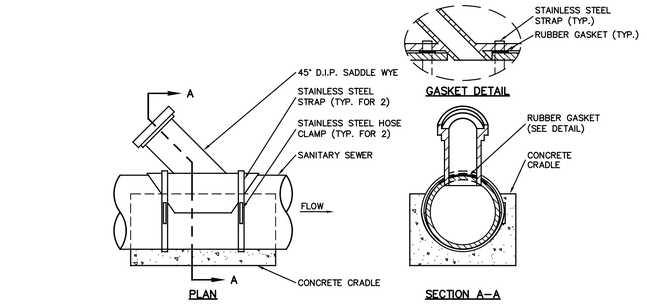


NOTES:

1. SEE PLAN FOR PIPE SIZES, SLOPE AND LOCATIONS.
2. MAINTAIN 1% MIN SLOPE. USE 2% SLOPE UNLESS OTHERWISE SPECIFIED ON PLAN.
3. CLEANOUTS TO BE AS SHOWN ON PLAN, BUT NOT GREATER THAN 75' O.C. FOR 4" LATERAL.

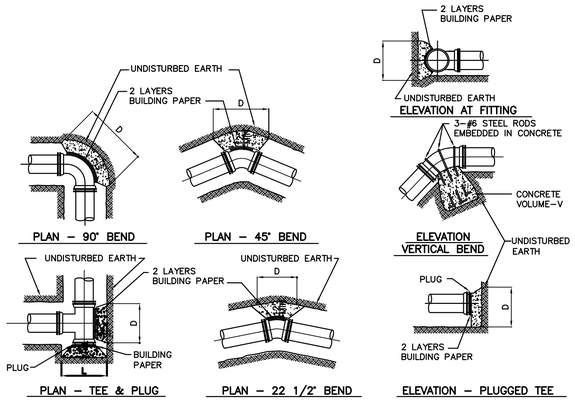
BUILDING SEWER CONNECTION AND CLEANOUT DETAIL

NOT TO SCALE



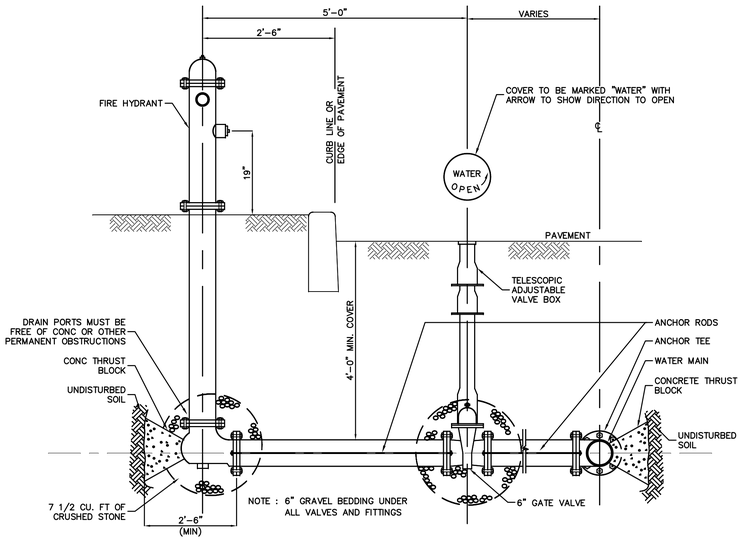
SANITARY SEWER SADDLE WYE CONNECTION

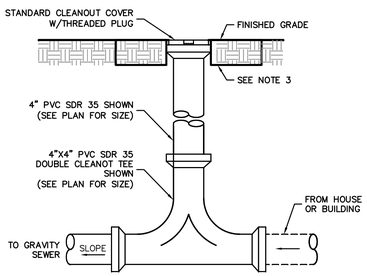
NOT TO SCALE



THRUST BLOCK DETAILS

NOT TO SCALE



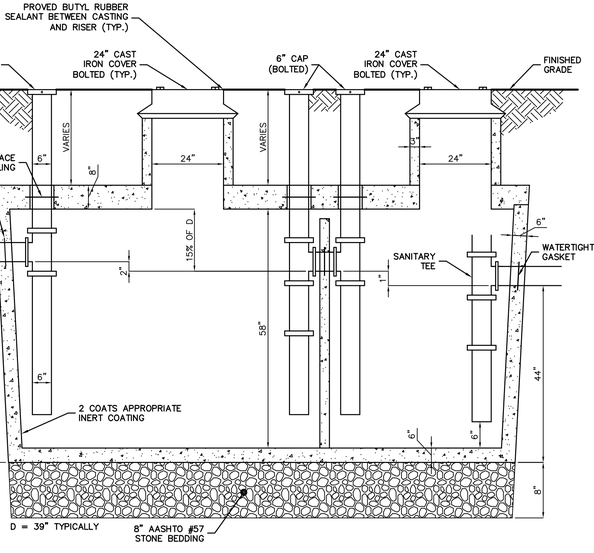


GENERAL NOTES

1. CLEANOUTS SHALL BE INSTALLED NO MORE THAN A MAX. 10'-0" FROM THE OUTSIDE FACE OF BUILDING FOUNDATION WALL AND EVERY 100'-0" MAX. THEREAFTER OR WHERE SERVICE LATERAL CHANGES DIRECTION BEFORE REACHING MAIN SANITARY SEWER LINE.
2. CLEANOUT PLUGS SHALL NOT BE COVERED WITH CEMENT PLASTER, OR ANY OTHER PERMANENT FINISHING MATERIAL, WHERE IT IS NECESSARY TO CONCEAL A CLEANOUT PLUG, A COVERING PLATE OR ACCESS DOOR SHALL BE PROVIDED WHICH WILL PERMIT READY ACCESS TO THE PLUG.
3. ON COMMERCIAL AND INDUSTRIAL INSTALLATIONS A 2'X2'X4" THICK CONCRETE PAD WITH CAST IRON CLEANOUT COVER (NEENAH R1974 OR EQUAL) SHALL BE PROVIDED AT GRADE IN BOTH PAVED AND UNPAVED AREAS. THE STANDARD PVC THREADED PLUG SHALL BE PROVIDED BELOW THE CAST IRON LID.

DOUBLE SWEEP CLEANOUT DETAIL

NOT TO SCALE



NOTES:
ALL INLET AND OUTLET PIPES SHALL BE INSTALLED NO MORE THAN 6" FROM THE BOTTOM OF THE GREASE TRAP.

TANK TAPERS TOP TO BOTTOM AND IS TRAPEZOIDAL IN CROSS SECTION.

TANK IS 5,000 PSI CONCRETE-STEEL REINFORCED (@ 28 DAYS) CONCRETE CONFORMS TO ACI 318-16-4.5.1 AND 318-16-4.5.2, ASTM A615 AND A185

DIMENSION: 151" INTERIOR/ 163" EXTERIOR LENGTH x 72" INTERIOR/ 84" EXTERIOR WIDTH

NOTES:
1) WHEN LOCATED IN DRIVEWAYS OR PAVED AREAS, GREASE TRAP TO BE DESIGNED FOR APPROPRIATE LOAD BEARING CONDITIONS. GREASE TRAP SHALL BE CAPABLE OF WITHSTANDING HS-20 LOADING.
2) ALL PIPE PENETRATIONS SHALL BE WATERTIGHT.
3) GREASE TRAP SHALL BE PROVIDED WITH GAS-TIGHT MANHOLE COVERS, IN ACCORDANCE WITH TOWNSHIP STANDARD SPECIFICATIONS.
4) PRECAST CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH 5000 PSI.
5) EXTERIOR CONCRETE SURFACES BELOW GRADE SHALL HAVE 2 COATS OF COAL TAR EPOXY.
6) SPECIFIC SEALANT DETAIL AT CONCRETE RISER TO CONCRETE VAULT INTERFACE SHALL BE WATERTIGHT. AT A MINIMUM, THE JOINT SHALL BE SEALED WITH BUTYL RUBBER SEALANT (KENT SEAL #2 OR APPROVED EQUIVALENT) AND THE EXTERIOR OF THE JOINT SHALL BE SEALED WITH NON-SHRINK GROUT IN CONFORMANCE WITH THE TOWNSHIP STANDARD GREASE TRAP DETAIL.
7) TANK SHALL BE TESTED FOR WATER TIGHTNESS BY FILLING FOR 24 HRS. TO SOAK, THEN TOPPED OFF, AND THEN WATCHED FOR 24 HRS. NO DROP IN WATER IS ALLOWED.
8) CAST IRON SHALL BE BOLTED TO CONCRETE WITH MASTIC TAPE (KENT SEAL OR APPROVED EQUIVALENT) SEALANT.
9) MAXIMUM EARTH COVER=5.0', HS-20 LOADING.
10) INLET AND OUTLET EQUIPPED WITH PIPE SEALS.

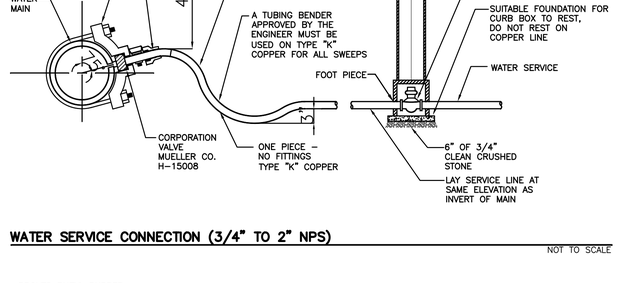
GREASE TRAP

1,500 GALLON (2 COMPARTMENT) TANK

NOT TO SCALE

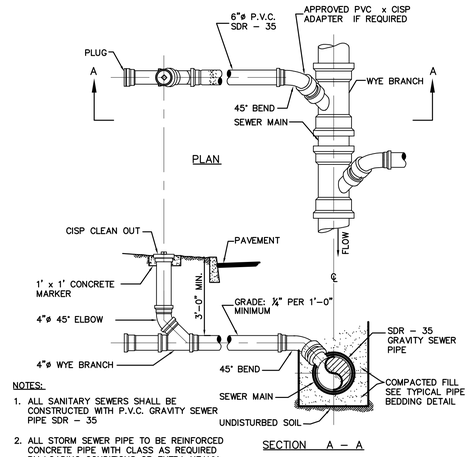
WATER SERVICE CONNECTION (3/4" TO 2" NPS)

NOT TO SCALE



TYPICAL FIRE HYDRANT INSTALLATION

NOT TO SCALE

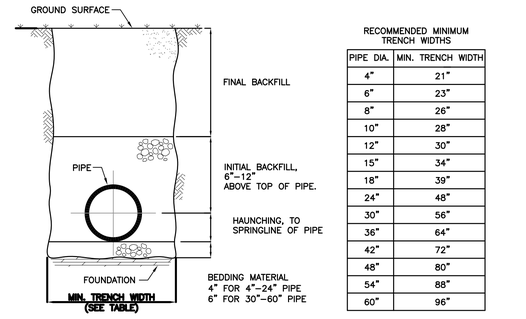


NOTES:

1. ALL SANITARY SEWERS SHALL BE CONSTRUCTED WITH P.V.C. GRAVITY SEWER PIPE SDR - 35
2. ALL STORM SEWER PIPE TO BE REINFORCED CONCRETE PIPE WITH CLASS AS REQUIRED BY LOADING CONDITIONS OR EXTRA HEAVY CORRUGATED POLYETHYLENE TUBING WHERE APPROVED BY THE ENGINEER.

SANITARY SERVICE LATERAL & CLEANOUT

NOT TO SCALE



RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIA.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

NOTES

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4"-24"; 6" FOR 30"-60".
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

TYPICAL TRENCH CROSS-SECTION

NOT TO SCALE

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STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:44:17 -04'00'

NO.	DATE	REVISION	
5	4-22-25	RE-ISSUE	J.A.S.
4	9-28-23	RE-ISSUE	VL
3	8-21-23	RE-ISSUE	VL
2	4-13-23	RE-ISSUE	VL
1	12-19-22	RE-ISSUE	VL

DRAWING TITLE
UTILITY DETAILS

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
VL	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	5

DRAWING NO.
C3.4

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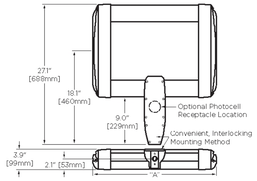
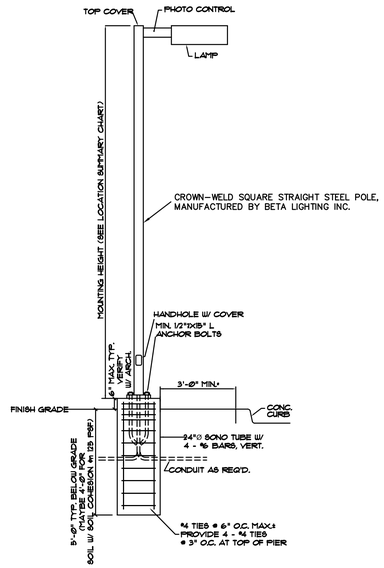


LED Count (x10)	Dim. "A"
02	12.1" [306mm]
04	12.1" [306mm]
06	14.1" [357mm]
08	16.1" [408mm]
10	18.1" [459mm]
12	20.1" [510mm]
14	22.1" [560mm]
16	24.1" [611mm]
20	28.1" [713mm]
24	32.1" [814mm]

"CREE EDGE SERIES" LED AREA LIGHT, MANUFACTURED BY CREE, SEE LUMINAIRE SCHEDULE FOR MODEL NUMBER & QUANTITIES.

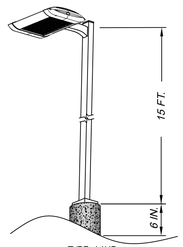
AREA LIGHT DETAIL

NOT TO SCALE

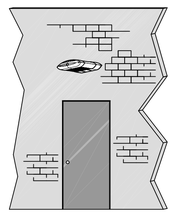


LIGHT POLE W/ STANDARD ANCHORING DETAIL

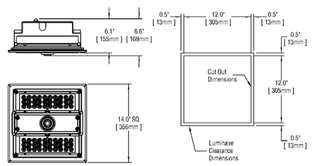
NOT TO SCALE



TYPE A4MB
AREA LIGHTS



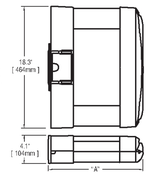
TYPE 2M, 3M
& 4M
WALL PACKS



"304 SERIES" LED RECESSED CANOPY LUMINAIRE, MANUFACTURED BY CREE, SEE LUMINAIRE SCHEDULE FOR MODEL NUMBER & QUANTITIES.

CANOPY LIGHT DETAIL

NOT TO SCALE



# of LEDs	Dim. "A"
20	11.91"
40	11.91"
60	13.91"
80	15.91"
100	17.91"
120	19.91"

"CREE EDGE SERIES" LED WALL PACK, MANUFACTURED BY CREE, SEE LUMINAIRE SCHEDULE FOR MODEL NUMBER & QUANTITIES.

WALL MOUNTED LIGHT DETAIL

NOT TO SCALE

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PROFESSIONAL ENGINEER
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MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694

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STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
No. GE37073
Date: 2025.07.15 15:45:51 -04'00'

NO.	DATE	REVISION	
5	4-22-25	RE-ISSUE	J.A.S.
4	9-28-23	RE-ISSUE	V.L.
3	6-21-23	RE-ISSUE	V.L.
2	4-12-23	RE-ISSUE	V.L.
1	12-12-22	RE-ISSUE	V.L.

DRAWING TITLE
CANOPY & LIGHTING DETAILS

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
VL	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	5

DRAWING NO.
C3.5

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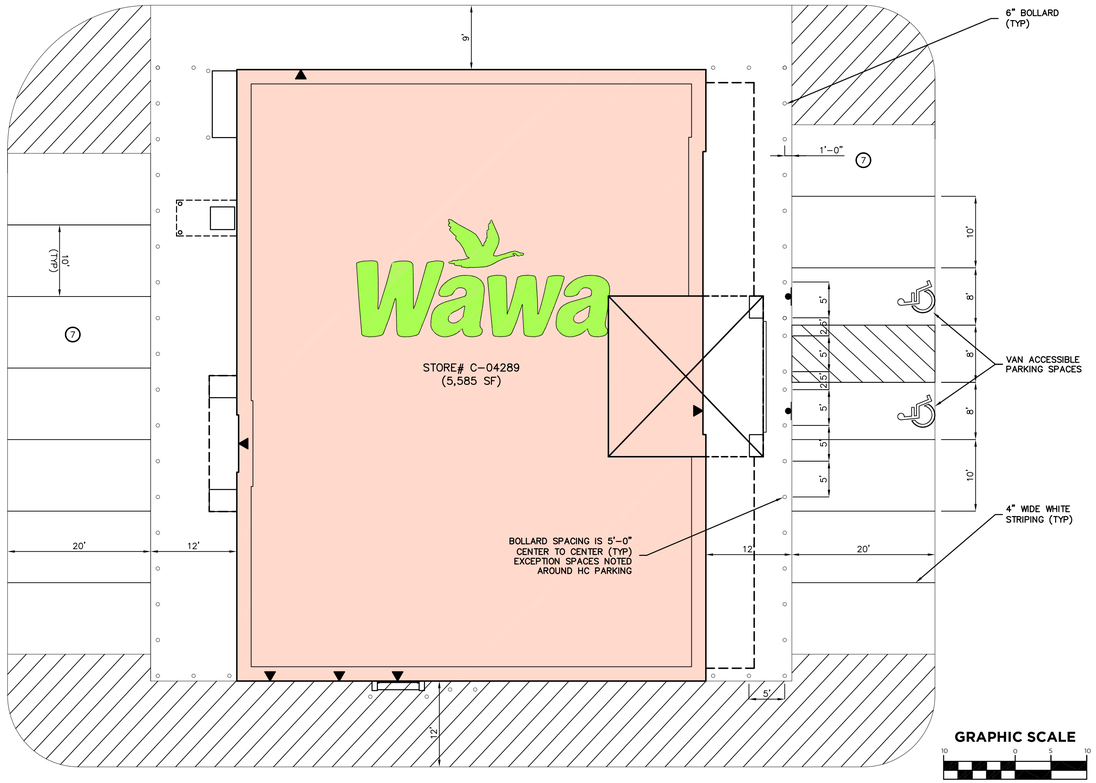
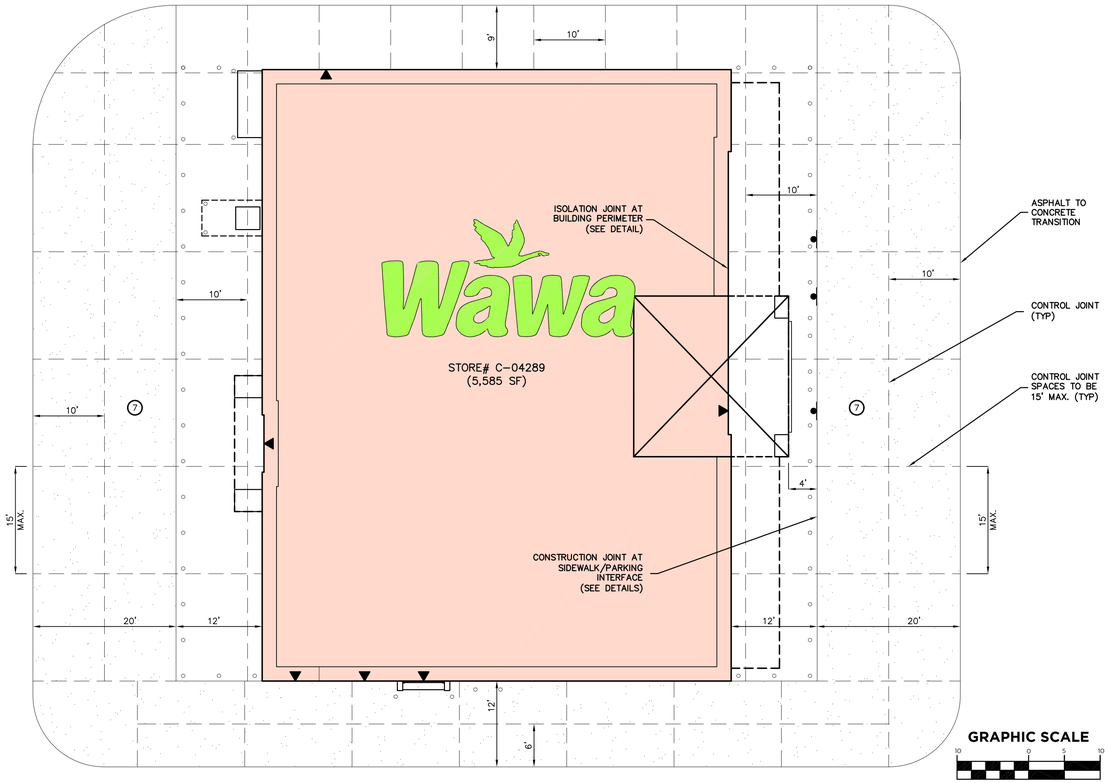


GRAPHIC SCALE

10 0 5 10

(IN FEET)

1 inch = 10 ft.



GRAPHIC SCALE

10 0 5 10

(IN FEET)

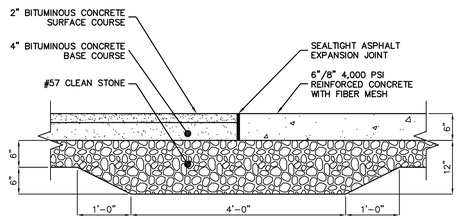
1 inch = 10 ft.

STRIPING & BOLLARD PLACEMENT DETAIL

SCALE: 1"=10'

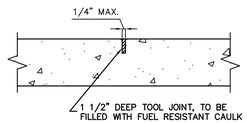
PARKING CONTROL JOINT PLAN

SCALE: 1"=10'



CONCRETE TO ASPHALT TRANSITION DETAIL

NOT TO SCALE



CONTROL JOINT DETAIL

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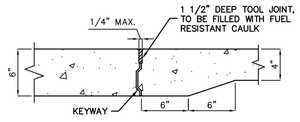
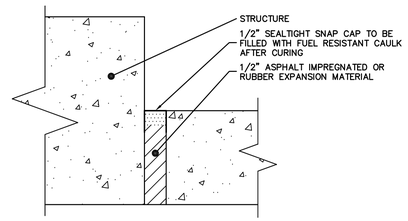


CONSTRUCTION JOINT DETAIL

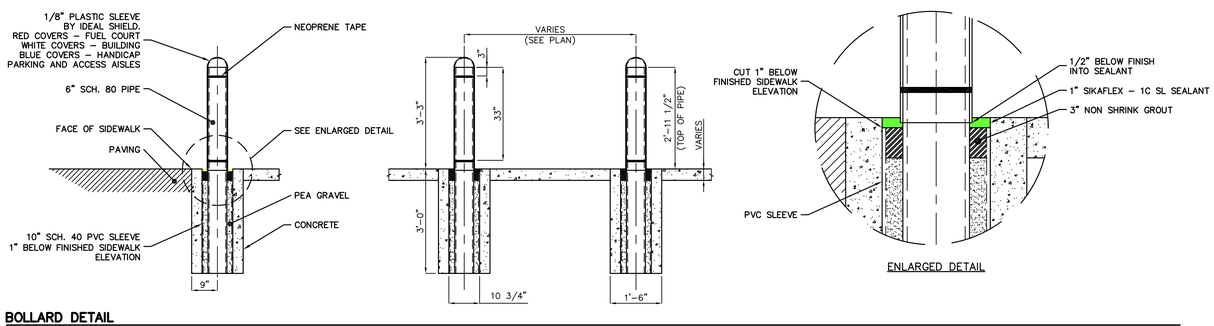
NOT TO SCALE



ISOLATION JOINT DETAIL

AT STRUCTURES SUCH AS GAS ISLANDS, BUILDING, CANOPY COLUMNS, ETC.

NOT TO SCALE



BOLLARD DETAIL

NOT TO SCALE

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STATE OF NEW JERSEY SHAWN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shawn-Pei Fanchiang
Date: 2025.07.15 15:47:13 -04'00'

NO.	DATE	REVISION
5	4-22-25	RE-ISSUE
4	9-28-23	RE-ISSUE
3	6-21-23	RE-ISSUE
2	4-12-23	RE-ISSUE
1	12-12-22	REVISED BOLLARDS, STRIPING & CONTROL JOINTS

DRAWING TITLE

STRIPING, BOLLARD PLACEMENT CONTROL JOINT PLAN & DETAILS

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
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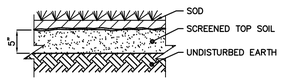
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	5

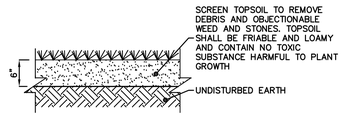
DRAWING NO.

C3.6



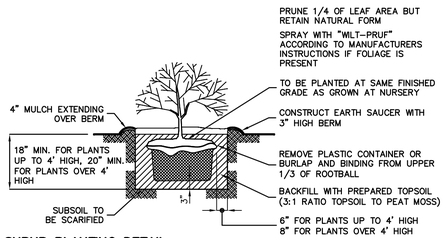
SOD DETAIL

NOT TO SCALE



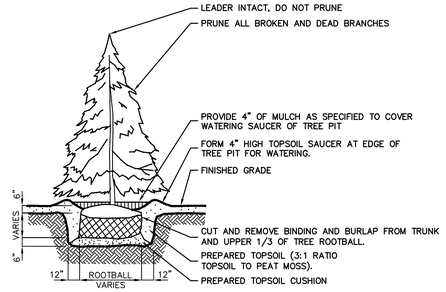
TOP SOIL & GRASS DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL

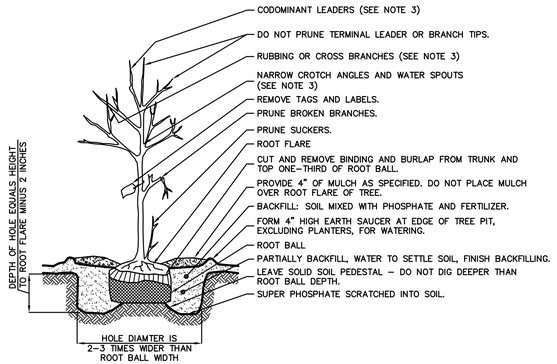
NOT TO SCALE

LAWNS: SEEDING AND SOIL PREPARATION NOTES

1. CONTRACTOR TO FINE GRADE AND PREPARE ALL SITE AREAS TO RECEIVE SEED. MAKE SITE SMOOTH TO FINAL GRADING PLAN ELEVATIONS, FILL IN DEPRESSIONS, LOW SPOTS AND GRADE SMOOTH.
2. ALL LAWN AREAS WITHIN LAWN LIMIT LINES TO RECEIVE 6" OF TOPSOIL PRIOR TO SEEDING OPERATIONS. ONCE TOPSOIL HAS BEEN PLACED, CONSTRUCTION ACTIVITY OF ANY KIND (EXCLUDING LANDSCAPING) SHALL NOT BE PERMITTED ON OR ACROSS ANY PLANTING AREA. CONTRACTOR SHALL FULLY EXCAVATE ANY PLANTING AREA THAT IS DISTURBED AND REPLACE WITH TOPSOIL.
3. SCARIFY SUBSOIL TO DEPTH OF 6" PRIOR TO TOPSOIL APPLICATION.
4. MULCH SEEDED AREAS WITH STRAW MULCH AT RATE OF MINIMUM 1 1/2 TON PER ACRE (70 LBS/1,000 SF). CRIMP OR TACK STRAW MULCH TO REMAIN IN PLACE UNTIL COMPLETE GERMINATION OF SEED AND ESTABLISHED GROWTH.
5. WATER AND MAINTAIN GRASS UNTIL STAND IS ESTABLISHED AND READY FOR MOWING AT MINIMUM 4 INCH HEIGHT. CONTINUE TO WATER FOR A MINIMUM 30 DAYS OR UNTIL ACCEPTED BY OWNER.
6. FOLLOWING SEEDING OPERATIONS, CLEAN UP EXCESS MATERIALS, AND CLEAN ALL BARK MULCHED AND PAVED AREAS.
7. FOLLOWING GERMINATION, APPLY HERBICIDE TO ALL GRASS GROWTH IN PLANT MULCH AREAS.
8. ALL LAWNS SHALL BE GUARANTEED TO HAVE A FULL UNIFORM STAND OF ACCEPTABLE GRASS AT THE END OF THE ONE YEAR GUARANTEE PERIOD WITH NO BARE SPOTS COMPRISING MORE THATN 2% OF ANY LAWN AREA. ANY AREA SO NOTED WILL BE RESEEDED OR SODDED UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED.
9. ALL DISTURBED LAWN AREAS SHALL BE SEEDED AS NOTED AND AS APPROVED BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.

LAWNS: SODDING AND SOIL PREPARATION NOTES

1. CONTRACTOR TO FINE GRADE AND PREPARE ALL SITE AREAS TO RECEIVE SOD. MAKE SITE SMOOTH TO FINAL GRADING PLAN ELEVATIONS, FILL IN DEPRESSIONS, LOW SPOTS AND GRADE SMOOTH.
2. ALL LAWN AREAS WITHIN LAWN LIMIT LINES TO RECEIVE 6" OF TOPSOIL PRIOR TO SODDING OPERATIONS. ONCE TOPSOIL HAS BEEN PLACED, CONSTRUCTION ACTIVITY OF ANY KIND (EXCLUDING LANDSCAPING) SHALL NOT BE PERMITTED ON OR ACROSS ANY PLANTING AREA. CONTRACTOR SHALL FULLY EXCAVATE ANY PLANTING AREA THAT IS DISTURBED AND REPLACE WITH TOPSOIL. SCARIFY SUBSOIL TO DEPTH OF 6" PRIOR TO TOPSOIL APPLICATION.
3. WATER AND MAINTAIN GRASS UNTIL STAND IS ESTABLISHED AND READY FOR MOWING AT MINIMUM 4 INCH HEIGHT. CONTINUE TO WATER FOR A MINIMUM 30 DAYS OR UNTIL ACCEPTED BY OWNER.
4. FOLLOWING SODDING OPERATIONS, CLEAN UP EXCESS MATERIALS, AND CLEAN ALL BARK MULCHED AND PAVED AREAS. ALL LAWNS SHALL BE GUARANTEED TO HAVE A UNIFORM STAND OF ACCEPTABLE GRASS AT THE END OF THE ONE YEAR GUARANTEE PERIOD WITH NO BARE SPOTS COMPRIZING MORE THAN 2% OF ANY LAWN AREA. ANY AREA SO NOTED WILL BE SODDED UNTIL AN ACCEPTABLKE STAND OF GRASS IS ESTABLISHED.
5. ALL DISTURBED LAWN AREAS SHALL BE SODDED AS NOTED AND AS APPROVED BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.

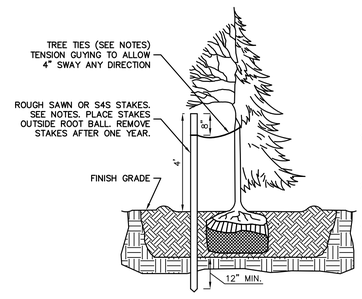


NOTES:

1. WIRE BASKETS ARE TO BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.
2. DO NOT WRAP TRUNK UNLESS SPECIFIED ON PLANS OR REQUIRED BY A REVIEWING ENGINEER OR INSPECTOR. IF TRUNK WRAPPING IS REQUIRED USE A WATERPROOF, BIODEGRADABLE TREE WRAP WITH 50% OVERLAP SECURED WITH HEMP CORD TO FIRST BRANCHING.
3. AT TIME OF PLANTING, ONLY PRUNE DEAD OR BROKEN BRANCHES, ANY SUCKERS AND ANY BRANCHES THAT MAY BE A HAZARD TO PEDESTRIANS. AT 2-3 YEARS AFTER PLANTING, PRUNE THE FOLLOWING: CODOMINANT LEADERS, RUBBING OR CROSS BRANCHES, WATER SPOUTS AND BRANCHES WITH NARROW CROTCH ANGLES.

TYPICAL TREE PLANTING DETAIL

NOT TO SCALE



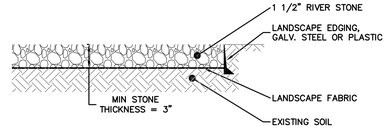
TREE STAKING NOTES:

1. STAKES TO BE CONSTRUCTION GRADE, ROUGH SAWN OR FINISHED DOUGLAR FIR OR PINE. STAKE SIZE TO BE 1 1/2" X 1 1/2" BY THE FOLLOWING LENGTHS:
   - TREES 36" AND SHORTER - USE ONE 6 FT (APPROX.) STAKE
   - TREES TALLER THAN 36" - USE TWO 8 FT (APPROX.) STAKES
2. DRIVE STAKES VERTICALLY AND AT LEAST 12" INTO UNDISTURBED SOIL. DO NOT DRIVE STAKES THROUGH ROOT BALL. LOCATE STAKES TO BEST RESIST PREVAILING WINDS WHERE POSSIBLE.
3. TREE TIES TO BE EITHER:
   PLASTIC CHAIN TYPE. APPROX. 1" WIDTH BY 1/8" DEPTH. WHERE TWO STAKES ARE REQUIRED, CROSS THE TIES BETWEEN STAKES AND WRAP TIE ONCE AROUND TREE. FASTEN SECURELY TO STAKE.

   2 STRANDS #12 GAUGE GALV. ANNEALED STEEL WIRE TWISTED. PORTION OF WIRE THAT GOES AROUND TREE TO BE ENCLOSED IN NEW BLACK REINFORCED RUBBER HOSE. WIRE IS TO BE DOUBLE WRAPPED AROUND STAKE AND TWISTED TO TIGHTEN.

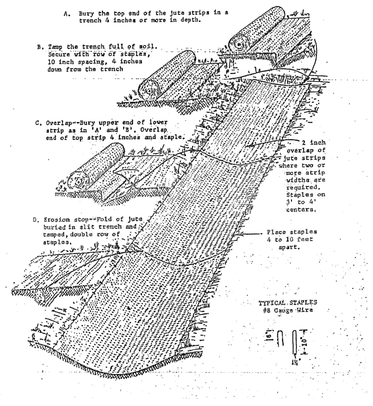
TREE STAKING DETAIL

NOT TO SCALE



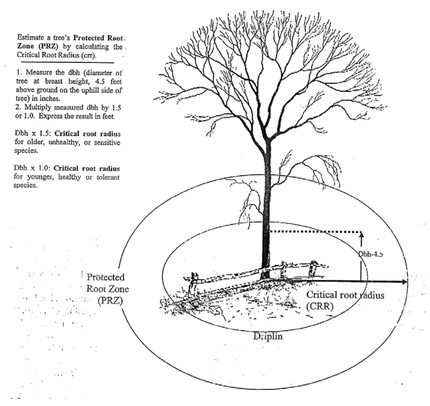
RIVER STONE MULCH COVER DETAIL

NOT TO SCALE



EROSION CONTROL MATTING INSTALLATION DETAIL

NOT TO SCALE



TREE PROTECTION INSTALLATION DETAIL

NOT TO SCALE

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STATE OF NEW JERSEY · SHAN-PEI FANCHIANG · No. GE37073 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:49:06 -04'00'

NO.	DATE	REVISION	
11	6-11-25	MOVE SAND FILTER SECTIONS TO SHEET C3.3A	V.L.
10	4-22-25	REISSUE	C.P.
9	12-30-24	REVISE SAND FILTER SECTIONS	J.A.S.
8	12-17-24	REVISE DRAWING TITLE	C.P.
7	5-14-24	REVISE BASIN SECTIONS	C.P.
6	4-24-24	REVISE BASIN SECTIONS	T.M.
5	1-31-24	ADD EROSION CONTROL MATTING INSTALLATION, TREE PROTECTION & STAKING DETAILS, CONSTRUCTION SEQUENCING AND SOIL PREPARATION NOTES.	A.D.
4	9-28-23	RE-ISSUE	M.K.
3	6-21-23	RE-ISSUE	V.L.
2	4-12-23	RE-ISSUE	V.L.
1	12-12-22	RE-ISSUE	V.L.

DRAWING TITLE

LANDSCAPE & SESC DETAILS

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1 BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
J.A.S.	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	11

DRAWING NO.

C3.7

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STABILIZATION WITH MULCH ONLY

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. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

2. PROTECTIVE MATERIALS
   A. UNROTTED SMALL–GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 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. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, i.e. THE SOIL CANNOT BE SEEN BELOW THE MULCH.
   B. B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
   C. C. WOOD–FIBER OR PAPER–FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDRO SEEDER.
   D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
   E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.
   F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ.FT. APPLIED TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C–33) IS RECOMMENDED.

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

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. 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 CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO–TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY MANUFACTURER.
   b. SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

PERMANENT STABILIZATION WITH SOD

METHODS AND MATERIALS
1. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD.
2. SOD SHOULD BE FREE TO BROADLEAF WEEDS AND UNDESIRABLE COARSE AND FINE WEED GRASSES.
3. SOD SHOULD BE OF UNIFORM THICKNESS, TYPICALLY ⅝ INCH, PLUS OR MINUS ¼ INCH, AT TIME OF CUTTING (EXCLUDES TOP GROWTH).
4. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10 PERCENT OF THE STRIP. BROKEN PADS AND ROLLS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
5. FOR DROUGHTY SITES, A SOD OF TURF–TYPE TALL FESCUE OR TURF–TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED OVER A 100% KENTUCKY BLUEGRASS SOD. ALTHOUGH NOT WIDELY AVAILABLE, A SOD OF FINE FESCUE IS ALSO ACCEPTABLE FOR DROUGHTY SITES.
6. ONLY MOIST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 24 HOURS OR LESS DURING SUMMER MONTHS.

1. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, INCORPORATION OF ORGANIC MATTER, AND OTHER SOIL PREPARATION PROCEDURES. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
   B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 6 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. SEE STANDARD FOR TOPSOILING FOR TOPSOIL AND AMENDMENT REQUIREMENTS.
   C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SOIL PREPARATION
   A. UNIFORMLY APPLY GROUND LIMESTONE, AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO–OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZERS SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 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 ½ RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ½ RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
   B. WORK LIME, AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.
   C. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO TOPSOIL CONTACT AND REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
   D. INSPECT SITE JUST BEFORE SODDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED IN ACCORDANCE WITH THE ABOVE.

3. SOD PLACEMENT
   A. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
   B. PLACE SOD STRIPS WITH SNUG, EVEN JOINTS (SEAMS) THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.
   C. LIGHTLY ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS AND INVASION OF WEEDS.
   D. ON SLOPES GRATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES BIODEGRADABLE PLASTIC SPIKES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY ¾ INCH WIDE).
   E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER–CARRYING CHANNELS AND OTHER CRITICAL AREA. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.
   F. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL WATER PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 1 INCH. MAINTAIN OPTIMUM WATER FOR AT LEAST TWO WEEKS.
4. TOPDRESSING – SINCE SOIL ORGANIC MATTER AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTIONS 1 AND 2 IN THIS STANDARD, A FOLLOW–UP TOPDRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP, TOPDRESSING SHALL THEN BE APPLIED. TOPDRESS WITH 10–0–10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEER EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

Table 6-1

Limestone [1.] Application Rate by Soil Texture		
SOIL TEXTURE	TONS/ACRE	LBS./1000 SQ. FT.
Clay, clay loam, and high organic soil	3	135
Sandy loam, loam, silt loam	2	90
Loamy sand, sand	1	45

1. Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick-Trenton line; however, this should be confirmed by soil testing.

STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL

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 A HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID–PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS 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 THE 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 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT A RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pH OF 5.0 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 OR 5 OR MORE.
   B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
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–PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORM WATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. NON–VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, 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, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID–PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

TOPSOILING NOTES

1. MATERIALS
   A. TOPSOIL SHOULD BE FRIABLE1, LOAMY2, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES
   B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

2. STRIPING AND STOCKPILING
   A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
   B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
   C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.
   D. A 4–6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.
   E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF–SITE ENVIRONMENTAL DAMAGE.
   F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (pg.4–1) OR TEMPORARY (pg.7–1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

3. SITE PREPARATION
   A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE
   B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.
      SEE THE STANDARD FOR LAND GRADING, PG. 19–1.
   C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
   D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19–1.
   E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

4. APPLYING TOPSOIL
   A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).
   B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC.. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1–1).
   C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE–APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

TEMPORARY VEGETATIVE STABILIZATION NOTES

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, PG. 19–1.
   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42. .
   C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.

2. SEEDBED PREPARATION
   A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO–OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10–20–10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
   B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
   C. NSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.
   D. SOIL HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS.

3. SEEDING
   A. MIXTURE SELECTED FROM TABLE 7–2 (SEE DETAILS SHEET C3.9) :
      PERENNIAL RYEGRASS, SEED RATE: 100LBS/ACRES,
      OPTIMUM SEEDING DATE: 2/15–5/1, 8/15–10/15,
      OPTIMUM SEED DEPTH: 0.5
   (SANDY SOILS REQUIRE TWICE THE DEPTH FOR OPTIMAL SEED DEPTH.)
      PEARL MILLET , SEEDING RATE: 20LB/ACRES,
      OPTIMUM SEEDING DATE: 5/1– 9/1,
      OPTIMUM SEDING DEPTH: 1.0
   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 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 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. MULCH 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 OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, 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 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 LAWNS DUE TO THE PRESENCE OF WEED SEED. APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE COVERED. 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.
   B. REFER TO MULCH ANCHORING NOTES UNDER STABILIZATION WITH MULCH ONLY.
   C. WOOD–FIBER OR PAPER–FIBER MULCH – SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 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 SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
   D. 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.

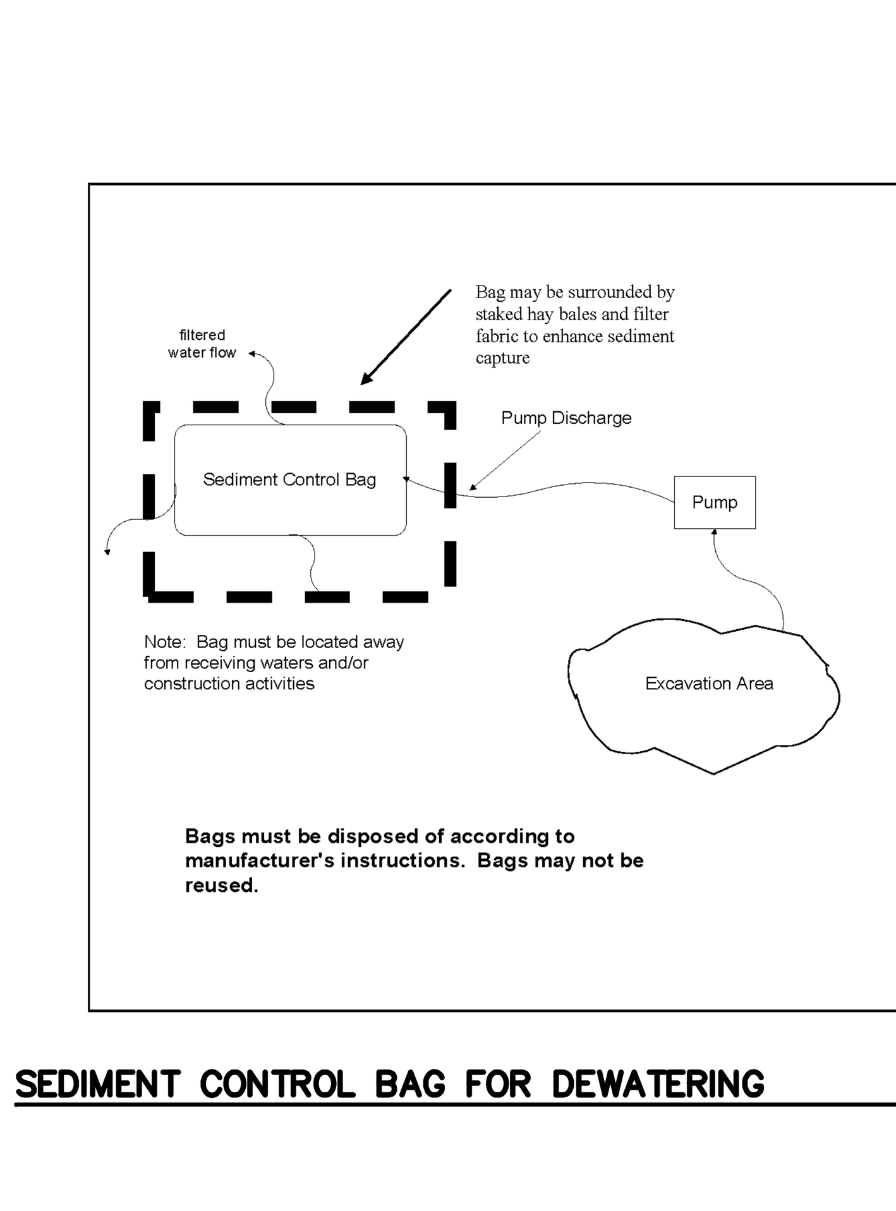
STANDARD FOR DEWATERING

DURING CONSTRUCTION EXCAVATED FACILITIES NEED TO BE DEWATERED TO FACILITATE OR COMPLETE THE CONSTRUCTION PROCESS. THE WATER PUMPED OUT OF THE EXCAVATED AREAS CONTAIN SEDIMENTS THAT MUST BE REMOVED PRIOR TO DISCHARGING TO RECEIVING BODIES OF WATER. THIS STANDARD DOES NOT ADDRESS THE REMOVAL OF GROUND WATER THROUGH WELL POINTS ETC.
THIS STANDARD DESCRIBES THE FOLLOWING PRACTICES FOR THE REMOVAL OF SEDIMENT LADEN WATERS FROM EXCAVATION AREAS:
REMOVABLE PUMPING STATIONS, SUMP PITS, PORTABLE SEDIMENTATION TANKS AND SILT CONTROL BAGS.

WATER DISCHARGED FROM EXCAVATED AREAS ON CONSTRUCTION SITES MAY BE A SIGNIFICANT CONTRIBUTOR OF SEDIMENT TO SURFACE WATERS DURING CONSTRUCTION. WATER MUST BE REMOVED AND DISPOSED OF IN ORDER FOR CONSTRUCTION TO MOVE FORWARD. TYPICALLY, WATER IS PUMPED OR CONTAINMENT BERMS ARE BREACHED AND SEDIMENT LADEN WATERS ARE PERMITTED TO FLOW UNCONTROLLED INTO SURFACE WATERS SUCH AS STREAMS OR LAKES. BY EMPLOYING PRACTICES DESCRIBED IN THIS STANDARD, THE MAJORITY OF SEDIMENT SUSPENDED IN WATERS MAY EASILY BE REMOVED PRIOR TO LEAVING THE SITE. FILTERS AND MATERIALS DESCRIBED HEREIN ARE READILY AVAILABLE AND ARE EASY TO INSTALL AND MAINTAIN.

1. DESIGN CRITERIA
   A. SEDIMENT TANK / SILT CONTROL BAGS ARE CONTAINERS THROUGH WHICH SEDIMENT LADEN WATER IS PUMPED TO TRAP AND RETAIN THE SEDIMENT. A SEDIMENT TANK OR A SILT CONTROL BAG IS TO BE USED ON SITES WERE EXCAVATIONS ARE DEEP, AND SPACE IS LIMITED AND WHERE DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO STREAM AND STORM DRAINAGE SYSTEMS IS TO BE AVOIDED.
   B. TEMPORARY FILTERS FOR SMALL IMPOUNDMENTS FOR SMALL QUANTITIES OF PONDED WATER SUCH AS MAY BE FOUND IN SHALLOW EXCAVATIONS (SMALL TRENCHES, MANHOLE INSTALLATIONS ETC.) A SEDIMENT FILTER MAY BE CONSTRUCTED USING COMBINATIONS OF HAY BALES, SMALL CLEAN STONE AND FILTER FABRIC. THIS METHOD IS LIMITED TO SMALL QUANTITIES OF TRAPPED SURFACE WATER (PUMPING OF WELL POINTS IS EXCLUDED FROM THIS STANDARD) AND WHERE SEDIMENTS ARE NOT HIGHLY COLLOIDAL IN NATURE.
   C. CONTAINERS (TANKS OR BAGS) SHALL BE LOCATED FOR EASE OF CLEAN–OUT AND DISPOSAL OF THE TRAPPED SEDIMENT AND TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND PEDESTRIAN TRAFFIC. BAGS SHALL NOT BE PLACE DIRECTLY INTO RECEIVING WATERS. SEDIMENT CONTROL BAGS MUST BE LOCATED AWAY FROM RECEIVING WATERS AND DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTION.

SILT CONTROL BAG NOTE
LOCATION: CONTAINERS (TANKS OR BAGS) SHALL BE LOCATED FOR EASE OF CLEAN–OUT AND DISPOSAL OF TRAPPED SEDIMENT AND TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND PEDESTRIANS TRAFFIC. BAGS SHALL NOT BE PLACED DIRECTLY INTO RECEIVING WATERS.' AND 'SEDIMENT CONTROL BAGS MUST BE LOCATED AWAY FROM RECEVING WATERS AND DISPOSAL OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS. SEE DETAILS 14–4. BAGS MAY BE COMBINED WITH TEMPORARY FILTERS (ITEM 4, FOLLOWING) FOR ENHANCED FILTRATION.'



SEDIMENT CONTROL BAG FOR DEWATERING

NOT TO SCALE

STANDARD FOR MAINTAINING VEGETATION

A PREVENTIVE MAINTENANCE PROGRAM ANTICIPATES REQUIREMENTS AND ACCOMPLISHES WORK WHEN IT CAN BE DONE WITH LEAST EFFORT AND EXPENSE TO INSURE ADEQUATE VEGETATIVE COVER.

MAINTENANCE SHOULD OCCUR ON A REGULAR BASIS, CONSISTENT WITH FAVORABLE PLANT GROWTH, SOIL, AND CLIMATIC CONDITIONS. THIS INVOLVES REGULAR SEASONAL WORK FOR MOWING, FERTILIZING, LIMING, WATERING, PRUNING, FIRE CONTROL, WEED AND PEST CONTROL, RESEEDING, AND TIMELY REPAIRS.

THE DEGREE OF PREVENTIVE MAINTENANCE NEEDED DEPENDS UPON THE TYPE OF VEGETATION AND ITS PROPOSED FUNCTION OR USE.

1. MOWING IS A RECURRING PRACTICE AND ITS INTENSITY DEPENDS UPON THE FUNCTION OF THE GROUND COVER. ON HIGH TO MODERATE (A TO B) MAINTENANCE AREAS, SUCH AS LAWNS, CERTAIN RECREATION FIELDS, AND PICNIC AREAS, MOWING WILL BE FREQUENT (2 TO 7 DAY INTERVALS) AND TYPICALLY AT A HEIGHT OF 2.5 TO 3 INCHES. RETURN CLIPPINGS FROM MOWING (MULCHING MOWER) TO THE TURF TO REDUCE THE AMOUNT OF FERTILIZER NEEDED TO MAINTAIN THE TURF BY AS MUCH AS 50%. SOME TURF MIXTURES CAN BE MANAGED AS NATURALIZED STANDS REQUIRING ONLY ONE (COOL SEASON MIXTURES) OR TWO (WARM SEASON MIXTURES) MOWINGS PER YEAR. MOWING OF NATURALIZED AREAS IS TYPICALLY DONE AT HEIGHTS NO LESS THAN 4 INCHES AND SHOULD NOT BE DONE BETWEEN APRIL 1ST AND JULY 15TH TO AVOID DISTURBING GROUND NESTING BIRDS. THE LARGE AMOUNT OF CLIPPING DEBRIS GENERATED BY MOWING NATURALIZED AREAS WILL NEED TO BE REMOVED AND/OR DISPERSED SO THE VEGETATION IS NOT SMOTHERED. BURNING OF NATURALIZED AREAS IS ANOTHER PROCEDURE USED TO MANAGE NATURALIZED TURFS. LOW MAINTENANCE (D) AREAS MAY BE LEFT UNMOWED TO PERMIT NATURAL SUCCESSION. SEE PG. 4–13 FOOTNOTE #4, MAINTENANCE LEVELS A, B, C AND D IN THE STANDARD FOR PERMANENT VEGETATIVE COVER, TABLE 4–3.
2. INCORPORATION OF ORGANIC MATTER (FOR EXAMPLE, MATURE COMPOST) INTO THE SOIL WILL SUBSTANTIALLY REDUCE THE NEED FOR FERTILIZER AND IRRIGATION INPUTS. 3.
3. FERTILIZER AND LIME SHOULD BE APPLIED AS NEEDED TO MAINTAIN A DENSE STAND OF DESIRABLE SPECIES. FREQUENTLY MOWED AREAS AND THOSE ON SANDY SOILS WILL REQUIRE MORE FREQUENT FERTILIZATION BUT AT LOWER NUTRIENT RATES PER APPLICATION.
4. LIME REQUIREMENT SHOULD BE DETERMINED BY SOIL TESTING EVERY 2 OR 3 YEARS. FERTILIZATION MAY INCREASE THE NEED FOR LIMING. CONTACT THE LOCAL COUNTY EXTENSION OFFICE FOR DETAILS ON SOIL TESTING AND FERTILIZATION AND PEST CONTROL RECOMMENDATIONS ONLINE AT HTTP://NJAES.RUTGERS.EDU/COUNTY/.
5. FERTILIZATION AND ADDITIONS OF OTHER SOIL AMENDMENTS ARE NOT RECOMMENDED FOR MANAGING NATIVE VEGETATION SUCH AS IN THE PINELANDS NATIONAL RESERVE. SEE THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION FOR SPECIFIC REQUIREMENTS IN THE PNR.
6. WEED INVASION MAY RESULT FROM ABUSIVE MOWING AND FROM INADEQUATE FERTILIZING AND LIMING. MANY NEWLY ESTABLISHED GRASSES WILL NOT SURVIVE IF MOWED AT HEIGHTS BELOW 2.5 INCHES AND AT INTERVALS GREATER THAN 7 DAYS. BRUSH INVASION IS A COMMON CONSEQUENCE OF LACK OF MOWING. THE AMOUNT OF WEEDS OR BRUSH THAT CAN BE TOLERATED IN ANY VEGETATED AREA DEPENDS UPON THE INTENDED USE OF THE LAND. DRAINAGE WAYS ARE SUBJECT TO RAPID INFESTATION BY WEED AND WOODY PLANTS. THESE SHOULD BE CONTROLLED, SINCE THEY OFTEN REDUCE DRAINAGE WAY EFFICIENCY. CONTROL OF WEEDS OR BRUSH IS ACCOMPLISHED BY USING HERBICIDES OR MECHANICAL METHODS.
7. FIRE HAZARD IS GREATER WHERE DRY VEGETATION HAS ACCUMULATED. THE TALLER THE VEGETATION, THE GREATER THE HAZARD.
8. PRUNE TREES AND SHRUBS TO REMOVE DEAD OR DAMAGED BRANCHES. REMOVE UNDESIRABLE OR INVASIVE PLANTS TO MAINTAIN INTEGRITY OF THE LANDSCAPE AND ENHANCE QUALITY OF PERMANENT VEGETATIVE COVER.

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

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 STANDARD 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 SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES . 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 AS 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 OR 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 FOR SPECIFIC REQUIREMENTS.

3. SEEDING
   A. MIXTURE SELECTED FROM TABLE 4–3 (SEE DETAILS SHEET C3.9):
      MIXTURE #1:

      DEERTONGUE (PLANTING RATE:15 LBS/ACRE – PLANTING DATE: 2/1–4/30)
      SWITCHGRASS (PLANTING RATE: 20 LBS/ACRE – PLANTING DATE: 2/1–4/30)
      REDTOP (PLANTING RATE: 1 LBS/ACRE – PLANTING DATE: 2/1–4/30)

      REMARKS: USE DEERTONGUE IF PH<4.0. SWITCHGRASS IS SUPERIOR WILDLIFE PLANT. USE FOR WATERWAYS. REDTOP PROVIDES QUICK COVER.

      MIXTURE #2:

      DEERTONGUE (PLANTING RATE: 20 LBS/ACRE – PLANTING DATE: 2/1–4/30)
      REDTOP (PLANTING RATE: 2 LBS/ACRE – PLANTING DATE: 2/1–4/30)
      WILD RYE (ELYMUS) (PLANTING RATE: 15 LBS/ACRE – PLANTING DATE: 2/1–4/30)
      SWITCHGRASS (PLANTING RATE: 25 LBS/ACRE – PLANTING DATE: 2/1–4/30)

      REMARKS: NATIVE WET MIX.

      MIXTURE #3:

      TALL FESCUE (TURF–TYPE) (PLANTING RATE: 265 LBS/ACRE – PLANTING DATES: 2/1–4/30 & 5/1–8/14 & 8/15–10–30)
      PERENNIAL RYEGRASS (PLANTING RATE: 2 LBS/ACRE – PLANTING DATE: 2/1–4/30 & 5/1–8/14 & 8/15–10–30)
      WHITE CLOVER (ELYMUS) (PLANTING RATE: 15 LBS/ACRE – PLANTING DATE: 2/1–4/30 & 5/1–8/14 & 8/15–10–30)

      REMARKS: WHITE CLOVER CAN BE EXCLUDED ON LAWN SITES.

   B. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED.
   C. 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 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE–TEXTURED SOIL.
   D. 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.
   E. 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. MULCH 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 OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, 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 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 LAWNS DUE TO THE PRESENCE OF WEED SEED. APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. 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.
   B. REFER TO MULCH ANCHORING NOTES UNDER STABILIZATION WITH MULCH ONLY.
   C. WOOD–FIBER OR PAPER–FIBER MULCH – SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 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 SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
   D. 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 1/4 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 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 RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

FLOCCULENT NOTES

A FLOCCULENT SUCH AS "PAM" (POLYACRYLAMIDE) MAY BE ADDED TO THE BASIN IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS TO REMOVE FINE SUSPENDED COLLOIDAL MATERIAL PRIOR TO DEWATERING. ALL DEWATERING DISCHARGES MUST BE TO A STABILIZED LOCATION. A SOURCE OF FREE CATIONIC IONS (SUCH AS $Ca2+$) MAY BE REQUIRED AT A RATE OF 50–60 GM $Ca2+$ /KG PAM TO ENCOURAGE BONDING BETWEEN COLLOIDS AND PAM. MATERIALS SUCH AS LIME, CaCl, GYPSUM OR FLYASH MAY BE USED TO PROVIDE THE ACTION COMPONENT. THE FLOCCULENT SHALL NOT CAUSE ADVERSE ENVIRONMENTAL CONDITIONS TO DEVELOP IN THE AREA RECEIVING THE BASIN DISCHARGE. FLOCCULENT MAY BE ADDED THROUGH THE USE OF 'LOGS' OR SIMILAR DEVICES IMPREGNATED WITH PAM TO DOES INFLOW WATER PRIOR TO ENTRANCE TO THE SEDIMENT BASIN. SUCH DEVICES SHALL BE PLACED TO ALLOW COMPLETE PASSAGE OF THE DESIGN STORM AND SHALL NOT OBSTRUCT FLOW THROUGH STORM SEWER SYSTEMS.

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No. GE37073
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PROFESSIONAL ENGINEER

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Date: 2025.07.15 15:50:18 -04'00'

NO.	DATE	REVISION	
4	6-11-25	REVISE NOTES PER SOIL DISTRICT	C.P.
3	4-22-25	REISSUE	J.A.S.
2	12-17-24	REVISE NOTES PER SOIL DISTRICT	CP
1	5-14-24	REVISE NOTES PER SOIL DISTRICT	AD

DRAWING TITLE
SOIL EROSION & SEDIMENT CONTROL DETAILS 1

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
J.A.S.	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
11-8-22	4

DRAWING NO.
C3.8

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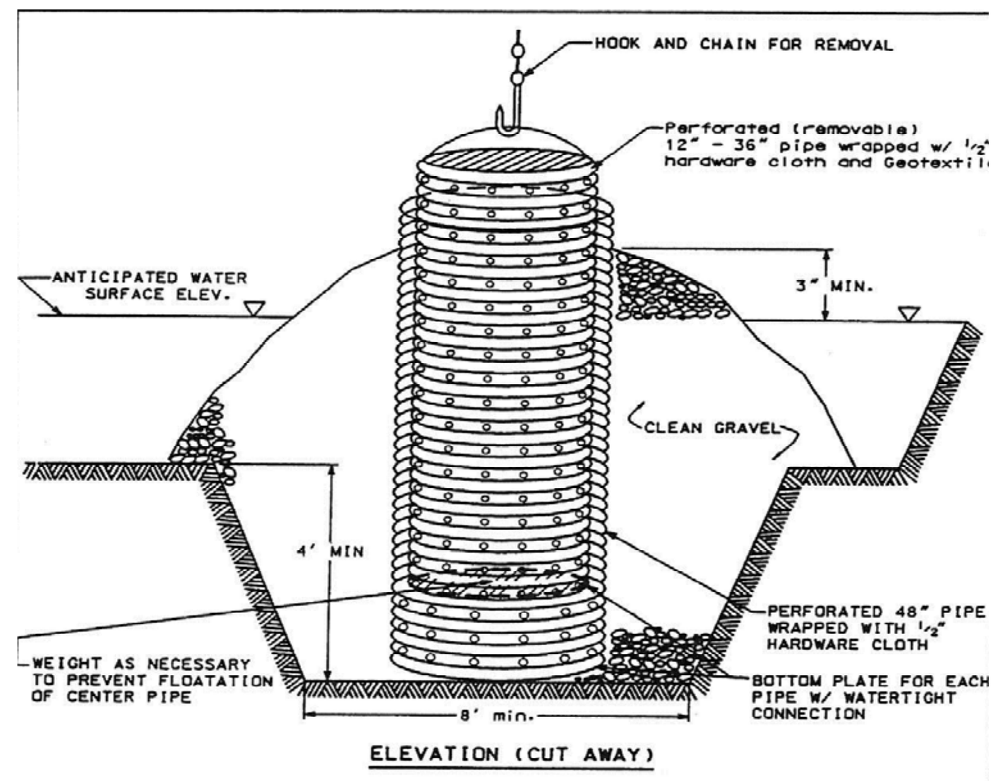
SEED SELECTIONS	SEEDING RATE [1] (pounds)		OPTIMUM SEEDING DATE [2] Based on Plant Hardiness Zone [3]			OPTIMUM SEED DEPTH [4] (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. Perennial ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. Spring oats	86	2.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1 - 11/1	8/1 - 11/15	8/1 - 12/15	1.0
WARM SEASON GRASSES						
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH

NOT TO SCALE



Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with ½" hardware cloth to prevent backfill material from entering the perforations.

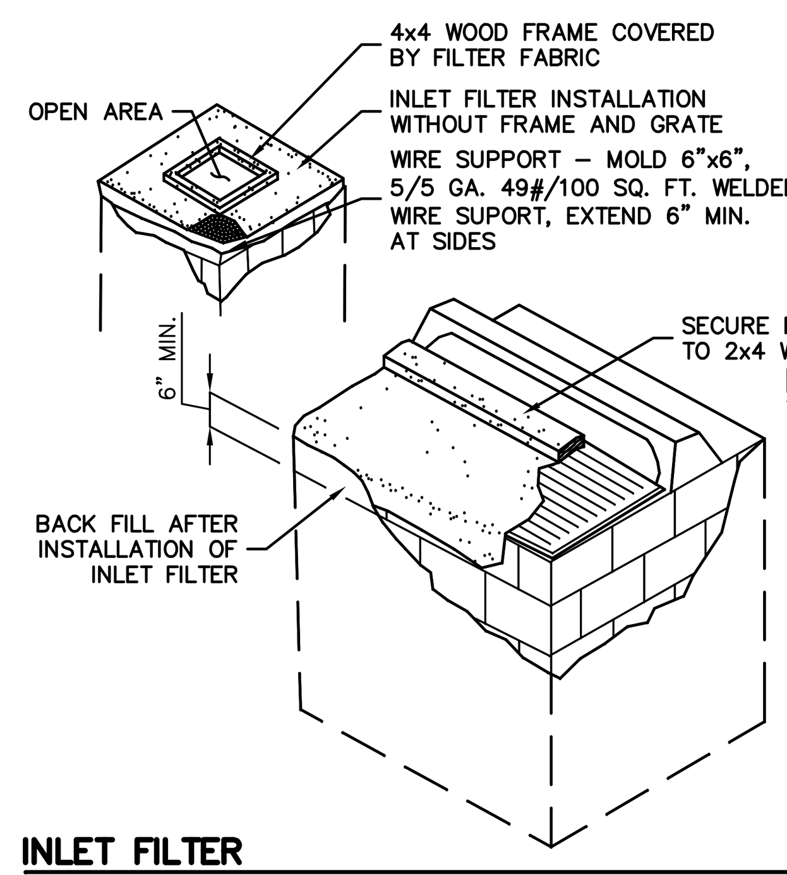
2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be ½" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with ½" hardware cloth first, then wrapped again with Geotextile Class E.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

REMOVABLE PUMPING STATION

NOT TO SCALE

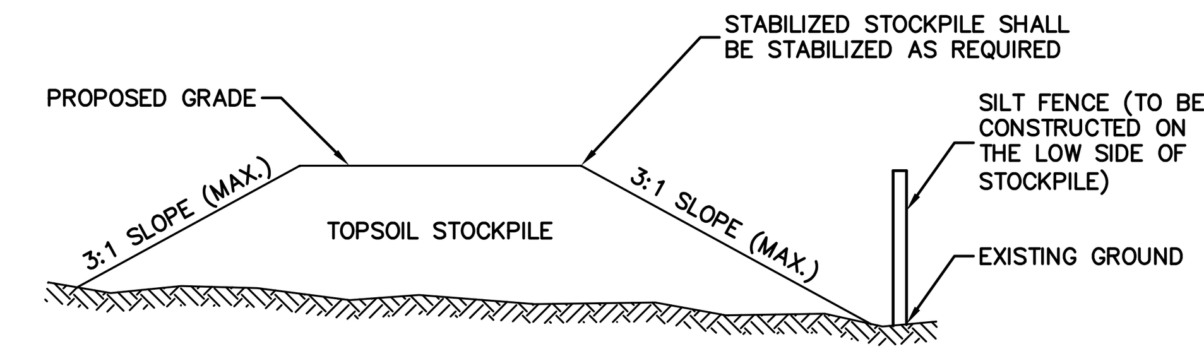


NOTES

1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EACH STORM.
2. CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.
3. THE PROTECTION IS DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.
4. INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE FILTER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABALIZED.

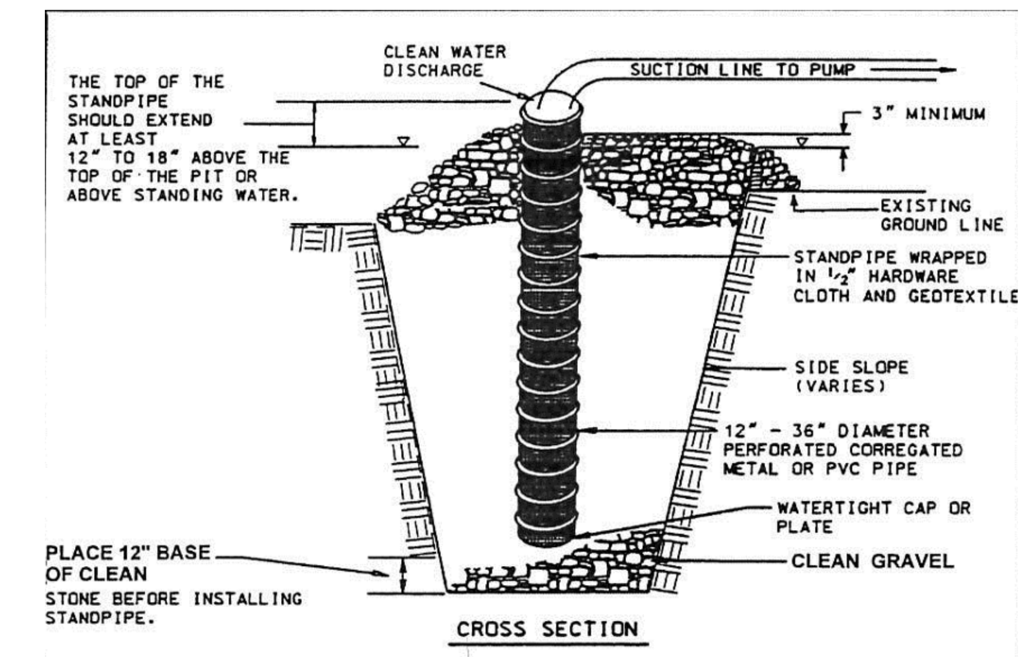
INLET FILTER

NOT TO SCALE



TOPSOIL STOCKPILE DETAIL

NOT TO SCALE



Construction Specifications

1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.

2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with ½" hardware cloth and Geotextile fabric. The perforations shall be ½" x 6" slits or 1" diameter holes.

3. A base of filter material consisting of clean gravel or ASTM C 33 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.

4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

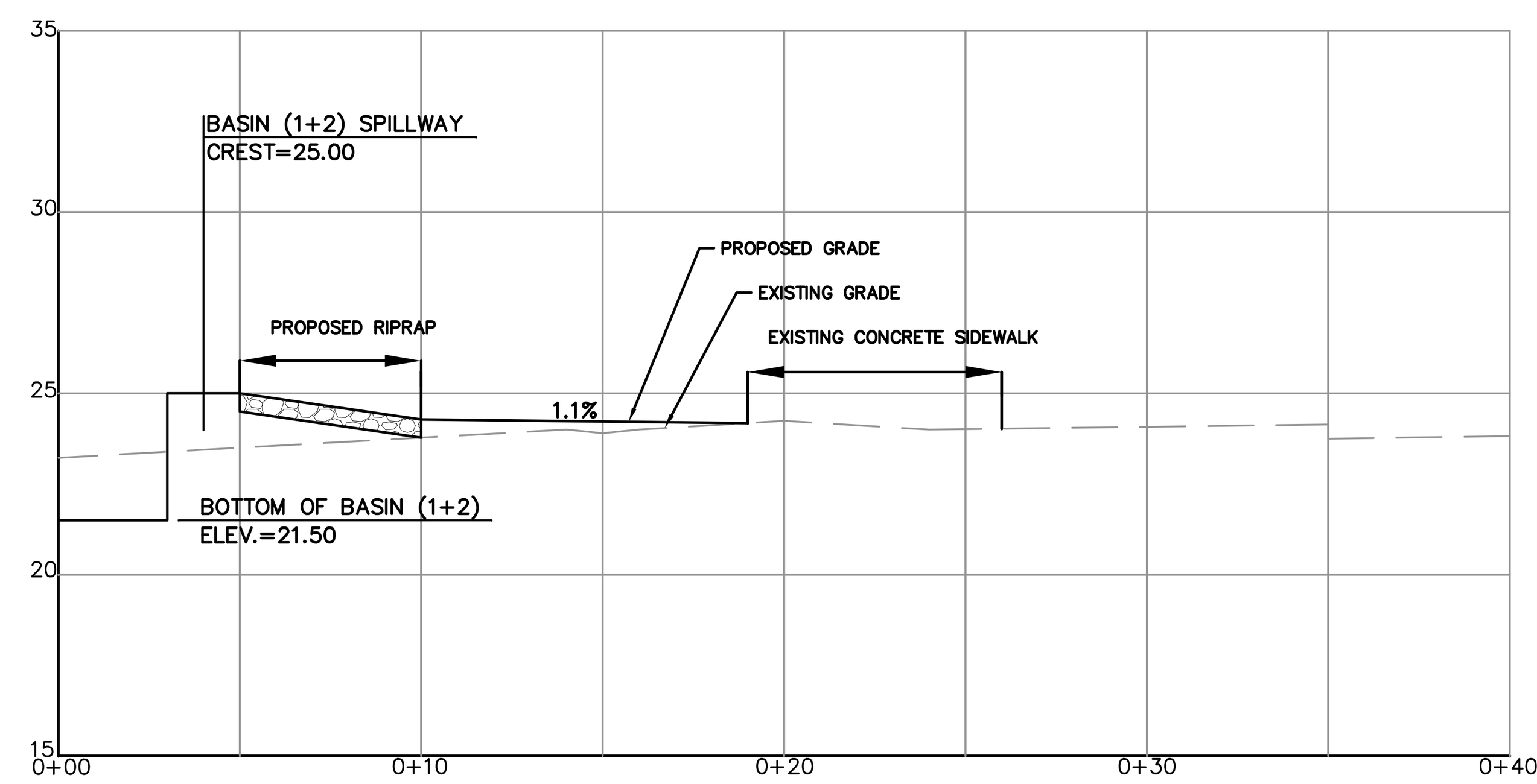
SUMP PIT

NOT TO SCALE

PERMANENT VEGETATIVE MIXTURES, PLANTING RATES AND PLANTING DATES[1]													
SEED MIXTURE [2]	PLANTING RATE [3]		PLANTING DATES. O = Optimal Planting period A = Acceptable Planting period PLANT HARDINESS ZONES (see Figure 4-1)									MAINTENANCE LEVEL [4]	REMARKS
			Zone 5b, 6a			Zone 6b			Zone 7a, 7b				
	lbs/acre	lbs/1000 sq. ft.	3/15-5/31	6/1-7/31	8/1-10/1	3/1-4/30	5/1-8/14	8/15-10/15	2/1-4/30	5/1-8/14	8/15-10/30		
WARM SEASON SEED MIXTURES 1A. For Pinelands National Reserve Seed mixtures see Table 4-4 page 4-17			O			O			O				
1. Switchgrass and/or Coastal panicgrass plus or Flatpea	15 15 ~~20~~ 20	.35 .35 ~~.45~~ .45	O			O			O			C-D	
MIXTURE #1 → 2. Deertongue or Switchgrass Redtop	15 20 1 ~~40~~	.35 .45 .1 ~~.23~~	O			O			O			C-D	Use Deertongue if pH < 4.0. Switchgrass is superior wildlife plant. Use for waterways. Redtop provides quick cover.
3. Switchgrass Deertongue Little Bluestem Sheep fescue plus Partridge pea	15 10 20 20 10	.35 .25 .45 .45 .25	O			O			O			C-D	Pinelands mixture.
4. Switchgrass Big Bluestem Little Bluestem Sand lovegrass Coastal panicgrass	10 5 5 4 10	.25 .10 .10 .10 .25	O			O			O			C-D	Native warm-season mixture.
5. Bermudagrass Zoysiagrass (seed) Zoysiagrass (sprigs)	15 30	0.35 0.70	O			O			O			A-D	Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance
COOL SEASON SEED MIXTURES	130	3	A	A^5	O	A	A^5	O	A	A^5	O		General low-maintenance mixture.
6. Fine Fescue (Blend) Hard Fescue Chewings fescue Strong Creeping Red Fescue Kentucky bluegrass Perennial ryegrass plus White clover (see note at right)	45 20 5	.1 ..5 .10										B-D	White clover can be removed when used to establish lawns
7. Strong Creeping red fescue Kentucky bluegrass Perennial ryegrass or Redtop plus White clover	130 50 20 10 5	3 1 .5 .25 .10	A	A^5	O	A	A^5	O	A	A^5	O	B-D	Suitable waterway mix. Canada bluegrass more drought tolerant. Use Redtop for increased drought-tolerance.
8. Tall fescue (turf-type) or Strong Creeping red fescue or Perennial ryegrass Flatpea	30 30 30 25	.7 .7 .7 .60	O	A^6		O	A^6		O	A^6		B-D	Tall fescue best selected for droughty conditions. Use Creeping red fescue in heavy shade. Use Flatpea to suppress woody vegetation.
MIXTURE #2 → 9. Deertongue Redtop Wild rye (Elymus) Switchgrass	20 2 15 25	.45 .05 .35 .60	O			O			O			C-D	Native wet mix.
MIXTURE #3 → 10. Tall fescue (turf-type) Perennial ryegrass or White clover (see note at right)	265 20 ~~40~~ 5	6 5 ~~.25~~ .10	O	A^5	A^5	O	A^5	A^5	O	A^5	A^5	C-D	white clover can be excluded on lawn sites
11 Kentucky Bluegrass Turf-type Tall fescue	~~15~~ 45 22	~~0.33~~ 1 5	A	A^5	O	A	A^5	O	A	A^5	O	C-D	Filter strip use for nutrient uptake.
12. Turf-type Tall fescue (Blend of 3 cultivars)	350	8	A	A^5	O	A	A^5	O	A	A^5	O	C-D	Use in a managed filter strip for nutrient uptake.
13. Hard Fescue and/or Chewing fescue and/or Strong creeping red fescue Perennial ryegrass Ky. bluegrass (blend)	175 45 45	4 1 1	A	A^5	O	A	A^5	O	A	A^5	O	A-C	General lawn/recreation.
14. Tall fescue Ky. bluegrass (blend) Perennial ryegrass (blend)	265 20 20	6 0.50 0.50	A	A^5	O	A	A^5	O	A	A^5	O	A-B	Athletic field/ 3 cultivar mix of Kentucky Bluegrass.
15. Hard fescue Chewings fescue Strong Creeping red fescue Perennial ryegrass	130 45 45 10	3 1 1 .25	A	A^5	O	A	A^5	O	A	A^5	O	C-D	Low-maintenance fine fescue lawn mix.
16. Rough bluegrass Strong Creeping red fescue	90 130	2.0 3	A	A^5	O	A	A^5	O	A	A^5	O	C-D	Moist shade.
17. Creeping bentgrass Creeping red fescue Alkali saltgrass	45 45 45	1 1 1	A	A^5	O	A	A^5	O	A	A^5	O	B-D	Use bentgrass under wetter conditions. Saltgrass will only persistent under saline conditions.
18. Hard or Sheeps fescue N. E. wildflower mixture	25 12	0.60 0.35	O	A	O	O	A	O	O	A	O	C-D	Regional Wildflower mix. Hydroseeding not recommended.
19. a. Smooth cordgrass b. Saltmeadow cordgrass	veg veg					O	Before July 1		O	Before July 1		D	Planted in the intertidal zone. Planted above mean high tide.
20. American Beachgrass Coastal Panicgrass	Veg 20	.45				Before April 1			O			D	Coastal Panicgrass may be interseeded between rows of beachgrass
21. a. Purpleosier willow b. Dwarf willow c. Redosier dogwood d. Silky dogwood	veg veg. veg. veg.		Before May 10			Before May 10			**Before May 1**			D	Also refer to Chapters 16 and 18 of USDA NRCS Engineering Field Handbook

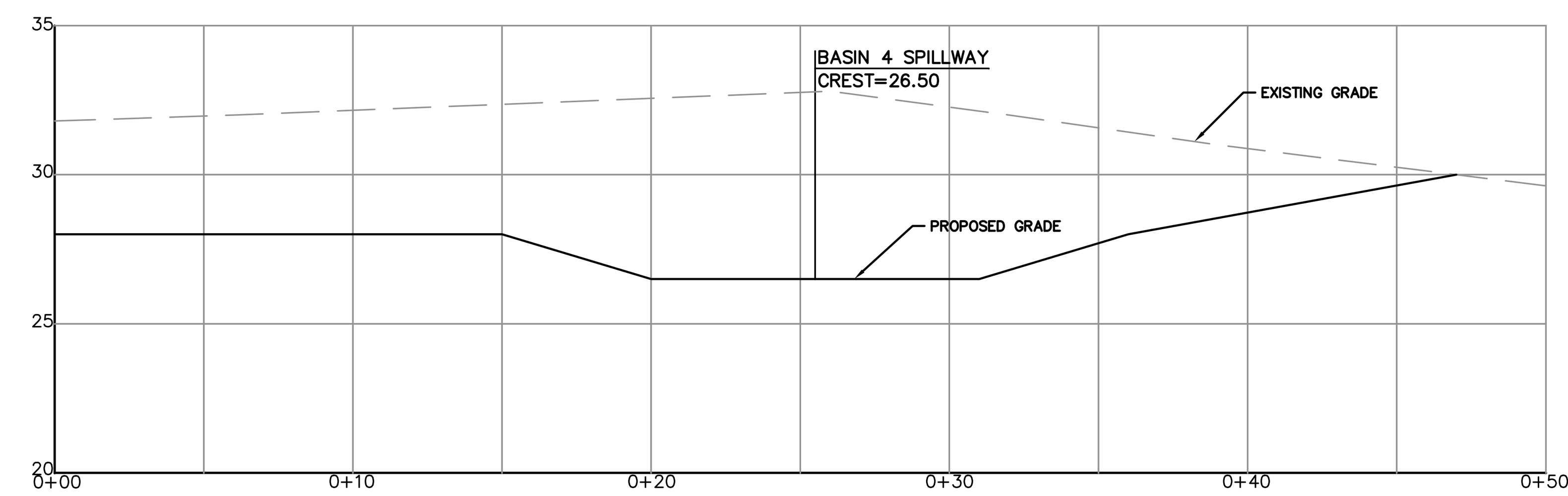
PERMANENT VEGETATIVE MIXTURE PLANTING RATES AND PLANTING DATES

NOT TO SCALE



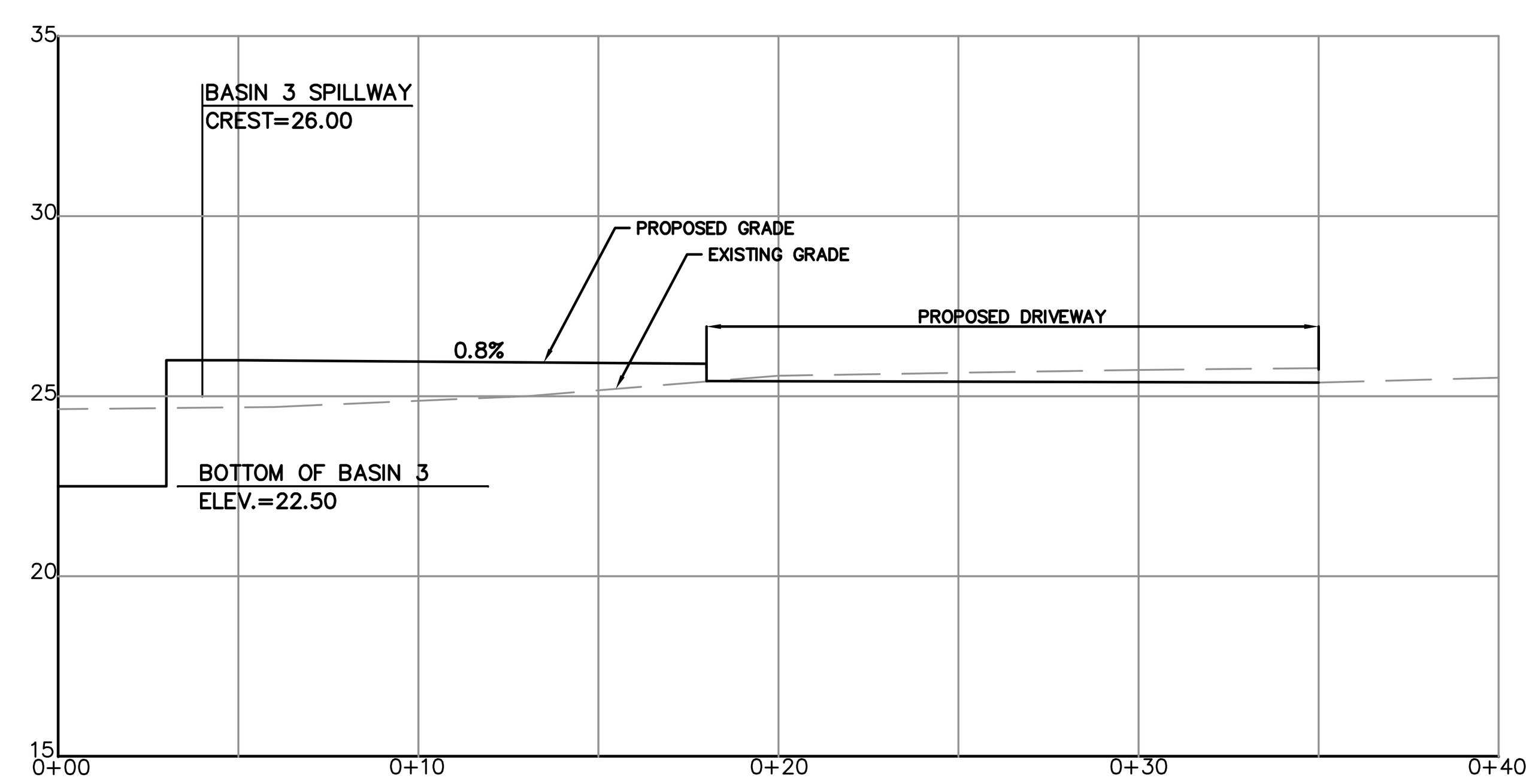
BASIN 1+2 SPILLWAY PROFILE

SCALE: V. 1"=5' H. 1"=5'



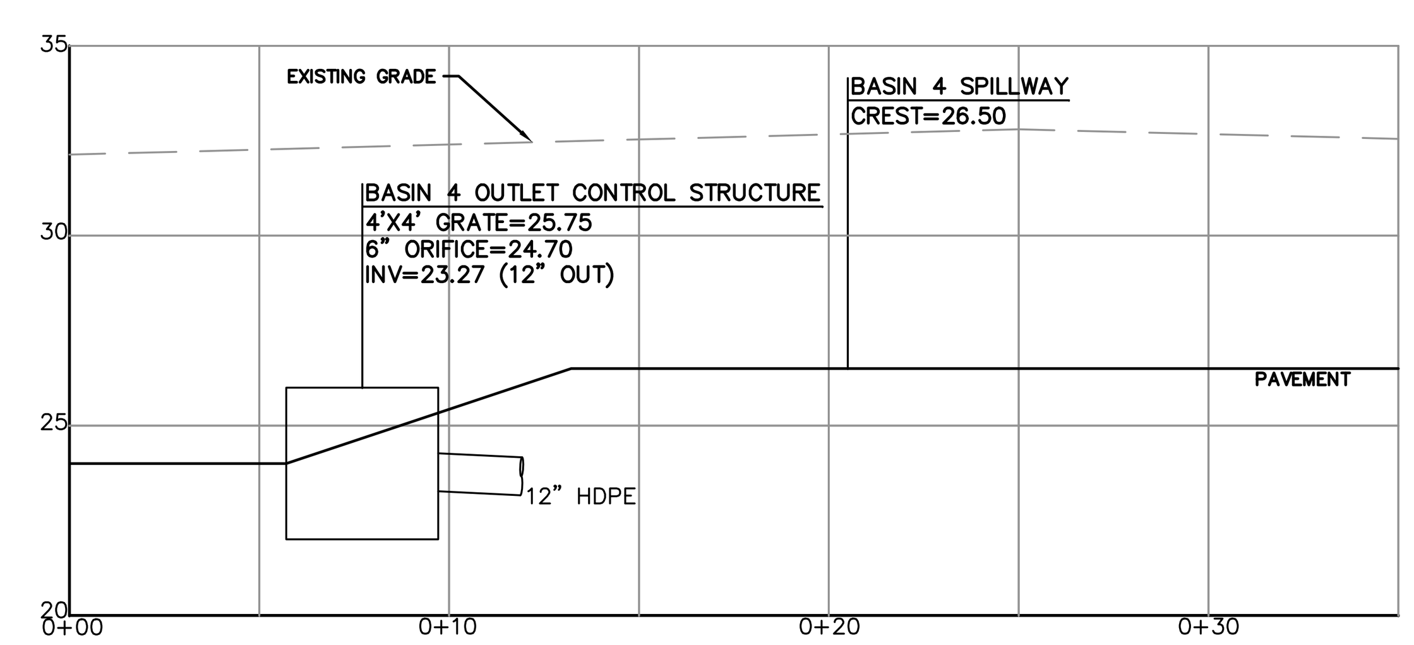
BASIN 4 SPILLWAY (A-A) PROFILE

SCALE: V. 1"=5' H. 1"=5'



BASIN 3 SPILLWAY PROFILE

SCALE: V. 1"=5' H. 1"=5'



BASIN 4 SPILLWAY (B-B) PROFILE

SCALE: V. 1"=5' H. 1"=5'

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PROFESSIONAL ENGINEER
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MA LIC. NO. 40595 NY LIC. NO. 60022
NH LIC. NO. 9368 RI LIC. NO. 6694
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STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang Date: 2025.07.15 15:51:35 -04'00'

NO.	DATE	REVISION	
3	6-11-25	REVISE BASIN 4 SPILLWAY PROFILE	C.P.
2	4-22-25	REISSUE	J.A.S.
1	12-30-24	REVISE BASIN 4 SPILLWAY (A-A) PROFILE	CP

DRAWING TITLE

SOIL EROSION & SEDIMENT CONTROL DETAILS 2

PROJECT

WaWa Food Market & Fueling Station

BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT

M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION 24GA28068900 / 21MH00002800

DRAWN BY	CHECKED BY
M.K.	C.J.B.
SCALE	PROJECT NO.
AS SHOWN	21-312
DATE	REVISION NO.
4-1-24	3

DRAWING NO.

C3.9

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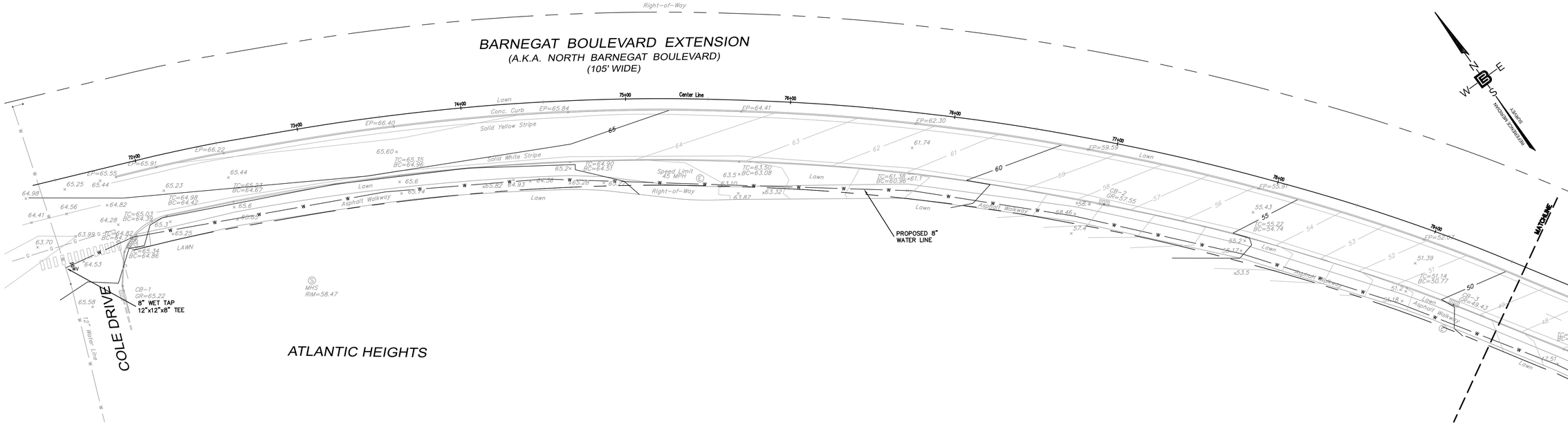

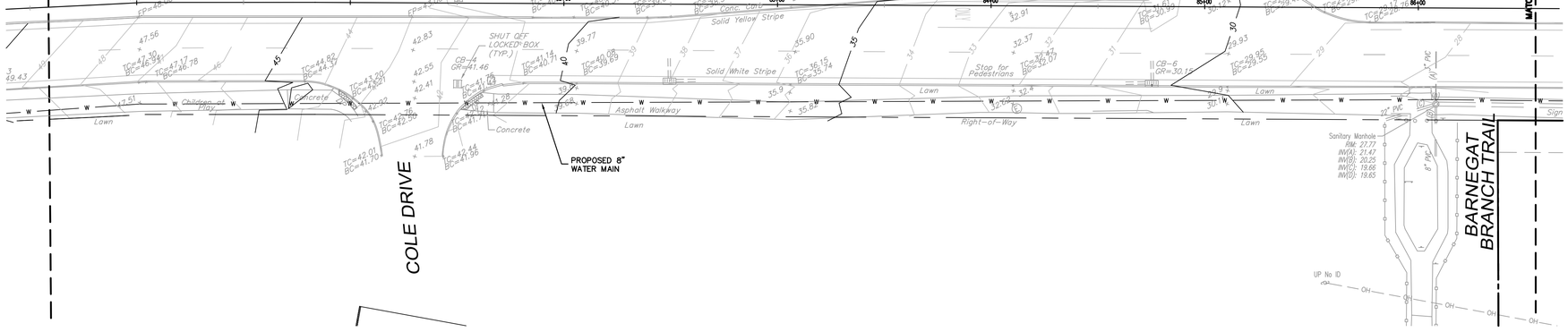

LEGEND

EOP	EXISTING EDGE OF PAVEMENT	FIRE HYDRANT	+ 14.18 PROPOSED SPOT ELEVATION
	TRAFFIC SIGN	DRAINAGE MANHOLE	14 PROPOSED CONTOUR LINE
	AREA LIGHT	CURB INLET	AREA LIGHT
	FIRE HYDRANT	YARD INLET	AREA LIGHT W/HOUSE SIDE SHIELD
	UTILITY POLE	INLET FILTER	DS DOWNSPOUT
x 00.00	SPOT ELEVATION	SANITARY MANHOLE	SILTFENCE
GV	GAS VALVE	UGE UNDERGROUND ELECTRIC LINE	LIMIT OF DISTURBANCE
WV	WATER VALVE	G GAS LINE	SAWCUT LINE
	SANITARY MANHOLE	W WATER LINE	SOIL TEST PIT
	DRAINAGE MANHOLE	S PROP. SANITARY LINE	
	TREELINE	T&D PROP. TELEPHONE & DATA LINE	
00	EXISTING CONTOUR	D DRAINAGE LINE (UNDER 12")	
OH	EXISTING OVERHEAD WIRE	DRAINAGE LINE (12" & UP)	
GAS	EXISTING GAS MARK-OUT	SAWCUT LINE	
WATER	EXISTING WATER MARK-OUT		
E	EXISTING ELECTRIC MARK-OUT		

WATER DEMANDS

NEW BUILDING

RETAIL: 0.125 GPD/SF x 5,585 SF =	698.1 GPD
ISLANDS: 125 GPD/FUELING POSITION x 12 POSITIONS =	1,500.0 GPD
NEW BUILDING TOTAL =	2,198.1 GPD

EXISTING BUILDING / LEFTY'S

RESTAURANT: 100 SEATS x 35 GPD =	3,500 GPD
OVERALL TOTAL =	5,698.1 GPD

SEWER DEMANDS

NEW BUILDING

RETAIL: 0.1 GPD/SF x 5,585 SF =	558.5 GPD
ISLANDS: 125 GPD/FUELING POSITION x 12 POSITIONS =	1,500.0 GPD
NEW BUILDING TOTAL =	2,058.5 GPD

* *LEFTY'S/RESTAURANT ALREADY TIED INTO SEWER LINE*

GENERAL NOTES

1. GENERAL CONTRACTOR SHALL EMPLOY AN INDEPENDENT SOIL INSPECTOR FOR 100% CONTINUOUS INSPECTION OF THE BEDDING AND BACKFILL OPERATIONS. COMPACTION TESTS SHALL BE TAKEN AT THE BOTTOM OF TRENCH AND AT EACH LIFT OF BACKFILL.
2. GENERAL CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO RECORD AS-BUILT TOP OF PIPE ELEVATIONS TAKEN WHEN BEDDING APPLICATION IS 75% COMPLETE. THESE ELEVATIONS SHALL BE TAKEN AT POINTS OF CONNECITON, CHANGES IN DIRECTION AND A T MINIMUM 20' INTERVALS ALONG THE LENGTH OF THE PIPE. THESE ELEVATIONS SHALL BE RECORDEDED AS AS-BUILT DIMENSIONS ON A SITE PLAN FOR REVIEW BY THE PROJECT CIVIL ENGINEER.
3. ALL SANITARY LINES ARE TO BE FLUSHED PRIOR TO TURNOVER OF THE FACILITY.
4. ALL PROPOSED INLETS TO INCLUDE AN INLET FILTER (FLO-GARD+PLUS).
5. ALL WORK FOR THE WATER SERVICE AND SANITARY SEWER LATERAL PERFORMED IN THE EXISTING UTILITY EASEMENT OR PUBLIC RIGHT-OF-WAY FOR CONNECTION TO THE WATER MAIN AND SANITARY SEWER, ARE UNDER THE JURISDICTION OF THE TOWNSHIP OF BARNEGAT BOARD OF PUBLIC WORKS. CREW ENGINEER'S INC. WILL INSPECT THIS WORK ON BEHALF OF THE BOARD AND WILL REQUIRE 72-HOUR ADVANCE NOTICE FROM THE APPLICANT OR THEIR CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ALL WORK FOR THE WATER SERVICE AND SEWER LATERAL ON THE PROPERTY IS UNDER THE JURISDICTION OF THE TOWNSHIP OF BARNEGAT CONSTRUCTION PLUMBING SUBCODE OFFICIAL, AND THE APPLICANT IS RESPONSIBLE FOR PROVIDING PROPER NOTIFICATION TO THE DEPARTMENT AND TO ENSURE THE REQUIRED PLUMBING PERMIT.
6. BEFORE THE START OF WORK, THE APPLICANT'S CONTRACTOR MUST SUBMIT A CERTIFICATE OF INSURANCE (COI) TO CREW ENGINEERING, COMPLYING WITH THE TOWNSHIP OF BARNEGAT STANDARDS. THE COI MUST BE REVIEWED AND APPROVED BY THE TOWNSHIP'S INSURANCE CONSULTANT BEFORE THE APPLICANT IS PERMITTED TO CONNECT TO THE WATER DISTRIBUTION SYSTEM AND SANITARY SEWER.
7. BEFORE THE START OF WORK, THE APPLICANT OR THEIR CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO OUR OFFICE FOR ALL REVELANT ITEMS AND PRODUCTS THAT WILL BE USED ON THE PROJECT FOR THE WATER AND SANITARY SEWER CONNECTIONS.
8. CONTRACTOR TO COORDINATE WITH BARNEGAT WATER AND SEWER FOR 12" WATERMAIN EXTENSION.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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PROFESSIONAL ENGINEER
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STATE OF NEW JERSEY SHAN-PEI FANCHIANG No. GE37073 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Shan-Pei Fanchiang
Date: 2025.07.15 15:53:06 -04'00'

NO.	DATE	REVISION	BY
2	4-22-25	RESSUE	J.A.S
1	7-23-24	REVISE DRAWING	M

DRAWING TITLE
WATER MAIN EXTENSION PLAN

PROJECT
WaWa Food Market & Fueling Station
BLOCK 146.02, LOTS 9.02, 10.01 & 11, BLOCK 147, LOT 1
BLOCK 148, LOT 1, BLOCK 149, LOTS 1 & 2, BLOCK 151, LOT 1
547 NORTH MAIN STREET
TWSP OF BARNEGAT, OCEAN COUNTY, NJ

CLIENT
M&T AT 547 MAIN LLC
C/O EDGEWOOD PROPERTIES, INC.
1260 STELTON ROAD
PISCATAWAY, NJ 08854

CERTIFICATE OF AUTHORIZATION
24GA28068900 / 21MH00002800

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R.M.C.	C.J.B.
SCALE	PROJECT NO.
1"=30'	21-312
DATE	REVISION NO.
2-26-24	2

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