### SHEET INDEX

### REVISION SHEET NUMBER SHEET TITLE DATE DATE COVER SHEET 2/19/2021 02/21/2023 EXISTING CONDITIONS PLAN 2/19/2021 02/21/2023 SITE PLAN - TRACT 1 2/19/2021 02/21/2023 GRADING AND DRAINAGE PLAN - TRACT 1 2/19/2021 02/21/2023 SITE AND GRADING PLAN - TRACT 2 2/19/2021 02/21/2023 SOIL EROSION AND SEDIMENT CONTROL PLAN (1) 2/19/2021 02/21/2023 SOIL EROSION AND SEDIMENT CONTROL PLAN (2) 2/19/2021 02/21/2023 SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS 02/21/2023 2/19/2021 LANDSCAPING PLAN - TRACT 1 2/19/2021 02/21/2023 LANDSCAPING PLAN - TRACT 2 10 2/19/2021 02/21/2023 LANSCAPING NOTES AND DETAILS 11 2/19/2021 02/21/2023 LIGHTING PLAN - TRACT 1 12 2/19/2021 02/21/2023 LIGHTING PLAN - TRACT 2 13 2/19/2021 02/21/2023 CONSTRUCTION DETAILS 1 14 2/19/2021 02/21/2023 CONSTRUCTION DETAILS 2 15 2/19/2021 02/21/2023

### **PROPERTY OWNERS WITHIN 200'**

Depau, Nancy 103 High Street Cranford, New Jersey 07016

Minitelli, Paul & Judy 109 High Street Cranford, New Jersey 07016

Union County Court House Elizabeth, New Jersey 07207

Riverfront Developers, LLC 820 Morris Turnpike Short Hills, New Jersey 07078

Rennie, Kimberly A 101 High Street Cranford, New Jersey 07016

Curtis, Vera 107 High Street Cranford, New Jersey 07016

Titre, Sherwin & Nivine 105 High Street

Smith Cleveland C 111 High Street Cranford, New Jersey 07016

Township of Cranford 8 Springfield Avenue Cranford, New Jersey 07016

CRFD Cong of Jehovahs Wit. 77 Chestnut Street

Cranford, New Jersey 07016

109 South Avenue, LLC 206 Avenue F Matamorus, PA 18336

NJ Transit Corp. PO Bo 10009 Newark, New Jersey 07101

Di Tullio & La Corte Associates 102-108 Walnut Avenue Cranford, New Jersev 07016

IOP Cranford 100 South LLC 55 Bleeker Street 2<sup>nd</sup> Floor Millburn, New Jersey 07041

116 Walnut Avenue, LLC 206 Avenue F Matamorus, PA 18336

East Coast Cranford Crossing, LLC PO Box 182585 Mail Stop #3 Columbus, Ohio 43218

DB Walnut Ave. LLC 55 Bleeker Street, 2<sup>nd</sup> Floor Millburn. New Jersev 07041

Union County Economic Dev. Corp 76 Chestnut Street Cranford, New Jersev 07016

EFRUS JED 114 Orchard Street Cranford, New Jersey 07016 Cranford, New Jersey 07015

> Sunkin Properties, LLC PO Bo 636 Inlet, New York 13360

O V A Realty 206 Stoughton Avenue Cranford, New Jersey 07016

St. Mark AME Church 34 High Street Cranford, New Jersey 07016

Junior League of Eliz & Cranford Inc. 110 Walnut Avenue Cranford, New Jersey 07016

### **REGULATORY BODIES AND** UTILITY PROVIDERS

Township of Cranford – Construction Official 8 Springfield Avenue Cranford, New Jersey 07016

Township of Cranford – Environmental Commission 8 Springfield Avenue Cranford, New Jersey 07016

Township of Cranford – Planning Board 8 Springfield Avenue Cranford, New Jersey 07016

Union County Planning Board 10 Elizabethtown Plaza Elizabeth, New Jersey 07202

Somerset Union Soil Conservation Dist 308 Milltown Road Bridgewater, New Jersey 08801

**Comcast Cablevision** C/O Corporation Trust Co. 820 Bear Tavern Road West Trenton, New Jersey 08628

NJAW- GIS Supervisor 1025 Laurel Oak Road Voorhees, New Jersey 08043

Verizon – Executive Offices Corporate Secretary One Verizon Way Basking Ridge, New Jersey 07920

Elizabethtown Gas Company Engineering Department 520 Green Lane Union, New Jersey 07083

PSE&G – Manager Corp. Properties 80 Park Plaza T6B Newark, New Jersey 07101

Rahway Valley Sewerage Authority Chief Engineer 1050 East Hazelwood Avenue Rahway, New Jersey 07065

Union County Div Parks & Recreation Admin Bldg/Elizabethtown Plaza Elizabeth, New Jersey 07207

# **\*OWNERS LIST**

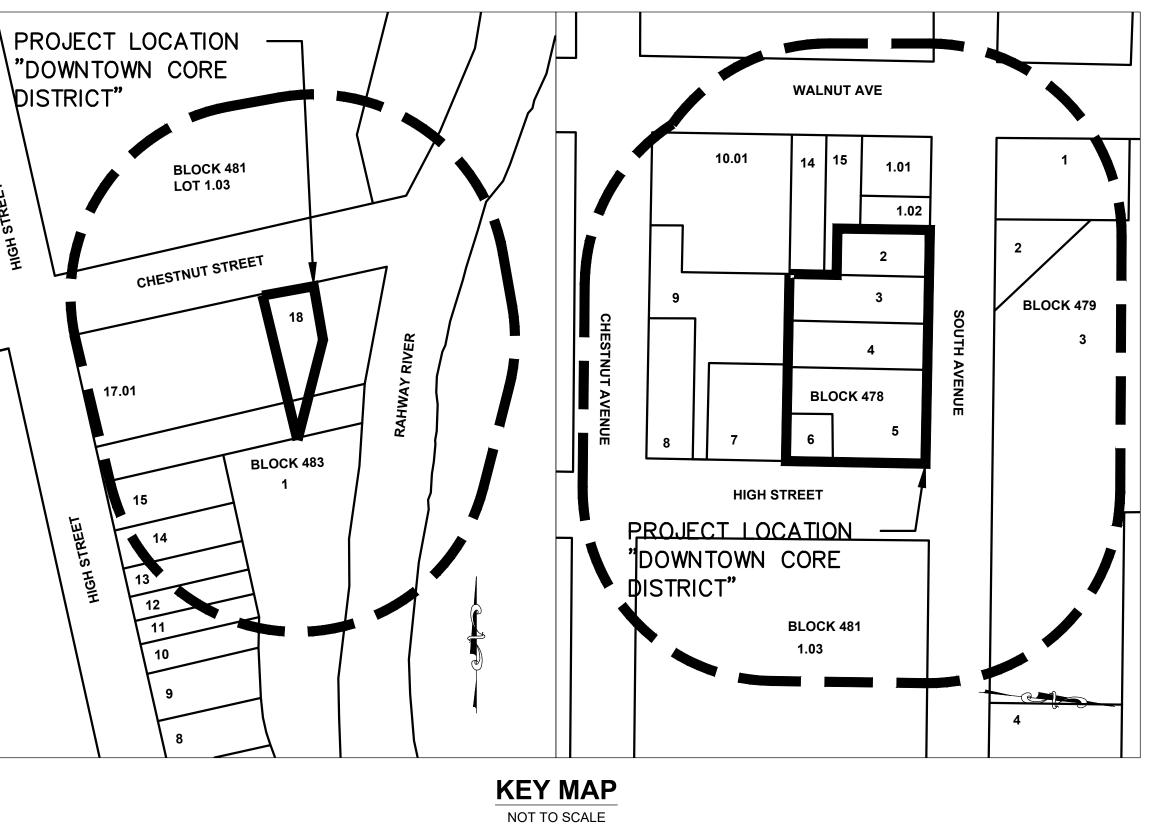
	EXHIBIT A		
Property Address	Block	Lot	Owner
108 South Avenue E	478	2	108 South Ave E LLC
112 South Avenue E	478	3	112 South Avenue E LLC
118 South Avenue E	478	4	Boffard Holdings LLC
122-126 South Avenue E	478	5	VIBO Holdings LLC
32 High Street	478	6	Boffard Holdings LLC
2 Chestnut Street	483	18	2 Chestnut St LLC
41 High Street	483	17.01	Township of Cranford

I HAVE CAREFULLY EXAMINED THIS MAP AND FIND IT CONFORMS TO THE PROVISIONS OF THE MAP FILING LAW AND MUNICIPAL ORDINANCES AND **REQUIREMENTS THERETO** 

TOWNSHIP ENGINEER (AFFIX SEAL)

DATE

# PRELIMINARY AND FINAL SITE PLAN FOR 108-126 SOUTH AVENUE EAST 32 HIGH STREET & 2 CHESTNUT STREET BLOCK 478, LOTS 2, 3, 4, 5, AND 6 BLOCK 483, LOT 18, AND 17.01 TOWNSHIP OF CRANFORD **UNION COUNTY, NEW JERSEY**



THIS APPLICATION NOIS APPROVED BY THE CRANFORD TOWNSHIP PLANNING			
BOARD AS A MAJOR DEVELOPMENT			
CHAIRPERSON			
	04	02/21/2023	Revise per DRC Meeting
	03	01/26/2023	Revised per Completeness Review dated 01/20/2023
DATE	02	11/07/2022	Revised for Township Submission
	01	05/20/2021	Revised per NJDEP Comments
SECRETARY	No.	Date	Revision
SECRETART			
DATE			SCALE IN FEET

GE	ENERAL NOTES:			DEP ELECTRONIC APPROVAL SI
<u>U</u> 1.	THE SUBJECT PROPERTY IS KNOWN AND SHOWN ON THE CURRENT TAX ASSESSM THE "D-C" (DOWNTOWN CORE) ZONING I REDEVELOPMENT PLAN. THE SUBJECT PF	MENT MAP OF THE TOWNSHIP DISTRICT, AND WITHIN SUBDI	P OF CRANFORD, SHEET NC DISTRICT 1 OF THE SOUTH A	DS. 105 AND 106 AND IS SITUATED AVENUE & CHESTNUT STREET
2.	PROPERTY OWNERS*/CO-APPLICANT: (*SI	EE OWNERS LIST)		
	C/O PROPERTY OWNERS 55 BLEEKER STREET, 2ND FLOOR MILBURN, NEW JERSEY 07041 I HEREBY CERTIFY THAT I AM THE CO-/		NPER ON BEHALF OF THE (	WINERS OF RECORD OF THE PLAN
	HEREIN DEPICTED AND THAT I CONCUR			
3.	CO-APPLICANT, IRON ORE PROPERTIES I	PROPOSED USE:		
3. 4.	EXISTING USE: MIXED USE BASE MAP INFORMATION WAS OBTAINED	NO CHANGE		
4. 4.1	1. TOPOGRAPHIC INFORMATION TAKEN F BLOCK 478 SITUATED IN TOWNSHIP	FROM A PLAN ENTITLED "TO	DPOGRAPHIC SURVEY PREPA	
4.2	MAPPING, INC.	BLOCK 483 2 CHESTNUT S	STREET, BOROUGH OF CRAN	
5.		FOR SUBDISTRICT 1 OF THE		UT STREET REDEVELOPMENT PLAN
		PERMITTED:	EXISTING:	PROPOSED:
	MINIMUM LOT REQUIREMENTS MINIMUM LOT AREA	0.75 ACRES	0.803	0.803
	PRINCIPAL BUILDING REQUIREMENTS			
		9 FT. FROM FACE OF 10 FT. FROM CURB, OTHE		9.8 FT. 13.4 FT.
	MINIMUM REAR YARD	9 FT. BETWEEN BUILD OR 5 FT. BETWEEN PROPE AND BUILDING FACA		9 FT. 10 FT. BETWEEN PROPERTY LINE AND BUILDING FACADE
	MAXIMUM BUILDING HEIGHT	55 FT. / 4 STORI		LESS THAN 55 FT. / 4 STORIES
	MAXIMUM BUILDING COVERAGE MAXIMUM LOT COVERAGE	90% 96%	29.6% 96.0%	75.8% 96.0%
6.	OFF-STREET PARKING REQUIREMENTS -	USE: DWELLING, MULTI-FA	MILY	
	AT LEAST 15% TO BE ELECTRIC VEHICL SPACES = 11.55 OR 12.		+6 STREET PARKING +3 STREET PARKING <u>+2 STREET PARKING</u> TOTAL 77 PARKING SPAC VEHICLE MAKE-READY PA	I 2 CHESTNUT STREET G SPACES ON CHESTNUT STREET. G SPACES ON SOUTH AVENUE EAST <u>G SPACES ON HIGH STREET</u> CES, INCLUDING 12 ELECTRIC ARKING SPACES ING ELECTRIC VEHICLE SPACES = 7
	<u>BICYCLE PARKING:</u> USE REQU	<u>UIRED</u>		PROVIDED
D'	DEWLLING, MULITIFAMILY INDOOR : 0.25 S			16 SPACES 9 SPACES
7.	ALL CONSTRUCTION SHALL BE IN ACCOR	RDANCE WITH THE TOWNSHIF	P OF CRANFORD DESIGN ST	ANDARDS AND DETAILS.
8.	TRASH AND RECYCLING DISPOSAL SHALL REQUIREMENTS.			
9.	THIS SET OF PLANS HAS BEEN PREPARE PLANS SHALL NOT BE UTILIZED AS CON DRAWINGS AND EACH DRAWING HAS BEE	NSTRUCTION DOCUMENTS UNT EN REVISED TO INDICATE 'IS	TIL ALL CONDITIONS OF API SSUED FOR CONSTRUCTION'.	PROVAL HAVE BEEN SATISFIED ON T
	ALL DESIGN FEATURES DEPICTED HEREON AND INITIAL PRESENTATION OF THIS PLA COMMENCEMENT OF ANY ACTIVITY BASEN	AN. ALL CURRENT DEVELOPM ED ON THIS PLAN.	MENT CONSTRAINTS SHOULD	) BE INVESTIGATED PRIOR TO
11.	THE CONTRACTOR SHALL BE RESPONSIB CABLE TV SERVICE LOCATIONS. LOCAT WITH THE UTILITY COMPANIES AND IS NO HOURS PRIOR TO CONSTRUCTION TO DE AN AID IN DETERMINING EXACT LOCATION ANY CONSTRUCTION. THE CONTRACTOR REPAIRS SHALL BE TO THE SATISFACTION	TION OF UTILITIES AS SHOWN IOT GUARANTEED AS TO EXA ETERMINE EXACT LOCATION. T DNS. THE CONTRACTOR SHALL SHALL BE FULLY RESPONSIB	N ON THESE PLANS ARE PL ACTNESS. THE CONTRACTOR THE CONTRACTOR SHALL U LL FIELD VERIFY THE EXACT BLE FOR ALL DAMAGES ASS	LOTTED FROM AVAILABLE DATA ON R IS TO CONTACT UTILITY COMPANIE JSE THE UTILITY LOCATIONS SHOWN T LOCATIONS PRIOR TO PERFORMING
12.	ANY CONFLICTS ENCOUNTERED WITH EXIS			LOCATION WITH RESPECTIVE UTILITY
13.	ANY IMPORTED FILL SHALL MEET THE DER REMEDIATION (NJAC 7:26E-1.8).	EFINITION OF CLEAN FILL, P	URSUANT TO THE TECHNIC.	AL REQUIREMENTS FOR SITE
14.	THE CONTRACTOR IS RESPONSIBLE FOR ORIGINAL CONDITION.	RESTORING ANY AREA THA	T HE/SHE DISTURBED BEY(	OND THE PROPERTY LIMITS TO ITS
15.	CONTRACTOR TO PROVIDE NECESSARY F ARCHITECT AS REQUIRED.	FOUNDATION DRAINS AND W/	ATER-PROOFING AROUND F	OUNDATION. COORDINATE WITH
16.	THE CONTRACTOR SHALL BE RESPONSIB		AD OPENING PERMITS THAT	MAY BE REQUIRED FOR THE
	REFER TO THE SOIL EROSION AND SEDIN	MENT CONTROL PLAN FOR R		
18.	ALL EXCAVATED MATERIAL SHALL BE RE PRIOR APPROVAL IS OBTAINED FROM TH MATERIAL WITHIN TOWNSHIP-OWNED PRO	HE TOWNSHIP ENGINEER. UND	DER NO CIRCUMSTANCES CA	AN THE CONTRACTOR PLACE EXCAV
		Corporate Office: 1800 Route 34, Suite 101 Wall New Jersey 07719		COVER SHEET FOR
		Wall, New Jersey 07719 732.312.9800 FPAengineers.com	PRELIMINA	RY AND FINAL SITE PLAN FOR
	FRENCH & PARRELL			SE DEVELOPMENT

**BAHRAM FARZANEH, PE, PP** 

PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

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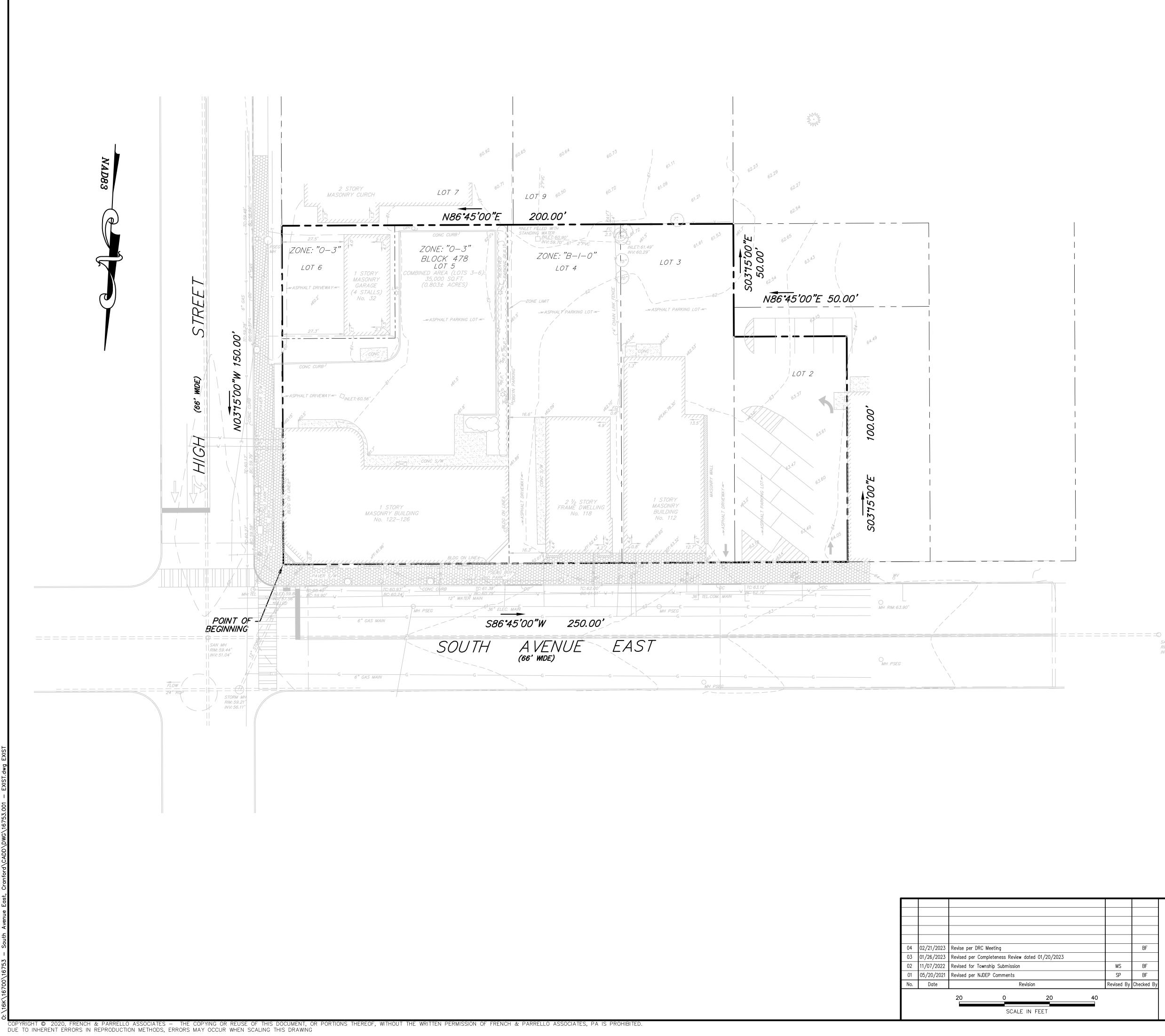
New Jersey 🔺 New York 🔺 Pennsylvania 🔺 Georgia

	FC	DR	
M	XED USE D	EVELOPME	NT
E	BLOCK 478, LOT BLOCK 483, LO		
		F CRANFORD ′ NEW JERSEY	
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBE
2/19/2021	WGS	AS SHOWN	16753.001
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:

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WGS



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NJDEP ELECTRONIC APPROVAL STAMP

- 1. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR FOR THE DURATION OF THE DEMOLITION PROJECT. ALL PERSONNEL WORKING OR VISITING THE SITE SHALL BE PROVIDED A PROJECT SAFETY BRIEFING. THE CONTRACTOR SHALL DESIGNATE A TRAINED, RESPONSIBLE INDIVIDUAL FOR ALL SAFETY RELATED ITEMS. THIS PERSON SHALL HAVE THE AUTHORITY TO SUSPEND WORK SHOULD AN UNSAFE CONDITION BE ENCOUNTERED.
- 2. THE CONTRACTOR SHALL ERECT AND MAINTAIN FENCING AROUND THE PERIMETER OF THE WORK AREAS. AN EIGHT FOOT HIGH CHAIN LINK FENCE SHALL BE USED. DURING THE DEMOLITION OPERATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE PERIMETER FENCING, LOCATED ALONG THE LIMITS OF EACH DESIGNATED DEMOLITION AREA AND SHALL REPLACE ANY DAMAGED SECTIONS TO THE SATISFACTION OF THE OWNER.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TEMPORARY OFFICE TRAILERS, ON-SITE DECONTAMINATION AREAS, DISPOSAL CONTAINERS AND ALL OTHER ITEMS AS MAY BE REQUIRED TO PERFORM HIS ACTIVITIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 4. THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL NECESSARY PERMITS AND LICENSES REQUIRED TO CARRY OUT HIS WORK IN FULL ACCORDANCE WITH REQUIREMENTS OF ALL REGULATIONS AND AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND ALL CODES, RULES AND REGULATIONS OF HEALTH, PUBLIC OR OTHER AUTHORITY CONTROLLING OR LIMITING THE METHODS, MATERIAL TO BE USED, OR THE ACTIONS OF OF THOSE EMPLOYED IN WORK OF THIS KIND. ALL WORK, LABOR OR MATERIAL NECESSARY TO COMPLY WITH THESE LAWS, CODES, RULES AND REGULATIONS SHALL BE PERFORMED AND FURNISHED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS/HER ACTIVITIES WITHIN THE LIMITS OF THE PROJECT SITE. ROAD PAVEMENT REPLACEMENT AND ALL OTHER RESTORATION WORK WITHIN THE CITY OF PATERSON RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS OF THE CITY ENGINEER.
- 6. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND PROTECT WORK AND ADJACENT STRUCTURES FROM DAMAGE BY WATER DURING ALL STAGES OF HIS/HER ACTIVITIES.

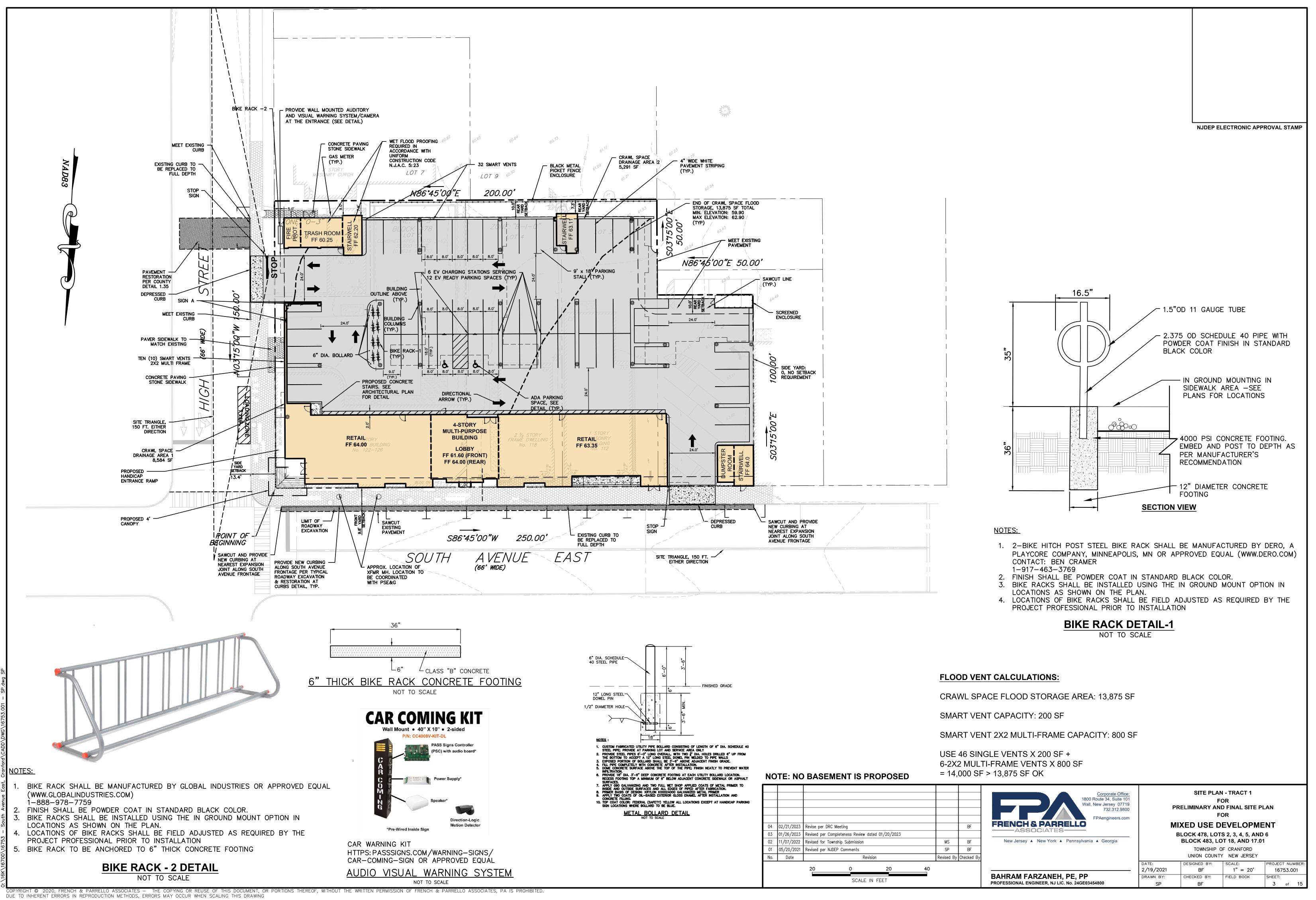
**UTILITY NOTES:** 

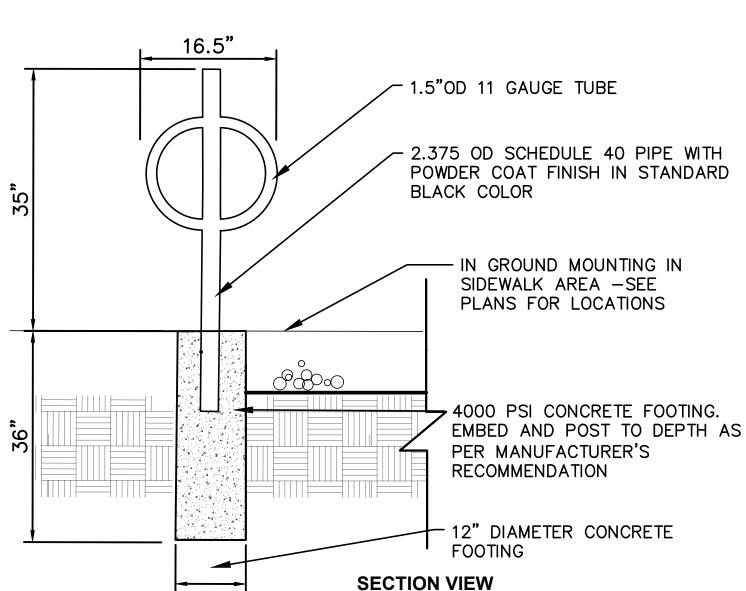
**GENERAL NOTES:** 

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION OR CONSTRUCTION ACTIVITIES TO DETERMINE THE EXACT LOCATIONS AS NECESSARY AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. UTILITY LOCATIONS SHOWN ON THESE PLANS ARE FROM ABOVE-GROUND OBSERVATIONS AND FROM RECORD INFORMATION PROVIDED BY THE UTILITY COMPANIES. IN ADDITION, THE LOCATION AND TYPE OF THE EXISTING UTILITIES SHOWN ON THESE PLANS IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE. THE CONTRACTOR SHALL USE THE EXISTING UTILITY LOCATIONS SHOWN AS AN AID IN DETERMINING EXACT LOCATIONS. THE CONTRACTOR MUST CONTACT THE "ONE CALL SYSTEM" AT 1-800-272-1000 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, SCHEDULING AND ALL COSTS REQUIRED TO CAP, DISCONNECT AND REMOVE THE UTILITIES. IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY AGENCY OR THE AUTHORITY HAVING JURISDICTION. IN ADDITION, IF ANY EXISTING IMPROVEMENTS LOCATED WITHIN THE THE BOROUGH RIGHT-OF-WAY ARE DISTURBED BY THE CONTRACTOR OR THE UTILITY COMPANIES, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE BOROUGH ENGINEER. THE CONTRACTOR SHALL CALL THE PSE&G DEMOLITION CENTER AT 1-800-817-3366 TO SCHEDULE THE INDIVIDUAL METER REMOVAL AND CUTTING OF SERVICE LINES FOR EACH STRUCTURE THAT IS TO BE DEMOLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS REQUIRED BY THE BOROUGH OF SAYREVILLE BUILDING BUREAU FOR THIS WORK, INCLUDING LETTERS FROM THE WATER, GAS AND ELECTRICAL COMPANIES, WHICH INDICATES ALL UTILITIES TO BE REMOVED ARE CLEARED FOR DEMOLITION AND/OR EXCAVATION.
- 3. IF ANY UTILITY FACILITIES, INCLUDING DISTRIBUTION MAINS OR SERVICES FOR ADJACENT PROPERTIES, ARE DISRUPTED OR DAMAGED DURING THE CONSTRUCTION WORK ASSOCIATED WITH THIS PROJECT, THEN THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE UTILITY FACILITIES BY THE END OF THE WORKING DAY AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS INCURRED TO REMOVE OR TEMPORARILY SUPPORT
- 4. ANY UTILITY POLE AND/OR GUY ANCHORS THAT MAY BE IN CONFLICT WITH HIS ACTIVITIES. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EXISTING FACILITIES FROM THESE POLES, INCLUDING ALL LIGHTS, ELECTRICAL LINES, TELEPHONE LINES, CABLE LINES AND ALL ELSE AS REQUIRED TO REMOVE THE UTILITY POLES OR GUY ANCHORS. THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES FOR THE REMOVAL OF ANY EXISTING FACILITIES THAT ARE NOT PRIVATELY OWNED.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION, INSTALLATION AND SUPPLY OF ANY UTILITY SERVICE REQUIRED FOR THIS PROJECT, INCLUDING TEMPORARY POWER AND TELEPHONE SERVICES. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.
- TRAFFIC CONTROL NOTES:
- 1. THE CONTRACTOR IS RESPONSIBLE TO INSURE THE SAFE, ORDERLY AND EXPEDITIOUS CIRCULATION OF VEHICULAR AND PEDESTRIAN TRAFFIC FLOW AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 12 FEET WIDE, TRAVEL LANE FOR EACH DIRECTION OF TRAFFIC FLOW ALONG THE ADJACENT ROADWAYS, AT ALL TIMES DURING HIS/HER CONSTRUCTION ACTIVITIES, TO ALLOW LOCAL AND EMERGENCY TRAFFIC ACCESS.
- 2. WATCHMEN AND FLAGMEN SHALL BE EMPLOYED BY THE CONTRACTOR FOR THE PROTECTION OF ANY EQUIPMENT ENTERING, LEAVING OR CROSSING ACTIVE TRAFFIC LANES, OR AS MAY BE REQUIRED FOR ROUTING OF ANY TRAFFIC AROUND OR THROUGH THE CONSTRUCTION. WATCHMEN AND FLAGMEN WILL BE EMPLOYED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- 3. BEFORE BEGINNING WORK ON ANY STAGE OF THE PROJECT, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WARNING SIGNS, BARRICADES, TRAFFIC GUIDES, LIGHTS, SAFETY CONES AND OTHER DEVICES AS NECESSARY TO PROTECT THE PUBLIC DURING THAT PHASE OF HIS OPERATIONS. IN ADDITION, THE CONTRACTOR MUST NOTIFY ANY TENANTS OR PROPERTY OWNERS AT LEAST ONE WEEK PRIOR TO ANY ACTIVITIES THAT MAY EFFECT EXISTING OFF-STREET PARKING AND/OR THE FLOW OF TRAFFIC.
- 4. ALL NECESSARY REGULATORY AND WARNING SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LAST REVISED AND SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

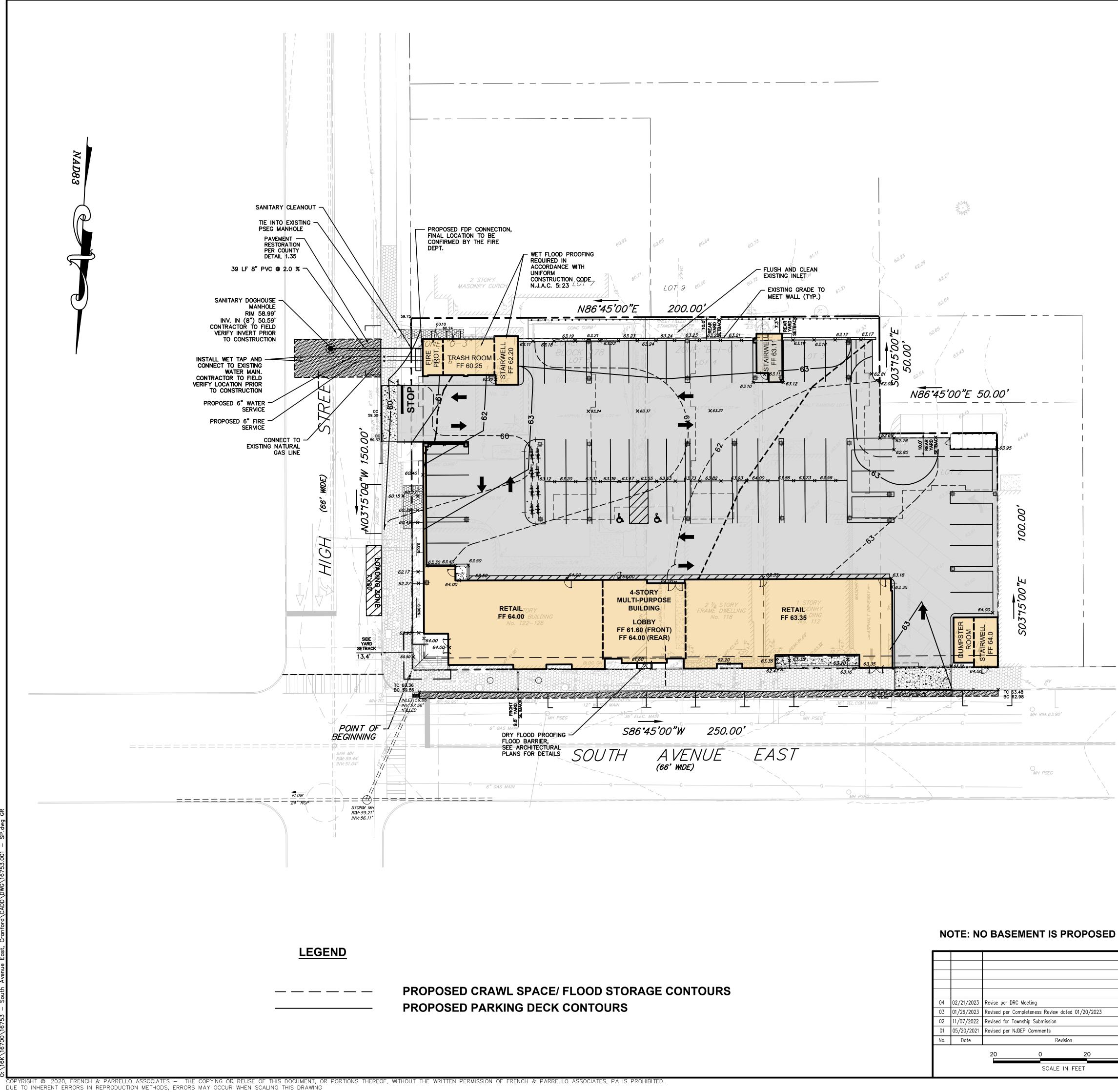
	MS SP Revised By	BF BF BF Checked By	EXAMPLE 1       Corporate Office:         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 07719         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, Suite 101       Wall, New Jersey 100         1800 Route 34, S	м	FO RELIMINARY AND FO IXED USE D BLOCK 478, LOT BLOCK 483, LO TOWNSHIP C	OR <b>EVELOPMI</b> S 2, 3, 4, 5, ANI	ENT
40			BAHRAM FARZANEH, PE, PP PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800	DATE: 2/19/2021 DRAWN BY: MS	DESIGNED BY: MS CHECKED BY: BF	SCALE: 1" = 20' FIELD BOOK	PROJECT NUMBER: 16753.001 SHEET: 2 of 15

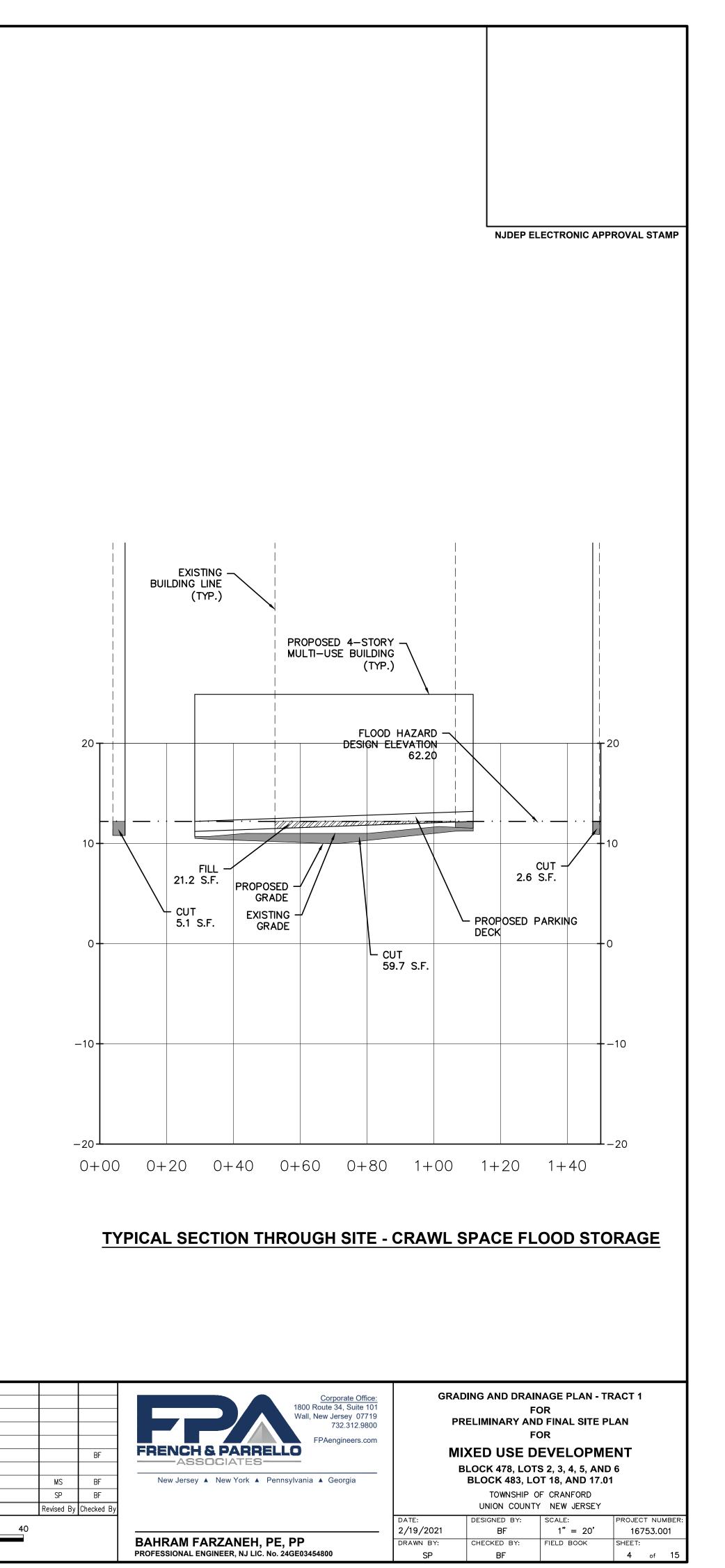
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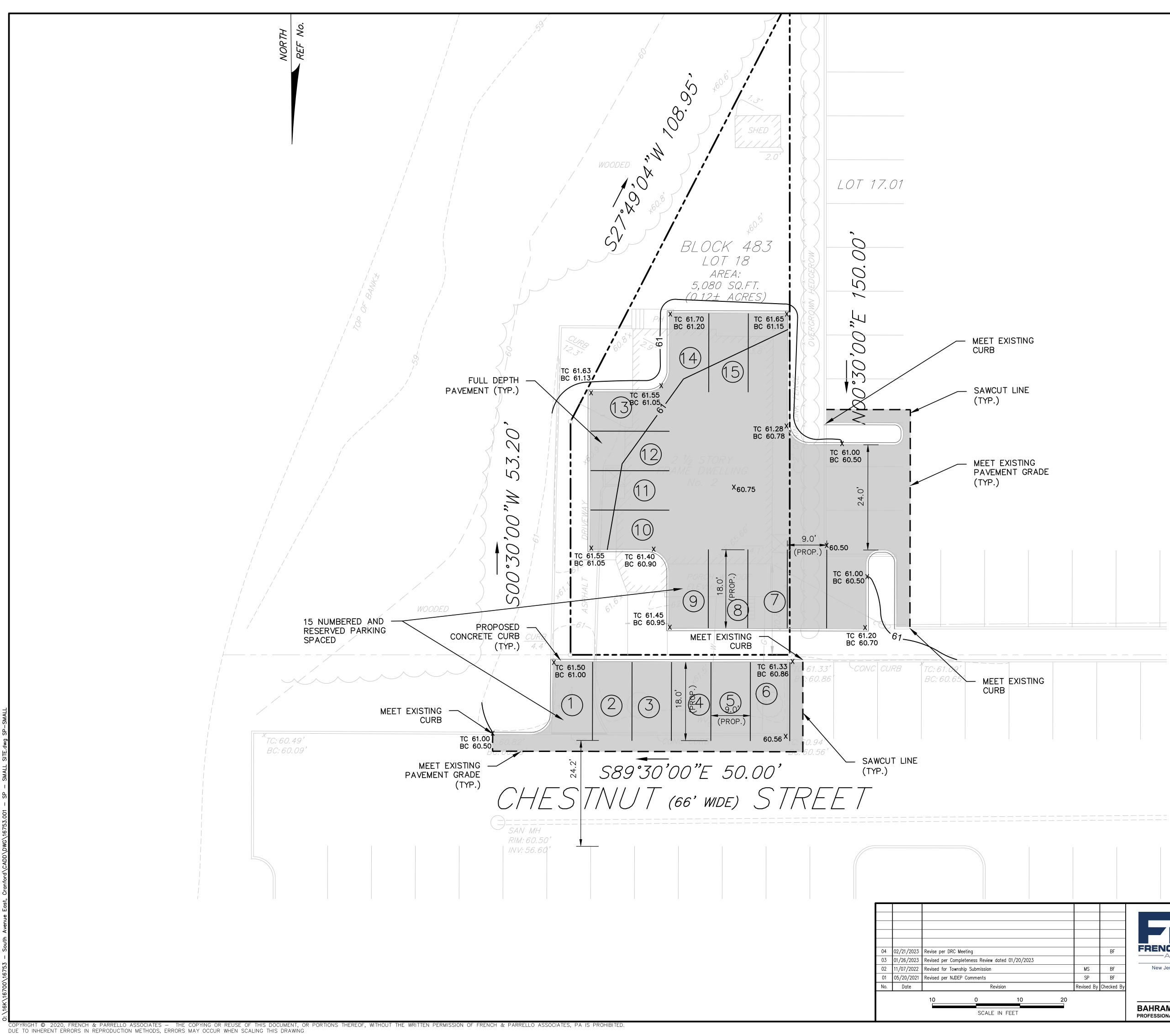






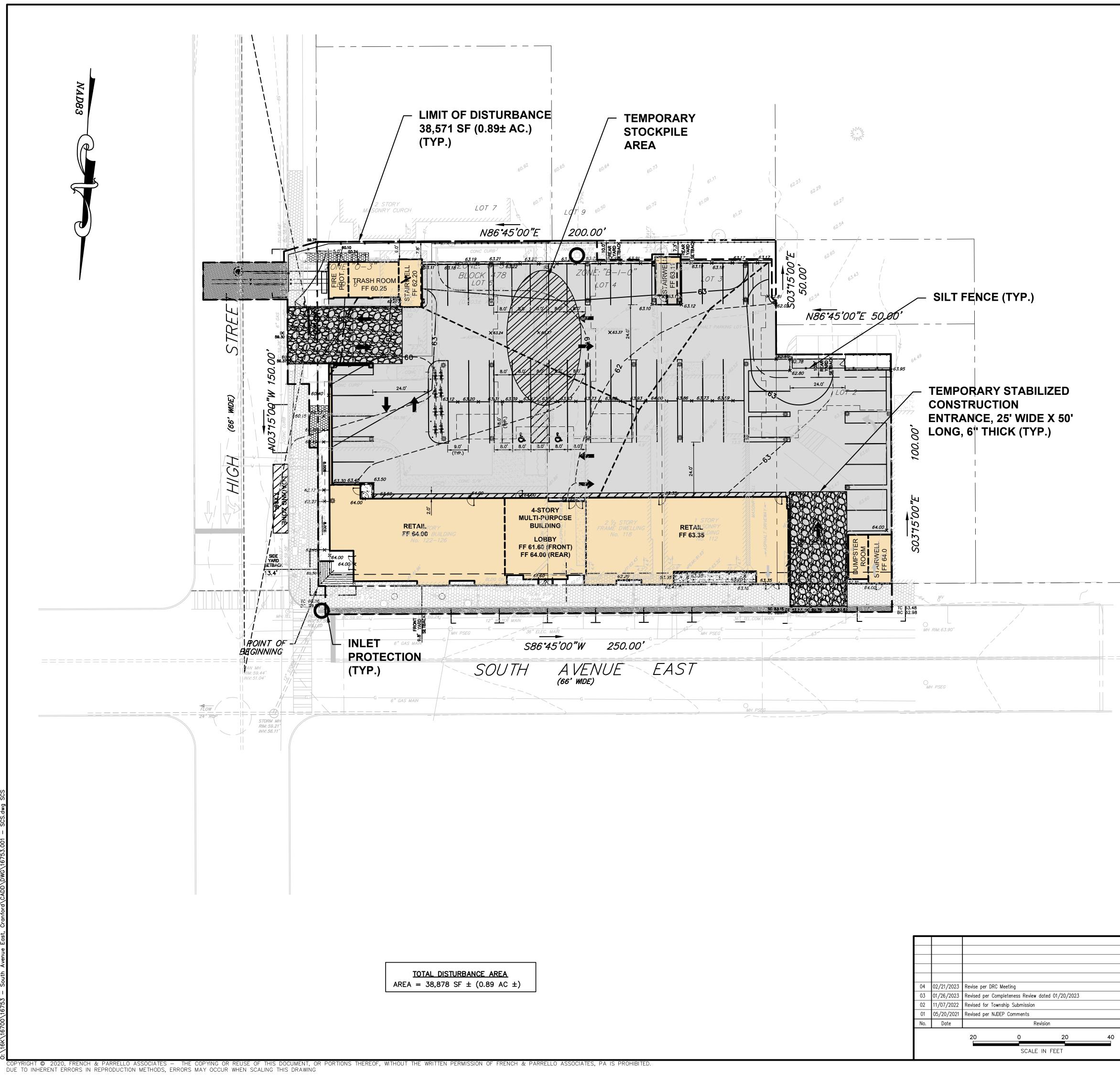






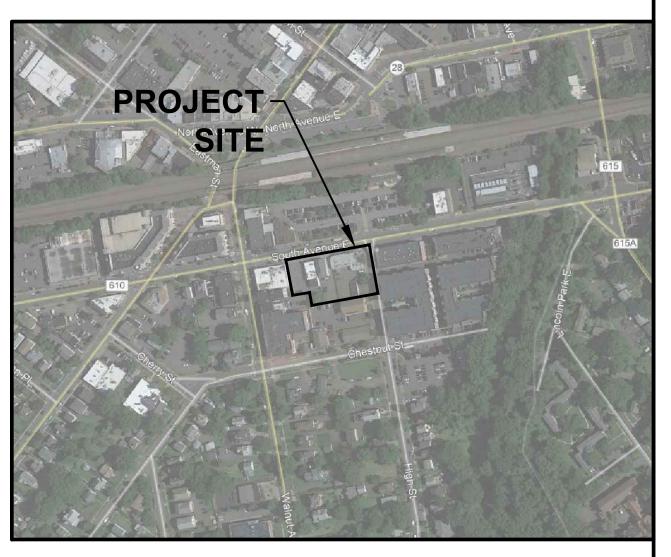
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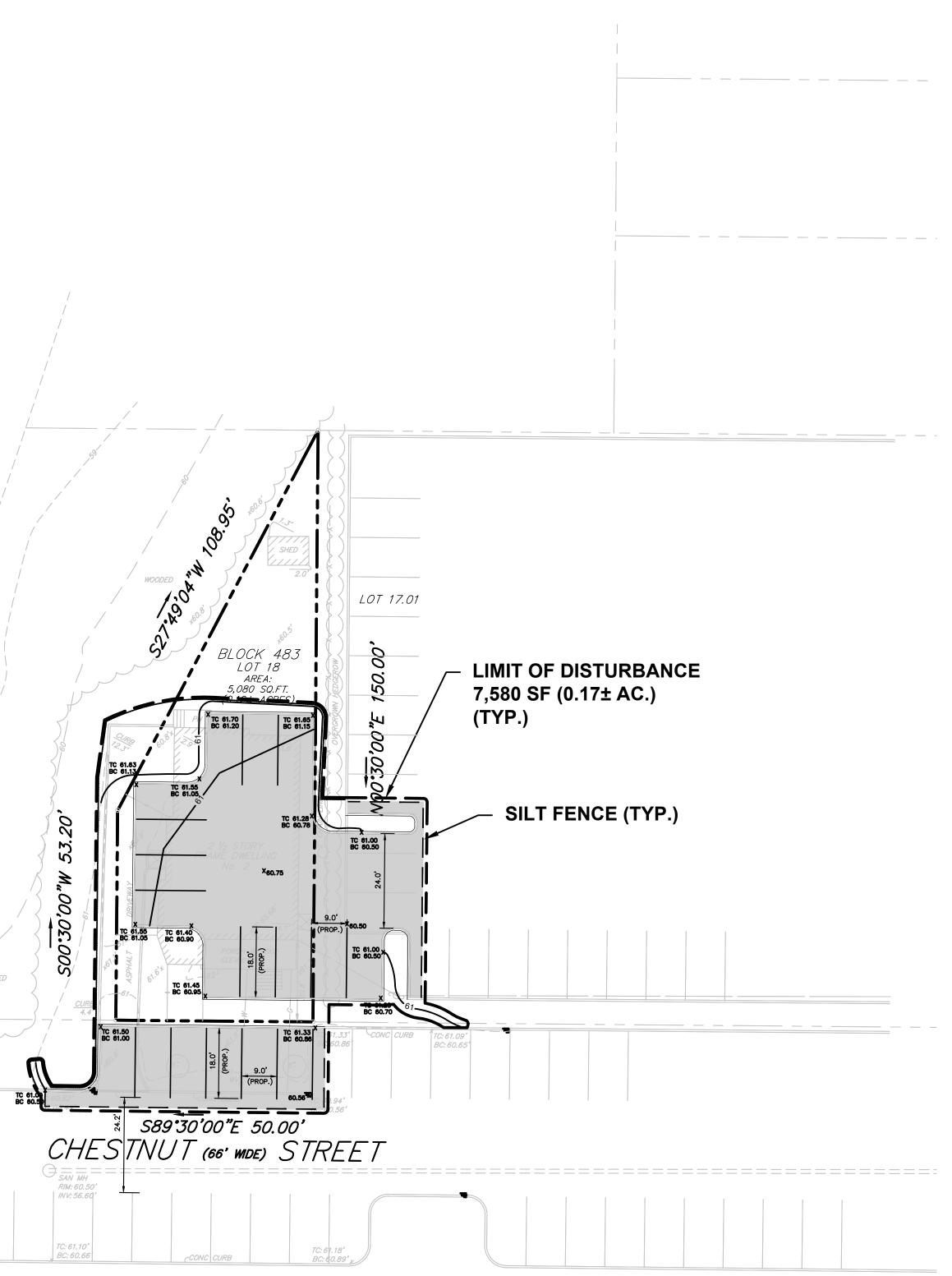
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40		· · · · ·		DATE: 2/19/2021	DESIGNED BY: BF	SCALE: 1" = 20'	PROJECT NUMBER: 16753.001
			BAHRAM FARZANEH, PE, PP PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800	DRAWN BY: SP	CHECKED BY: BF	FIELD BOOK	SHEET: 6 of 15

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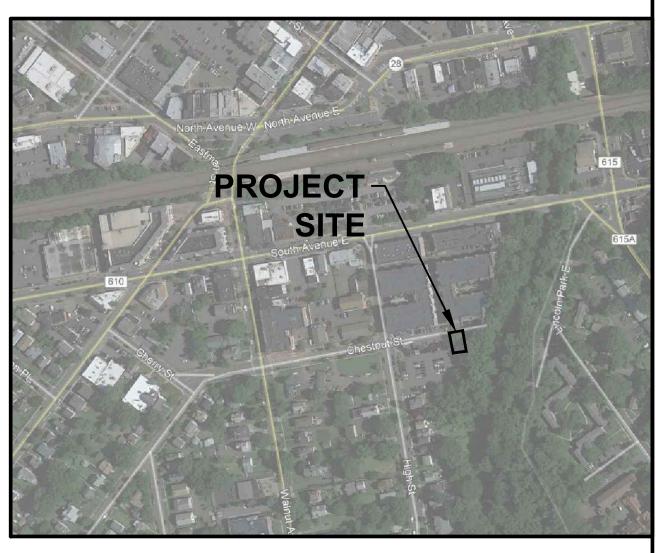
 $\frac{\text{TOTAL DISTURBANCE AREA}}{\text{AREA} = 7,580 \text{ SF } \pm (0.17 \text{ AC } \pm)}$ 

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40	ļ	· · · ·		DATE: <b>2/19/2021</b>	DESIGNED BY: BF	SCALE: 1" = 20'	PROJECT NUMBER: 16753.001
			BAHRAM FARZANEH, PE, PP PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800	DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET: 7 of 15

	L EROSION AND SEDIMENT CONTROL NOTES	PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION 1. SITE PREPARATION
1.	ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.	A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE
2.	ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2)	<ul> <li>B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOILING APPLICA STANDARD FOR LAND GRADING.</li> <li>C. TOPSOIL SHOULD BE HANDLED ONLY WHEN ITS DRY ENOUG DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SI</li> </ul>
3.	TONS PER ACRE, ACCORDING TO NJ STATE STANDARDS PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH WILL BE USED FOR PROTECTION UNTIL	WITH THE STANDARD FOR TOPSOILING. D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILIT
4.	SEEDING IS ESTABLISHED ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJ STATE STANDARDS FOR SOIL	2. SEEDBED PREPARATION
5.	EROSION AND SEDIMENT CONTROL IN NEW JERSEY. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OR PRELIMINARY GRADING.	A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZED RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS C RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP: //1 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 S. A SOIL TEST INDICATES OTHERWISE AND INCORPORATE ONE-HALFTHE RATE DESCRIBED ABOVE DURING THE S
6.	IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING ALL CRITICAL AREAS SUBJECT TO EROSION (I.E.: STEEP SLOPES, ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO THE NJ STATE STANDARDS.	B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NE. HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEI
	ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.: SLOPES GREATER THAT 3:1)	C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEF 3. SEEDING
8.	TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A 50'X30'X6"PAD OF 1 1/2" OR 2"STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.	A. PERMANENT SEEDING SHALL CONSISTING OF THE FOLL MARCH 1 THRU APRIL 30 AND OPTIMAL SEEDING DATE
9.	THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY. AT THE TIME WHEN THE 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	HARD FESCUE @ 4.0#/1,000 S.F. PERENNIAL RYEGRASS @ 1.0#/1,000 S.F. KENTUCKY BLUEGRASS @ 1.0#/1,000 S.F.
10.	SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND	PERMANENT SEEDING SHALL BE PROVIDED ON ALL TH SHALL BE SEED MIXTURE 17 AND CONSIST OF THE FOLLOWING M ARE BETWEEN MARCH 1 THRU AUGUST 14 AND OPTIMAL SEEDING DATES ARE AUGUST 15 THRU OCTOBER 1:
	STABILIZATION WILL HAVE TO BE EMPLOYED. 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.	CREEPING BENTGRASS @1#/1,0 CREEPING RED FESCUE @1#/1,0 ALKALI SALTGRASS @1#/1,0
11.	IN THAT NJSA 4:24-39 ET SEQ., REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, WILL HAVE TO BE	PLEASE NOTE THAT OTHER SEED MIXTURES CAN BE CONTROL IN NEW JERSEY.
<u> </u>	COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.	B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED
	CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE	PLACEMENT MAY BE $\frac{1}{4}$ INCH DEEPER ON COARSE-TEX
	ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NJ STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.	
	THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.	SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WA MULCH SHALL NOT BE INCLUDED IN THE TANK WITH S SEEDING. HYDROSEEDING IS NOT A PREFERRED SEEDIN NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED
	MULCHING TO THE NJ STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONALS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF	GROWTH. 4. MULCHING
	CONSTRUCTION PROJECT. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION AT THE REQUEST OF THE SOMERSET-UNION SOIL CONSERVATION DISTRICT.	MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSUF AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATIO THIS REQUIREMENT. A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY
18.	HYDRO SEEDING IS A TWO- STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED TO SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDROMULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE NJ STANDARDS.	POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHE ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TO MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE APPLICATION- SPREAD MULCH UNIFORMLY BY HAND O COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPRE
	SOMERSET-UNION SOIL CONSERVATION DISTRICT SOMERSET COUNTY 4-H CENTER 308 MILLTOWN ROAD	DISTRIBUTION 70 TO 90 POUNDS WITHIN EACH SECTIO ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AF ONE OF THE FOLLOWING METHODS, DEPENDING UPON
Δ	BRIDGEWATER NEW JERSEY 08807 (908) 526–2701 ACID SOILS NOTES	<ol> <li>PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WIT STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCI CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROL</li> </ol>
IN P	N ORDER TO PROVIDE SUITABLE CONDITIONS FOR GROWTH AND VEGETATION AND TO REVENT THE ACIDIFYING OF DRAINAGE WATER IN THOSE AREAS UNDERLAIN WITH ACID	<ol> <li>CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROL</li> <li>MULCH NETTING. STAPLE PAPER, JUTE, COTTON, OR PLASTIC MOWED.</li> </ol>
	ORMATIONS WITH A ph BELOW 4.0 THE FOLLOWING REQUIREMENT SHALL BE MET: . LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID PRODUCING SOILS ARE ENCOUNTERED.	3. CRIMPER (MULCH ANCHORING COULTER TOOL) – A TRACTOR PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCI STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS T
2	. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS.	SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. 4. LIQUID MULCH BINDERS-MAY BE USED TO ANCHOR SALT HA
3	5. 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.	A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE OF AREA SHOULD BE UNIFORM IN APPEARANCE.
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 SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PROVIDE TO THE TOPSOIL SHALL ACID PRODUCING COM	<ul> <li>B. USE ONE OF THE FOLLOWING:</li> <li>1. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OF FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYS GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CON MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF</li> </ul>
5	STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID PRODUCING SOIL. HIGH ACID PRODUCING SOILS WITH A pH OF 4 OR LESS, OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACE OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF	2. SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DIS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NA
	12 INCHES OF SETTLED SOIL WITH A PH OF 5 OR MORE EXCEPT AS FOLLOWS: A. AREAS WHERE TREES OR SHRUBS ARE PLANTED SHALL BE COVERED WITH A	EXCLUSION OF OTHER PRODUCTS. 3. WOOD-FIBER OR PAPER-FIBER MULCH. SHALL BE MADE FRO
	MINIMUM OF 24 INCHES OF SOIL WITH A pH OF 5 OR MORE. B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24" OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES AND OTHERS TO	INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUND BE APPLIED BY A HYDROSEEDER. THIS MULCH SHALL NOT B DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
6	PREVENT POTENTIAL LATERAL LEACHING DAMAGES. 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 STORMWATER	4. PELLETIZED MULCH. COMPRESSED AND EXTRUDE PAPER AND FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHE MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANU MECHANICAL SPREADER AT THE RATE OF 60-75LBS/1,000 FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR REI ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE
7	CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING. 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.	APPLY THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPE SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PE 5. IRRIGATION (WHERE FEASIBLE)
8	5. 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), <u>MONITORING</u> <u>MUST CONTINUE FOR A MINIMUM OF 6 MONTHS</u> 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.	IF SOIL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL E ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SIT
	CORRECT THE PROBLEM.	WITH METAL FASTNERS AND
1.	EROSION AND SEDIMENT CONTROL MEASURES PROVIDE TEMPORARY STABILIZATION OF ALL DISTURBED AREAS AND INSTALL SILT FENCE, TRE PROTECTION, INLET PROTECTION, STABILIZED CONSTRUCTION ENTRANCES AND ALL OTHER NEC SOIL EROSION MEASURES. (1 WEEK)	
3.	REMOVE EXISTING SITE IMPROVEMENTS. (3 WEEK) CLEAR AND ESTABLISH ROUGH GRADES AS NECESSARY TO CONSTRUCT SITE IMPROVEMENTS.	(2 WEEKS)
	(2 WEEKS) CONSTRUCT PROPOSED BUILDING AND PARKING AREAS (24 WEEKS)	DIG 6" IN DEEP TRENCH BURY
6.	<ul> <li>ESTABLISH FINISHED GRADE, AND PROVIDE PERMANENT VEGETATIVE COVER. (1 WEEK)</li> <li>REMOVE ACCESS PROTECTION, INLET PROTECTION, TREE PROTECTION AND SILT FENCE AFTER DISTURBED AREAS HAVE BEEN STABILIZED. 2 DAYS)</li> </ul>	BOTTOM FLAP, TAMP IN PLACE
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DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING

TION TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION E OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, ONE IN ACCORDANCE WITH STANDARDS, FOR LAND GRADING. 1. SITE PREPARATION PLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE 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. NOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE SEDIMENT BASINS, AND WATERWAYS. C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY ACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION 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 S.F. OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE AS ESTABLISHED BY SOIL TESTING. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOUL AND SUPPLY CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO FILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL ://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 0 S.F. OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. DRATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY 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 THE SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF FER SEEDING. PREPARED AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RECTIFIED IN ACCORDANCE WITH THE ABOVE. INAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. M SEEDBED IS PREPARED. D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS, SEE ACID SOIL NOTES. OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 3. SEEDING BEFORE INITIATING SEEDBED PREPARATION. SEE ACID SOIL NOTES. A. TEMPORARY SEEDING SHALL CONSISTING OF THE FOLLOWING SEED SELECTIONS OR APPROVED EQUAL: COOL SEASON GRASSES FOLLOWING MIXES OR APPROVED EQUAL - ACCEPTABLE SEEDING DATES ARE BETWEEN DATES ARE AUGUST 15 THRU OCTOBER 15: SPRING OATS @ 2.0#/1,000 S.F., WITH OPTIMUM SEED DEPTH OF 1.0 INCH WINTER CEREAL RYE @ 2.8#/1,000 S.F., WITH OPTIMUM SEED DEPTH OF 1.0 INCH WARM SEASON GRASSES THE DETENTION BASIN SIDE SLOPES AND BASIN BOTTOM. THE SEED MIX © 0.5#/1,000 S.F. WITH OPTIMUM SEED DEPTH OF 1.0 INCH PEARL MILLET ING MIXTURE OR APPROVED EQUAL – ACCEPTABLE SEEDING DATES

#/1,000 S.F. #/1,000 S.F.

AN BE USED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT

YING SEED UNIFORMLY BY HAND. CYCLONE (CENTRIFUGAL) SEEDER. DROP SEEDER. RILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO RATION TO A DEPTH OF  $\frac{1}{4}$  to  $\frac{1}{2}$  inch, by raking or dragging. Depth of seed -TEXTURED SOIL.

UGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE /ILL BE MAXIMIZED

D USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION WATER, AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. TH SEED. SHORT-FINERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING EDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND

NSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER ETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH

HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1  $\frac{1}{2}$  TO 2 TONS ACRE (70 TO 90 WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY FINE TURF OR LAWNS DUE TO PRESENCE OF WEED SEED AND OR MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE

SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND LY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY PON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS. O WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. NULCH. SECURE MULCH TO SOIL SURFACE BY STRECHING TWINE BETWEEN PEGS IN A

AROUND EACH PEG WITH TWO OR MORE ROUND TURNS. LASTIC NETTING TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE

CTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART AS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF CRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED. ALT HAY OR STRAW MULCH.

HERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER

LY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER DER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH AE OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

SION. MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH. DR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS ACKY UNTIL GERMINATION OF GRASS.

DE NAMES. THIS DOES NOT CONSTITUTE A COMMENDATION OF THESE PRODUCTS TO THE

FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION OUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY IOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND

AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORMA MULCH MAT. PELLETIZED IANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR 000 SQUARE FEET WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN R RENOVATION AREAS, SEED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ARE NOT PRACTICAL OR DESIRABLE

SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR TO PROVIDE SOIL COVERAGE.

JSED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH VELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN

> - FENCE POST (SPACING 8' – 0" O.C.)

- DRAWSTRING RUNNING THROUGH 2' - 0" FABRIC ALONG TOP OF FENCE MIN OPTIONAL WIRE FENCE BEHIND FABRIC FOR 'SUPER' SILT FENCE

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 TO 1 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1 INCH DEEPER ON COARSE-TEXTURED SOIL. C. 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-FINERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT A PREFERRED EEDING 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. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

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.

4. MULCHING

REFER TO THE MULCH NOTES, NOTE 4 UNDER THE PERMANENT VEGETATIVE COVER SECTION

STABILIZATION WITH MULCH

METHODS AND MATERIALS

- 1. SITE PREPARATION A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS, FOR LAND GRADING.
- B. 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. UN-ROTTED SMALL-GRAIN STRAW, OR SALT HAY 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, ie. THE SOIL CAN NOT BE BELOW THE MULCH.
- B. ASPHALT EMULSION IS RECOMMENDED AT THE RATE OF 600 TO 1,200 GALLONS PER ACRE. THIS IS SUITABLE FOR A LIMITED PERIOD OF TIME WHERE TRAVEL BY PEOPLE, ANIMALS OR MACHINES IS NOT A PROBLEM.
- C. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER. D. 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
- HYROSEEDER.
- E. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
- WATER COULD WASH THEM INTO AN INLET AND PLUG IT G. GRAVEL, CRUSHED STONE, OR SAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY 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 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 CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
- B. MULCH NETTING STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE A 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-DAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT IS 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 . APPLICATION 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 BINDER - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER. B. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING

MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS. EXISTING GRADE (TYP.) -2 % MAX.

10' MAX. SLOPE

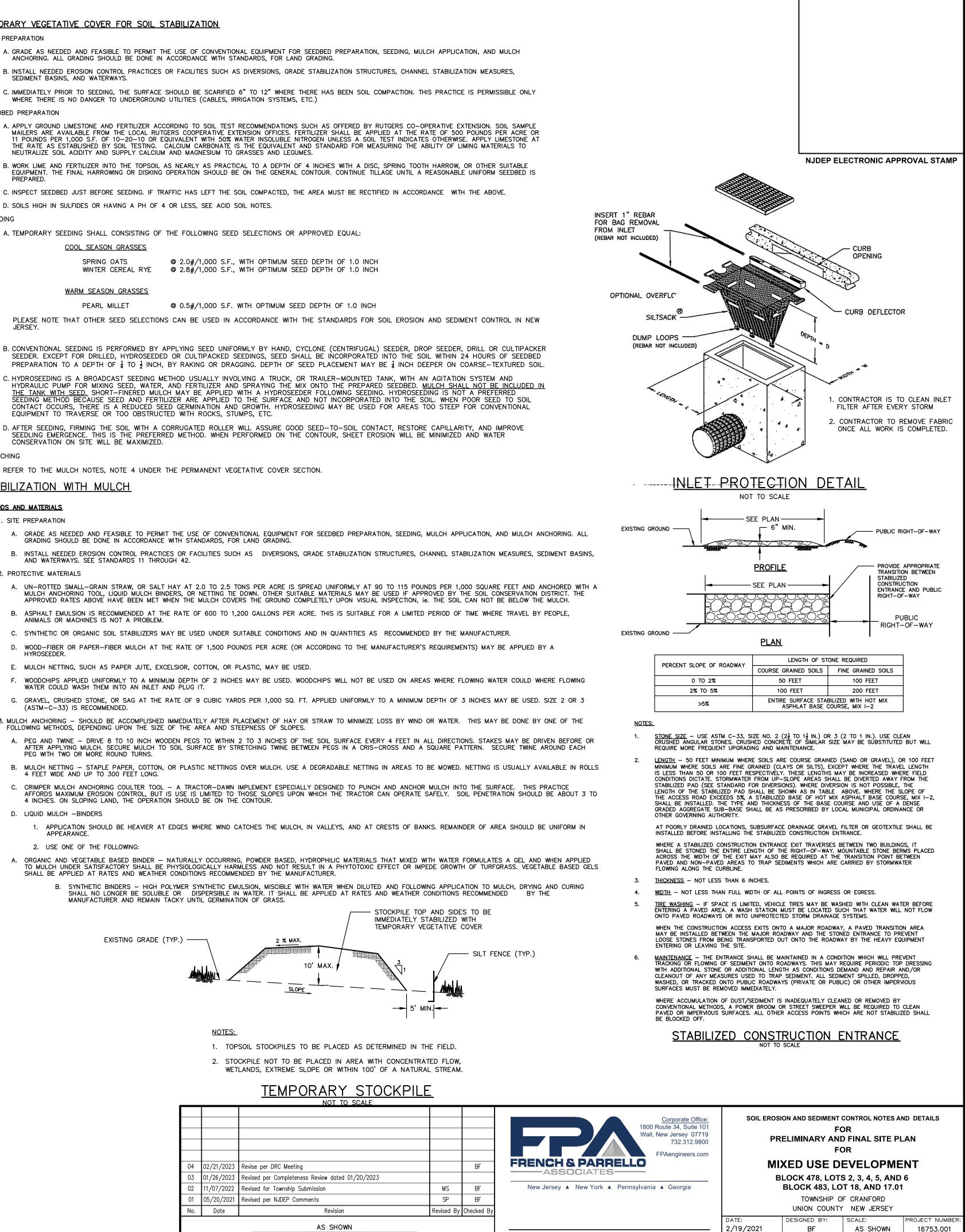
> NOTES: 1. TOPSOIL STOCKPILES TO BE PLACED AS DETERMINED IN THE FIELD. 2. STOCKPILE NOT TO BE PLACED IN AREA WITH CONCENTRATED FLOW,

WETLANDS, EXTREME SLOPE OR WITHIN 100' OF A NATURAL STREAM.

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		NOT TO SCALE
04	02/21/2023	Revise per DRC Meeting
03	01/26/2023	Revised per Completeness Review dated 01/20/2023
02	11/07/2022	Revised for Township Submission
01	05/20/2021	Revised per NJDEP Comments
No.	Date	Revision
		AS SHOWN
		SCALE IN FEET

SILT FENCE NOT TO SCALE

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**BAHRAM FARZANEH, PE, PP** PROFESSIONAL ENGINEER, NJ LIC, No. 24GE0345480

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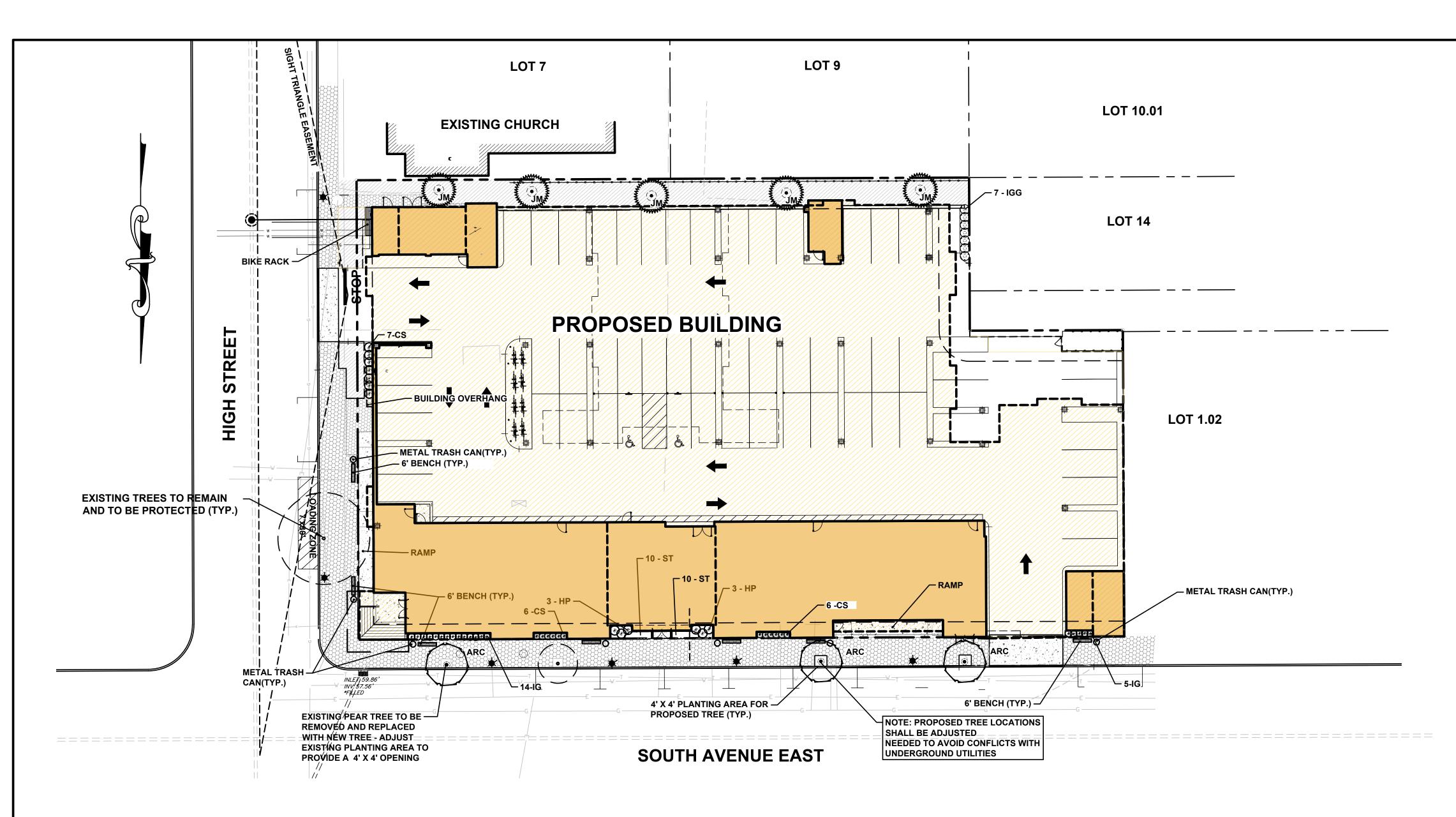
FIELD BOOK

CHECKED BY:

BF

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WGS



TREES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
ARC	N*	3	ACER RUBRUM COLUMNARE "ARMSTRONG"	ARMSTRONG COLUMNAR RED MAPLE	3" CAL.	B&B	40' HEIGHT, 15' SPREAD	COLUMNAR VERSION OF RE MAPLE, SINGLE TRUNK ONL
JM	N#&	5	JUNIPERUS SCOPOLORUM 'MOONGLOW'	MONNGLOW JUNIPER	8'-10' HEIGHT	B&B	20' HEIGHT, 8'–10' SPREAD	BLUE GREEN FOLIAGE, EVERGREEN, NARROW HABI
SHRUBS AND PERENNIALS AND GRASSES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
CS	N*	8	ARONIA MELANOCARPA LOW SCAPE MOUND	LOW SCAPE MOUND CHOKEBERRY	8' HEIGHT	1 GALLON CONT	18"-24" HEIGHT AND SPREAD	COMPACT DECIDUOUS SHRUE WHITE FLOWERS IN SPRING
HP	N&	6	HYDRANGEA QUERCIFOLIA 'RUBY SLIPPERS'	RUBY SLIPPERS OAKLEAF HYDRANGEA	1.5' HT.	3 GALLON CONT	3'-4' HEIGHT AND SPREAD	DECIDUOUS SHRUB, WHITE FLOWERS SUMMER
IG	N#&	19	ILEX GLABRA'SHAMROCK'	SHAMROCK INKBERRY HOLLY	2'-3' HEIGHT	В & В	4' HEIGHT AND SPREAD	EVERGREEN SHRUB, COMPAC FORM
IGG	N#&	18	ILEX GLABRA	INKBERRY HOLLY	2'-3' HEIGHT	B & B	6'-8' HEIGHT AND SPREAD	EVERGREEN SHRUB
ST	N&#</td><td>20</td><td>SEDUM TERNATUM</td><td>THREE LEAF STONECROP</td><td>2" HEIGHT</td><td>1 GAL. CONT,</td><td>6"-8" HEIGHT AND SPREAD</td><td>SUCCULENT TRAILING GROUNDCOVER, WHITE</td></tr></tbody></table>							

KEY:

N = NATIVE PLANT OF NORTH AMERICA

& = SALT SPRAY TOLERANT

\* = SPRING INSTALLATION ONLY

# = SELDOM OR RARELY DAMAGED BY DEER AS PER RUTGERS AG AGENCY (HTTP://NJAES.RUTGERS.EDU)

### SODDING SPECIFICATIONS

THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-ESTABLISHING ALL AREAS DISTURBED BY CONSTRUCTION. THE SODDING WILL BE IN ACCORDANCE WITH UNION COUNTY SOIL CONSERVATION DISTRICT STANDARDS. SPECIFIC SEED TYPES SHALL BE USED AS FOLLOWS:

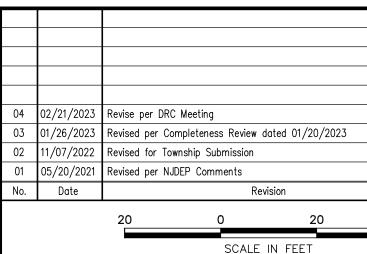
- A. ALL DISTURBED AREAS SHALL BE SODDED AS SHOWN ON THE LANDSCAPE PLAN WITH ERNST SEED CO. (ERNSTSEED.COM) ATHLETIC FIELD MIXTURE #ERNMX- 106 OR APPROVED EQUAL. SOD SHALL BE INSTALLED DURING THE GROWING SEASON ONLY.
- B. SLOPED AREAS 3:1 AND GREATER SHALL RECEIVE IN COMBINATION WITH THE ABOVE SPECIFIED GRASS MIXTURE AN EROSION CONTROL MATTING BY BONTERRA AMERICA, PINELANDS NURSERIES, COLUMBUS, NJ, MODEL # CS2 OR APPROVED EQUAL.

### LANDSCAPE PLAN UTILITY NOTE:

DUE TO INHERENT ERRORS IN REPRODUCTION METHODS, ERRORS MAY OCCUR WHEN SCALING THIS DRAWING

DO NOT INSTALL PROPOSED PLANT MATERIAL DIRECTLY ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST MATERIAL AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.

# THIS PLAN SHALL BE USED FOR LANDSCAPING PURPOSES ONLY.



## LEGEND



0

SODDED LAWN (TYP.)

**EXISTING STREET LIGHT FIXTURE** 

**EXISTING TREE TO REMAIN** 

NJDEP ELECTRONIC APPROVAL STAMP

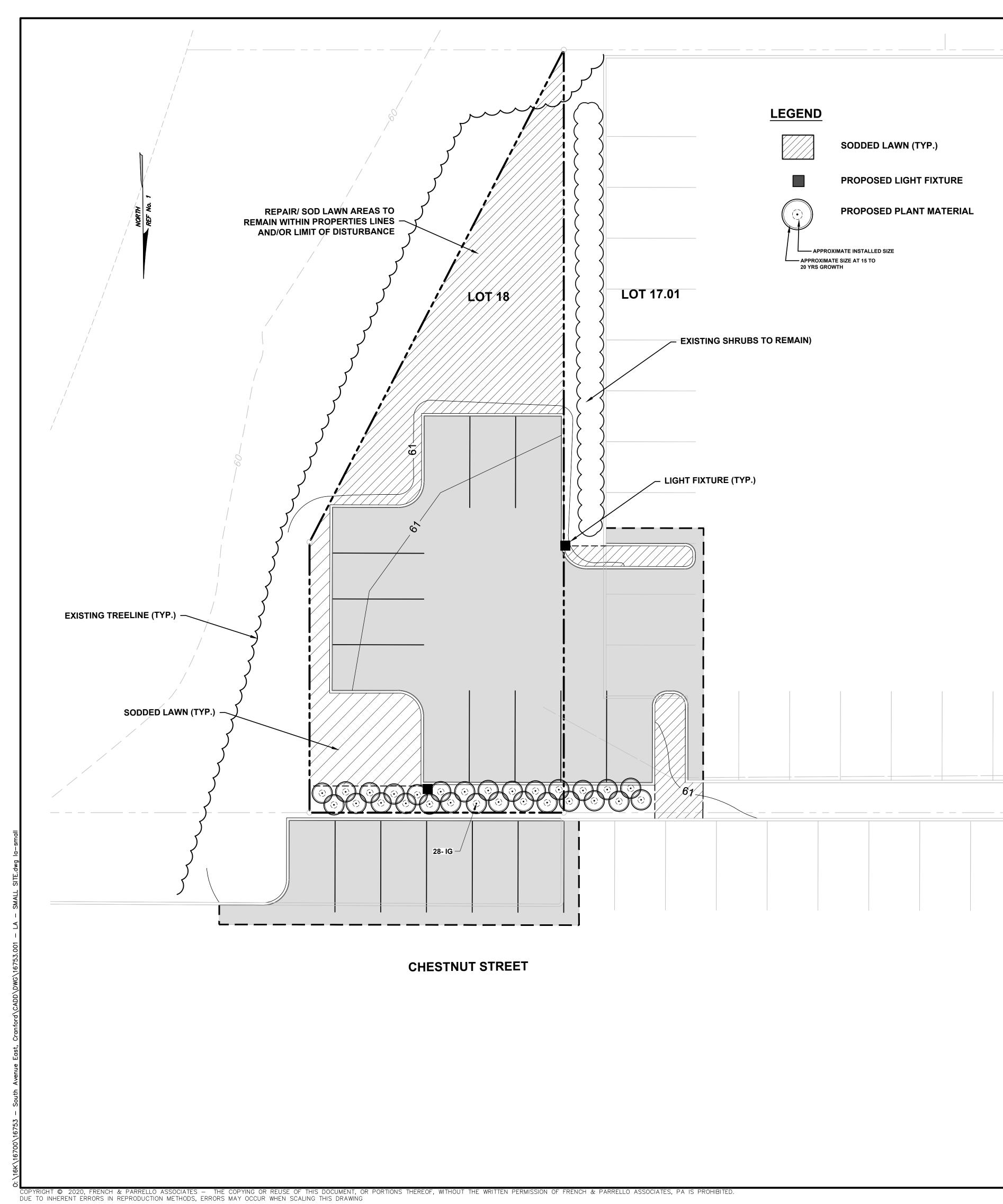


— APPROXIMATE INSTALLED SIZE - APPROXIMATE SIZE AT 15 TO 20 YRS GROWTH

# **PLANTING NOTES**

- 1. THE LANDSCAPE PLAN SHALL BE USED FOR LANDSCAPING PURPOSES ONLY. THE CONTRACTOR SHOULD EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR EXACT LOCATIONS OF UTILITIES, DRAINS, ETC., AND NOTIFY THE OWNER ABOUT ANY DISCREPANCIES BEFORE STARTING WORK.
- 2. ALL PLANTING SHALL BE IN CONFORMANCE WITH THE AMERICAN NURSERYMEN'S ASSOCIATION STANDARDS, CURRENT EDITION. ALL PLANT MATERIALS USED SHALL BE TRUE TO NAME AND SIZE IN CONFORMITY WITH THE CURRENT EDITION OF THE AMERICAN STANDARD OF NURSERY STOCK AND SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY, ALL PLANTS SHALL HAVE NORMAL, WELL-DEVELOPED BRANCHES AND VIGOROUS ROOT SYSTEMS. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, FREE FROM DEFECTS, DISFIGURING KNOTS, ABRASIONS OF THE BARK, SUN SCALD INJURIES, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTION. ALL PLANTS SHALL BE NURSERY GROWN. ALL PLANT MATERIAL SHALL BE TAGGED AT THE NURSERY SOURCE AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- 3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY ANY PERSON, VEHICLE, EQUIPMENT, OR TOOLS RELATED TO THE **EXECUTION OF THIS CONTRACT.** 4. EXCAVATION NEAR EXISTING UTILITIES TO BE CAREFULLY PERFORMED BY HAND.
- ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT THE NURSERY. ALL PLANT MATERIAL SHALL BE PLANTED 5. SO THAT THE TOP OF THE ROOTBALL IS NO HIGHER OR LOWER THAN THE EXISTING/FINISHED GRADE DEPENDENT UPON SOIL CONDITIONS.
- 6. IN THE EVENT THAT PLANTING DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE LANDSCAPING PLAN SHALL GOVERN. THE USE AND PLANTING OF BARE ROOT MATERIAL SHALL BE PROHIBITED.
- 7. ANY SUBSTITUTIONS OF PLANT MATERIAL WITH REGARDS TO SIZE, SPECIES, VARIETY, ETC., SHALL BE SUBJECT TO APPROVAL BY THE OWNER.
- 8. PLANTS SHALL ONLY BE INSTALLED WHEN THE SOIL IS FROST FREE.
- UNDER NO CIRCUMSTANCES SHOULD THE MAIN LEADER OF A DECIDUOUS OR EVERGREEN TREE BE TOPPED. DECIDUOUS TREES SHALL BE PRUNED BY REMOVAL OF 1/3 OF THE INTERIOR BRANCHING STRUCTURE WITHOUT ALTERING THE ORIGINAL BRANCHING FORM OF THE TREE.
- 10. ALL DISTURBED AREAS, NOT BEING PLANTED, SHALL BE TOPSOILED 4" THICK, FERTILIZED, SEEDED, AND MULCHED WITH APPROVED MULCH. TOPSOIL SHALL BE NATURAL FRIABLE, FERTILE SOIL CHARACTERISTIC OF PRODUCTIVE SOIL IN THE VICINITY. IT SHALL BE FREE OF LUMPS OF CLAY, STONES, ROOTS, AND OTHER FOREIGN MATTER. 11. CUT AND LOOSEN SISAL HEMP CHOKE TIE AROUND TREE TRUNK. ALL PLASTIC MATERIAL SHALL NOT BE PERMITTED. ALL WIRE BASKETS AND PLASTIC LINERS OF CONTAINER
- GROWN TREES AND SHRUBS MUST BE COMPLETELY REMOVED. NO CONTAINER GROWN MATERIAL WILL BE ACCEPTED IF IT IS ROOT BOUND AND NOT ROOT PRUNED. THE USE OF NYLON TWINE ON ROOT BALLS IS PROHIBITED
- 12. THE DEPTH OF PLANT PITS SHALL BE INCREASED BY 12" THROUGH THE ADDITION OF LOOSE AGGREGATE (3/4" TO 1 1/2" DIAMETER) WHEREVER POOR DRAINAGE OCCURS OR WHERE DIRECTED BY THE OWNER.
- 13. GUY WIRES SHALL BE LOCATED SO THAT THEY WILL NOT PULL CROTCH APART. GUY WIRES TO SECOND BRANCH (MINIMUM ONE-THIRD HEIGHT OF TREE). USE THREE GUYS PER TREE UNLESS OTHERWISE INDICATED. ALL TREE STAKES, GUY WIRES, TREE WRAPPING AND SAUCERS SHALL BE REMOVED AFTER ONE GROWING SEASON. 14. PLANTS PLANTED IN ROWS SHALL BE MATCHED SPECIMENS AND BE UNIFORM IN SIZE AND FORM.
- 15. IN THE EVENT THAT EXISTING VEGETATION IS REMOVED BEYOND THE CLEARING LIMITS SHOWN ON THE PLANS, ADDITIONAL PLANTING MUST BE PROVIDED AS APPROVED BY THE TOWNSHIP AND AT NO COST TO THE OWNER.
- 16. PLANTING BACKFILL MIXTURE SHALL CONSIST OF ONE PART TOPSOIL, ONE PART NATIVE SOIL AND ONE PART PEAT MOSS. NOTE THAT PLANTING MIXTURE MAY CHANGE BASED UPON SOIL CONDITIONS.
- 17. MULCH, 4" IN DEPTH, SHALL BE TREATED SHREDDED HARDWOOD BARK NOT EXCEEDING 2" IN GREATEST DIMENSION. MULCH SHALL BE INSTALLED WITH A MAXIMUM OF ONE (1) INCH WITHIN ONE (1) FOOT ON THE TREE'S ROOT FLARE. A NON-PLASTIC WEED RETARDANT BARRIER SHALL BE USED IN ALL NON GRASSED AREAS. MULCH SHALL BE FINE GRADED FOR A PLEASING APPEARANCE. THE USE OF MARBLE OR PINE BARK CHIPS IS PROHIBITED. MULCH VOLCANOES ARE NOT PERMITTED.
- 18. ALL PLANT MATERIAL SHALL BE GIVEN A MINIMUM OF 5 GALLONS OF WATER AT THE TIME OF INSTALLATION AND SHALL BE WATERED AT INTERVALS DURING ESTABLISHMENT TO ENSURE ADAPTATION TO THE SITE. PRIOR TO THE INSTALLATION OF THE PLANT MATERIAL, THE CONTRACTOR SHALL FILL EACH PLANTING PIT WITH WATER AND ALLOW IT TO FULLY PERCOLATE INTO THE GROUND PRIOR TO PLACEMENT OF THE PLANT. THE CONTRACTOR SHALL NOTIFY EITHER THE OWNER OR PROJECT LANDSCAPE ARCHITECT OF ANY PERCOLATION PROBLEMS PRIOR TO INSTALLATION.
- 19. PREFERRED PLANTING TIME PERIODS ARE FROM SEPTEMBER 1 TO NOVEMBER 30 OR MARCH 20 TO MAY 31. NO PLANTING SHALL BE EXECUTED DURING ABNORMALLY HOT WEATHER NOR WHEN THE GROUND IS FROZEN. 20. THE CONTRACTOR SHALL REMOVE ALL DAMAGED BRANCHES AND NURSERY TAGS AT THE TIME OF INSTALLATION.
- 21. ALL TURF SHALL RECEIVE FERTILIZER CONSISTING OF 10-6-4 (50% ORGANIC) COMPOSITION, APPLIED AT 3 LB.. PER 100 SQ. FT. SLOW RELEASE FERTILIZER TABLETS OR PACKETS OF 20-10-5 COMPOSITION SHALL BE ADDED TO ALL PLANTING PITS AT THE FOLLOWING RATIOS: 1 PER SHRUB, 2 PER DECIDUOUS OR EVERGREEN TREES UP TO 2" IN CALIPER AND 3 FOR DECIDUOUS AND EVERGREEN TREES ABOVE 2" IN CALIPER.
- 22. EACH TREE THAT IS PLANTED MUST BE TAGGED WITH A DURABLE LABEL BEARING THE GENUS, SPECIES, VARIETY, PLANT PATENT NUMBER (IF APPLICABLE) AND CULTURAL REQUIREMENTS AND MUST BE INSPECTED PRIOR TO REMOVAL.
- 23. ALL GROUPED SHRUBS SHALL BE MULCHED TOGETHER TO FORM ONE CONTINOUS PLANTING BED.
- 24. CONTRACTOR TO BE RESPONSIBLE FOR SODDING AREAS BEING DISTURBED BY CONSTRUCTION. SOD TO BE IN ACCORDANCE WITH SOIL CONSERVATION DISTRICT'S STANDARDS.
- 25. ALL TREES FOUR (4) FEET OR GREATER IN HEIGHT SHALL BE STAKED PER TOWNSHIP DESIGN STANDARDS.
- 26. ALL PLANT RELOCATIONS SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- 27. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR PERIOD OF ONE YEAR FROM THE TIME OF PLANTING.
- 28. ALL TREE "GATOR" IRRIGATION BAGS SHALL BE MAINTAINED FOR SIX MONTHS AND THEN REMOVED.

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40	-				DATE: <b>2/19/2021</b>	DESIGNED BY: SRB	SCALE: 1"=20'	PROJECT NUMBER: 16753.001	
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04	02/21/2023	Revise per DF	RC Meeting	
03	01/26/2023	Revised per (	Completeness Review d	ated 01/20/2023
02	11/07/2022	Revised for T	ownship Submission	
01	05/20/2021	Revised per N	IJDEP Comments	
No.	Date		Rev	ision
		10	0	10
			SCALE	IN FEET

SARAH REBAR BISAHA, LLA, PP LICENSED LANDSCAPE ARCHITECT NJ LIC NO AS000639

20

Revised By Checked By

TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY DESIGNED BY: SCALE: PROJECT NUMBE 1" = 10' 16753.001

SHEET:

10 of 15

2/19/2021 JB CHECKED BY: FIELD BOOK DRAWN BY: JB SRB



### METAL BENCH DETAIL

NOTES:

NOT TO SCALE

- 1. 6' LONG METAL BENCH SHALL BE MANUFACTURED THOMAS STEELE, (THOMAS-STEELE.COM) MODEL "CARNIVAL", 6 FT BENCH #CRB-6 WITH BACK AND ARMS
- 2. POWDER COATED COLOR FINISH TO BE SELECTED BY OWNER FROM STANDARD AVAILABLE COLORS
- 3. BENCH SHALL HAVE PREDRILLED MOUNTING HOLES FOR SURFACE MOUNT



# METAL TRASH RECEPTACLE DETAIL

NOT TO SCALE

NOTES:

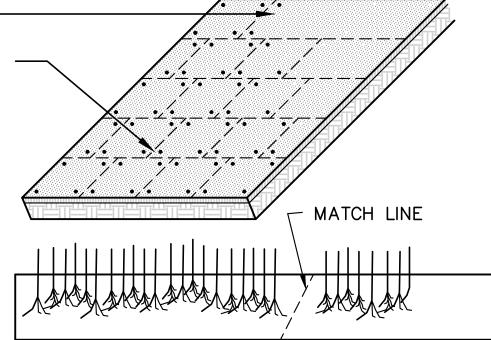
1. TRASH RECEPTACLES SHALL BE OUTDOOR SLATTED STEEL TRASH CAN WITH FLAT LID, 36 GALLON, BLACK, AS MANUFACTURED BY GLOBAL INDUSTRIAL<sup>™</sup> MODEL 237726BK. COLOR TO BE BRONZE OR AS PER OWNER'S SELECTION FROM FULL RANGE OF STANDARD COLORS PROVIDED BY THE MANUFCATURER.

<ul> <li>ALL TREES UNDER 3" IN CALIPER SHALL BE STAKED ALL TREES 3" IN CALIPER AND GREATER SHALL BE GUYED</li> <li>TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE</li> <li>SET STAKES VERTICAL AND AT SAME HEIGHT</li> <li>REMOVE ALL WIRE BASKETS PRIOR TO BACKFILLING THE PLANTING PIT.</li> <li>ALL WIRE BASKETS SHALL BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.</li> <li>STAKES TO BE SET 2/3'RDS UP TREE OR JUST AT FIRST BRANCHES SEE TREE STAKING AND GUYING DETAIL</li> <li>20 GALLON TREE GATOR SLOW RELEASE WATERING BAG MODEL #98183 OR APPROVED EQUAL. PROVIDE ONE BAG PER INSTALLED TREE FOR TREES LESS THAN 4" IN CALIPER PROVIDE TWO PER TREE FOR LARGER SIZES- BAGS TO BE REMOVED AFTER 6 MONTHS</li> <li>4" SHREDDED HARDWOOD MULCH- KEEP MULCH AWAY FROM ROOT COLLAR AS DESCRIBED IN PLANTING NOTES. MULCH VOLCANCES ARE NOT PERMITTED</li> <li>6" SOLL MOUND FOR FOR WATER RETENTION</li> <li>REMOVE ALL PLASTIC MATERIAL, BURLAP SINTHETIC BURLAP, STRING OR CONTAINERS AT THE TIME OF PLANTING</li> <li>BACKFILL AUGMENTED WITH TOPSOIL</li> <li>STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED GROUND</li> </ul>	NOTES:	
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STAKES TO EXTEND 18" BELOW TREE PIT IN	SYNTHETIC BURLAP, STRING OR	
UNDISTURBED GROUND PLANTING AREA SHALL ——— BE 12" WIDER THAN	BACKFILL AUGMENTED WITH TOPSOIL	
		BE 12" WIDER THAN
	NOT TO SCALE	

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PEG ON SLOPES GREATER THAN 3 : 1

STAGGERED SOD PANEL JOINTS



### NOTES :

- 1. CULTIVATED SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
- 2. APPLY FERTILIZER AT THE RATE OF 500 POUNDS PER ACRE USING 10-20-10 RATIO OR AS DETERMINED BY SOIL TESTING.
- 3. SUPPLY PULVERIZED DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE OR AS DETERMINED BY SOIL TESTING.
- 4. APPLY 300 POUNDS 38-0-0 PER ACRE IN LIEU OF TOP DRESSING OR AS DETERMINED BY SOIL TESTING.
- 5. PLACE SOD STRIPS ON THE CONTOUR STARTING AT THE BOTTOM.
- 6. PLACE SOD WITH SNUG EVEN JOINTS THAT ARE STAGGERED.
- 7. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT.
- 8. ON SLOPES GREATER THAN 3 TO 1 SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 OF AN INCH).
- 9. ANCHOR SOD IN WATER CARRYING CHANNELS WITH HEAVY JUTE OR PLASTIC NETTING.
- 10. SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH THE SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.

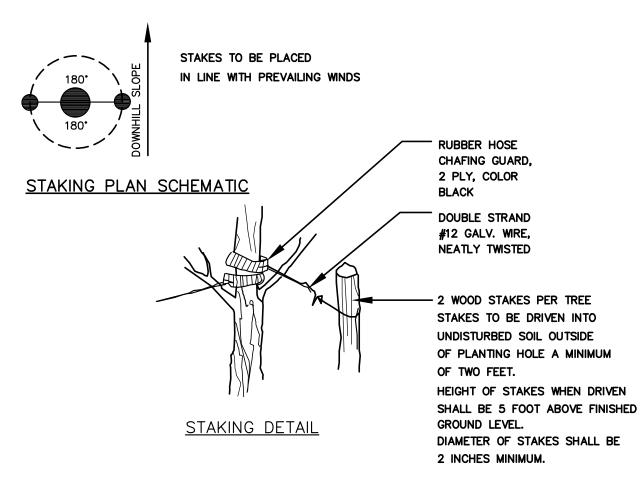
# SOD INSTALLATION DETAIL

NOT TO SCALE

### SODDING SPECIFICATIONS

THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-ESTABLISHING ALL AREAS DISTURBED BY CONSTRUCTION. THE SODDING WILL BE IN ACCORDANCE WITH BERGEN COUNTY SOIL CONSERVATION DISTRICT STANDARDS. SPECIFIC SEED TYPES SHALL BE **USED AS FOLLOWS:** 

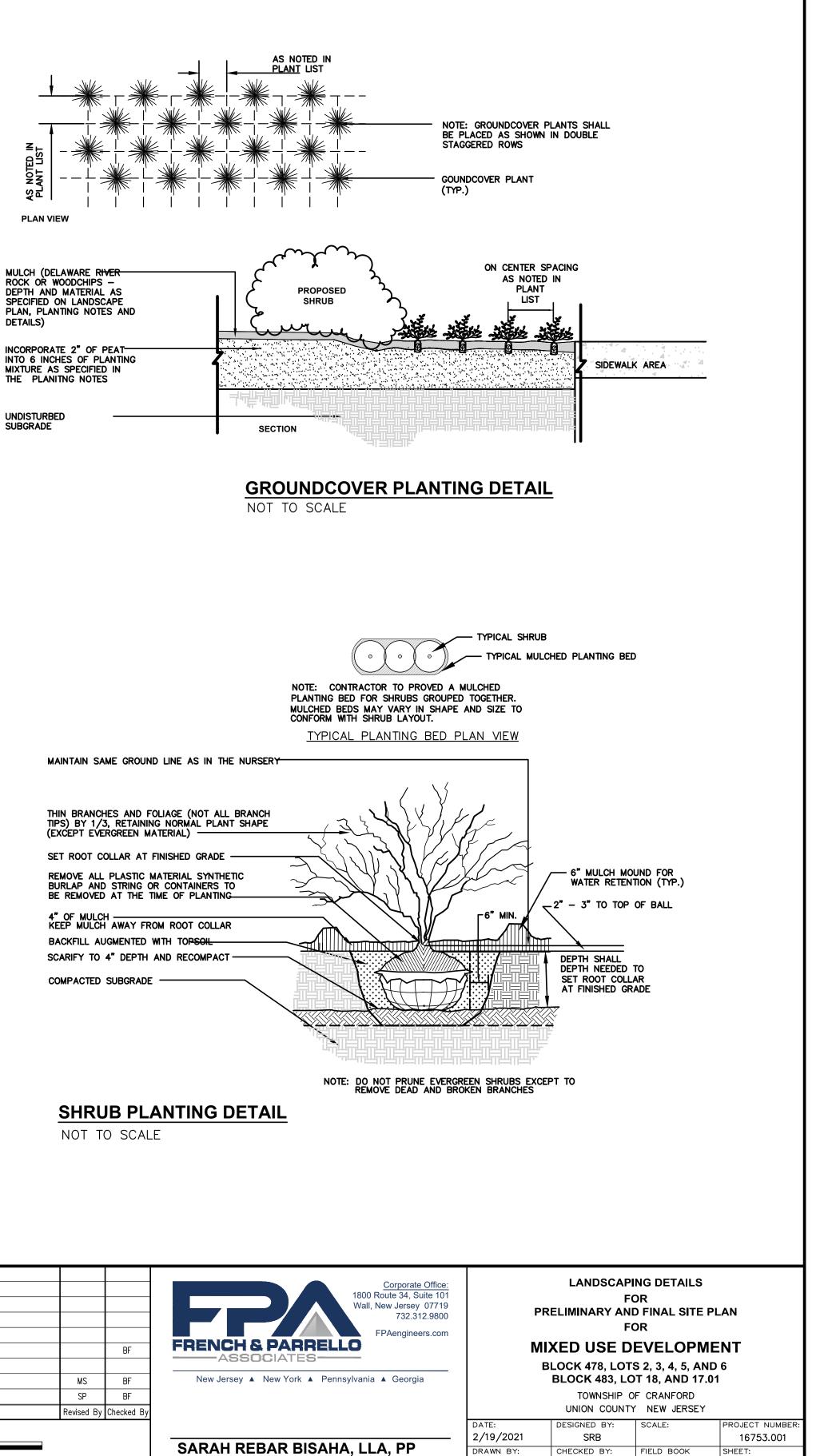
- A. ALL DISTURBED AREAS SHALL BE SODDED AS SHOWN ON THE LANDSCAPE PLAN WITH ERNST ATHLETIC FIELD MIXTURE OR APPROVED EQUAL. SEED SHALL BE APPLIED AT A RATE OF 170 LBS/ACRE BETWEEN THE PERIODS OF EITHER 4/1 TO 5/31 OR 8/15 TO 10/16.
- B. SLOPED AREAS 3:1 AND GREATER SHALL RECEIVE IN COMBINATION WITH THE ABOVE SPECIFIED GRASS MIXTURE AN EROSION CONTROL MATTING BY BONTERRA AMERICA, PINELANDS NURSERIES, COLUMBUS, NJ, MODEL # CS2 OR APPROVED EQUAL.



**TREE STAKING DETAIL** NOT TO SCALE

> 04 02/21/2023 Revise per DRC Meeting 01/26/2023 Revised per Completeness Review dated 01/20/2023 02 11/07/2022 Revised for Township Submission 01 05/20/2021 Revised per NJDEP Comments No. Date Revision

NJDEP ELECTRONIC APPROVAL STAMP

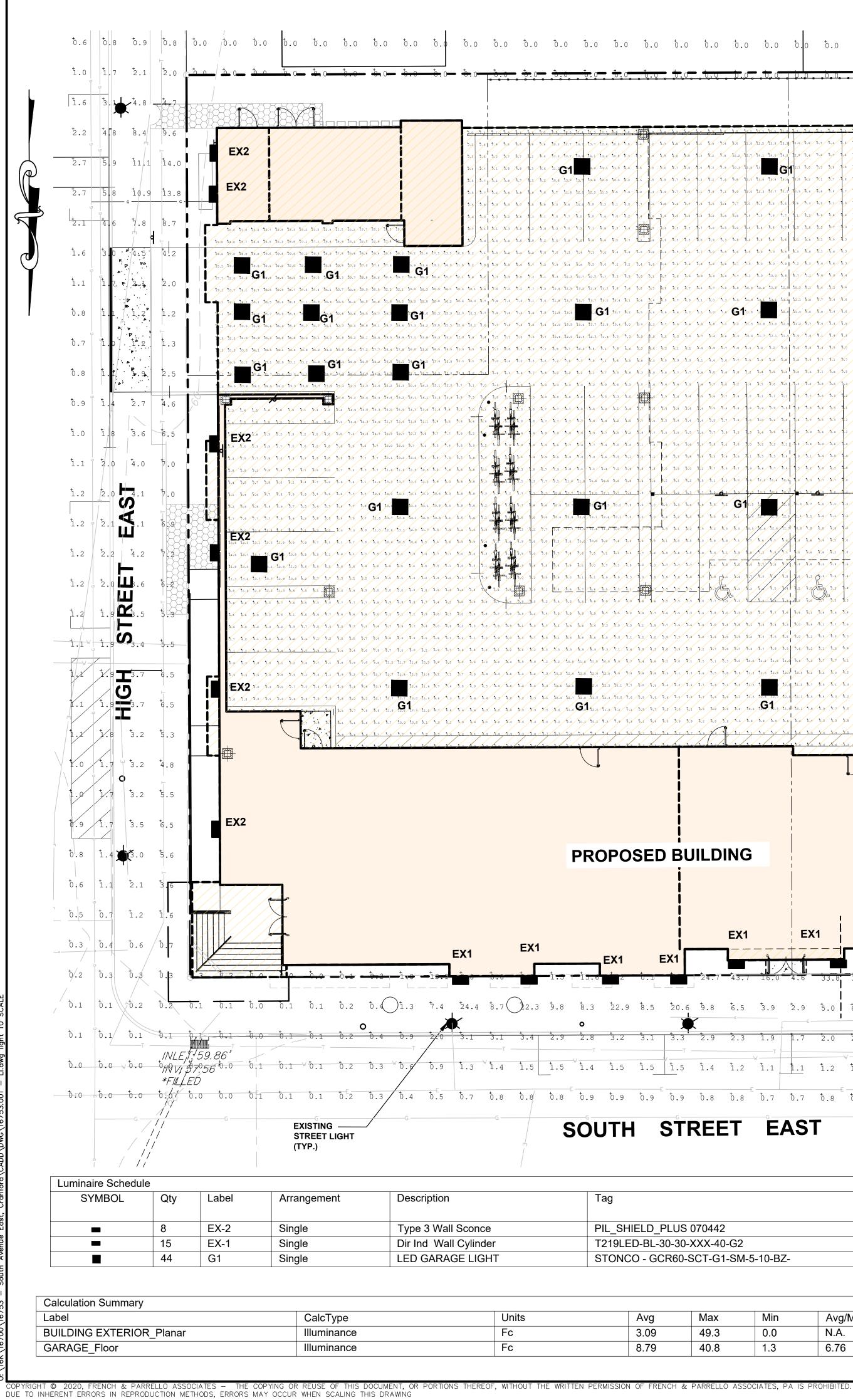


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11 of 15

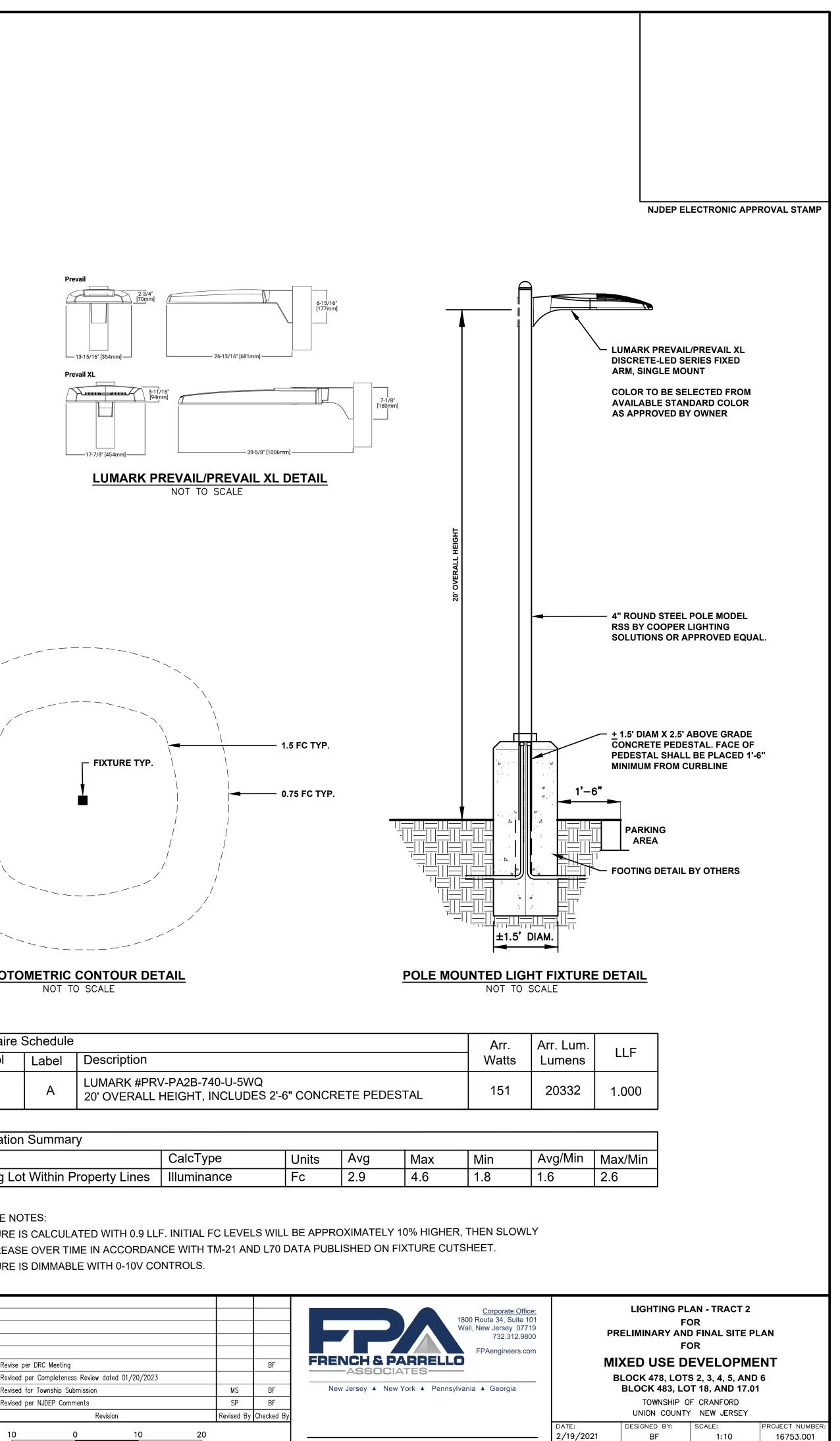


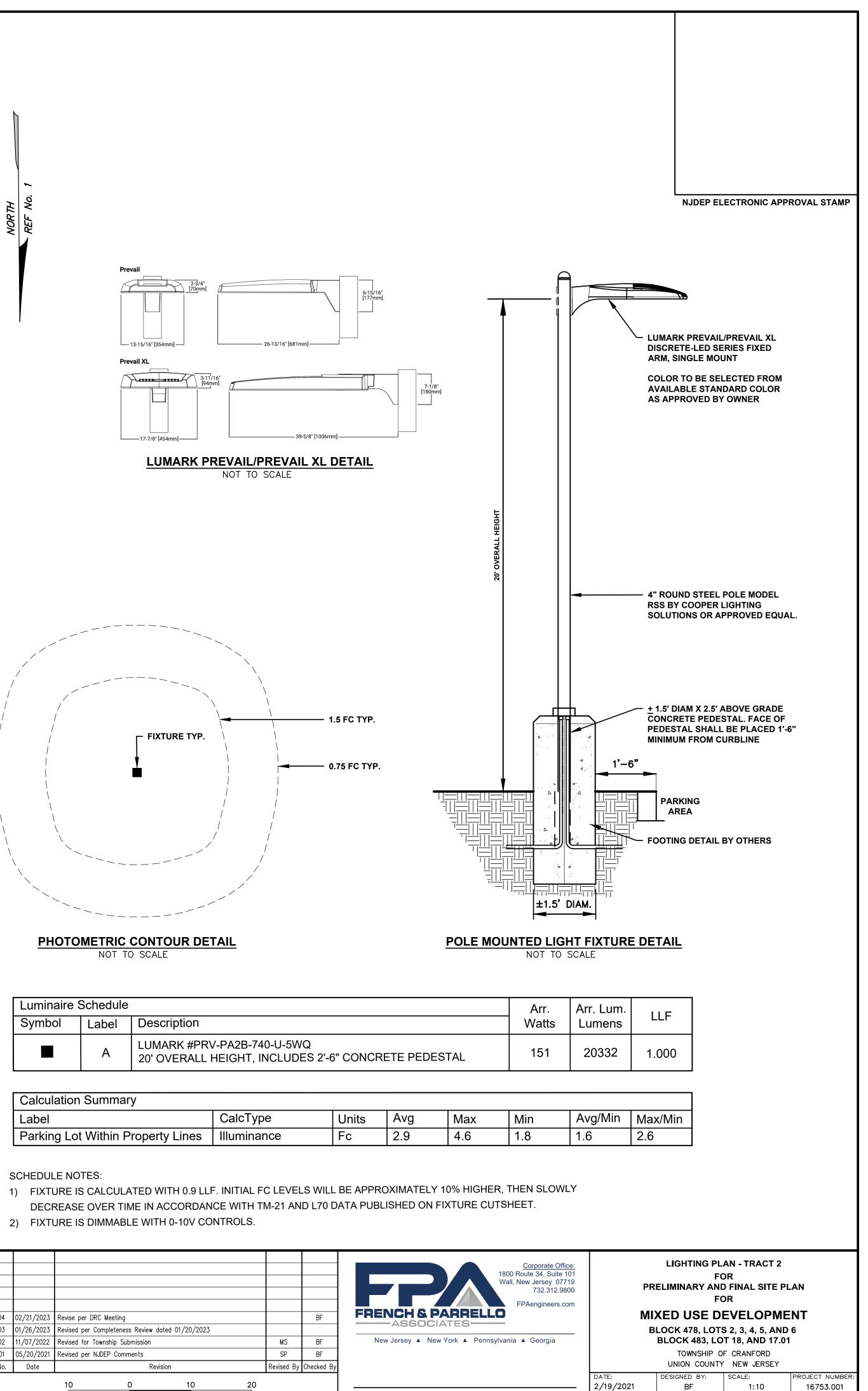
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FFFFFFF	*3.0     *3.0     *2.5     *2.4     *2.3     *2.2     *1.4     *0.       *1.5     1.4     1.3     1.3     1.2     1.1     1.0     0.8     0.	7  0.2  0.2  0.6  5.4  42.9  198  201  51.5  51.5  911  8.6  911	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<ul> <li>JGHTING LEVELS SHOWN ON THIS PLAN DO NOT INCLUDE ANY CONTRIBUTIONS FROM EXISTING STREET LIGHT FIXTURES.</li> <li>FIXTURES ARE CALCULATED WITH 0.9 LIGHT LOSS FACTOR. INITIAL FC LEVELS WILL BE APPROXIMATELY 10% HIGHER.</li> <li>FIXTURES ARE DIMMABLE WITH 0-10V CONTROLS.</li> </ul>
	82 57.8 867	Image: Second state of the second s	Battana Farzanet, NJ Lic. No. 24GE03454800	LIGHTING PLAN - TRACT 1         FOR         PRELIMINARY AND FINAL SITE PLAN         FOR         MIXED USE DEVELOPMENT         BLOCK 478, LOTS 2, 3, 4, 5, AND 6         BLOCK 478, LOTS 2, 3, 4, 5, AND 6         BLOCK 483, LOT 18, AND 17.01         TOWNSHIP OF CRANFORD         UNION COUNTY NEW JERSEY         DATE:         2/19/2021       SRB       1" = 20'       16753.001         DRAWN BY:       CHECKED BY:       FIELD BOOK       SHEET:         SRB       BF       12 of 15

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# LIGHTING NOTES

- 1. DO NOT INSTALL PROPOSED LIGHTS ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST LIGHTS AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.
- 2. ALL POLE MOUNTED FIXTURES SHALL HAVE 2'-6" CONCRETE PEDESTALS.
- 3. LIGHTING LEVELS SHOWN ON THIS PLAN DO INCLUDE ANY CONTRIBUTIONS FROM EXISTING STREET AND/OR PARKING LOT LIGHT FIXTURES.





**BAHRAM FARZANEH, PE, PP** 

PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

DRAWN BY:

DC

CHECKED BY: FIELD BOOK

BF

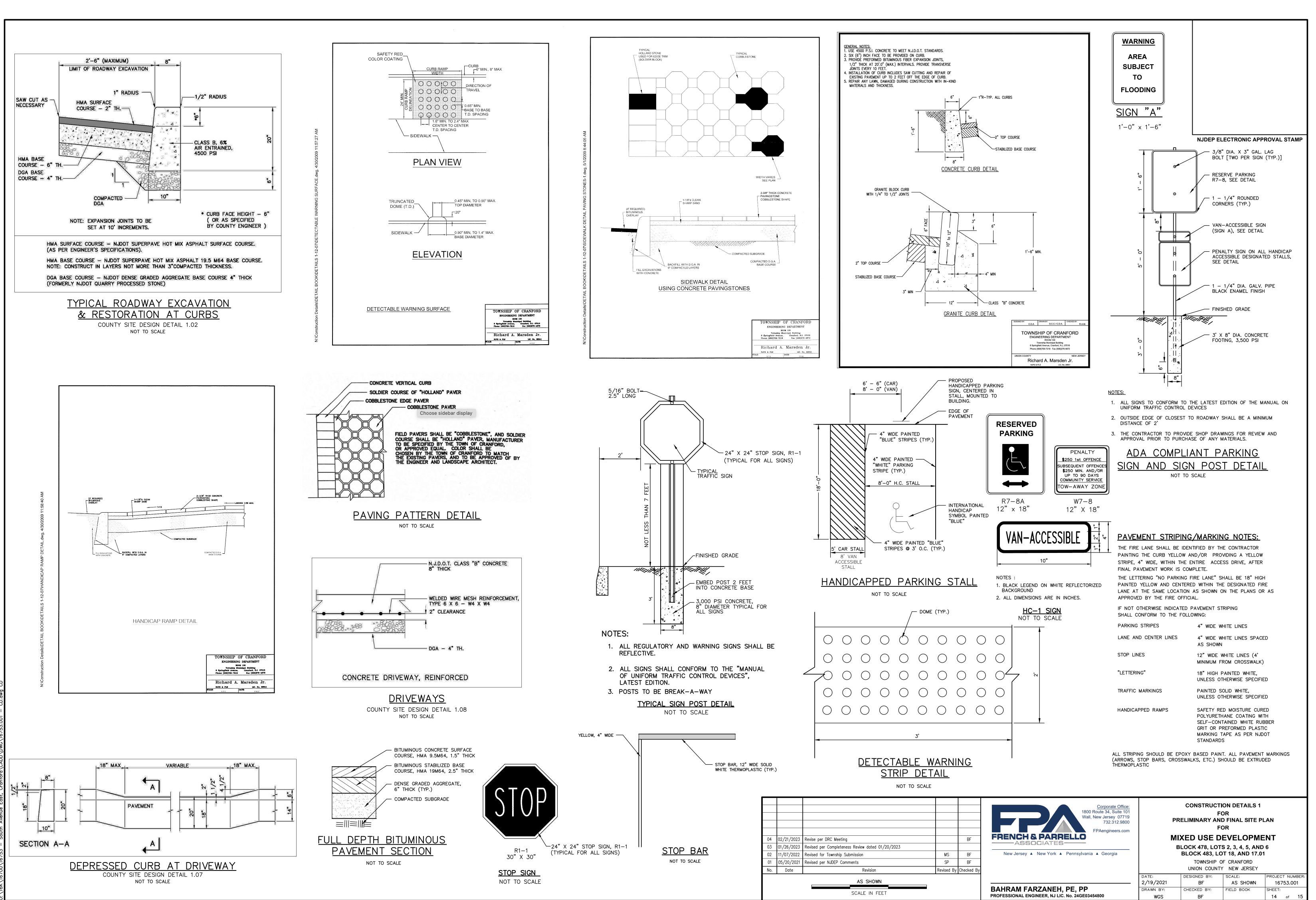
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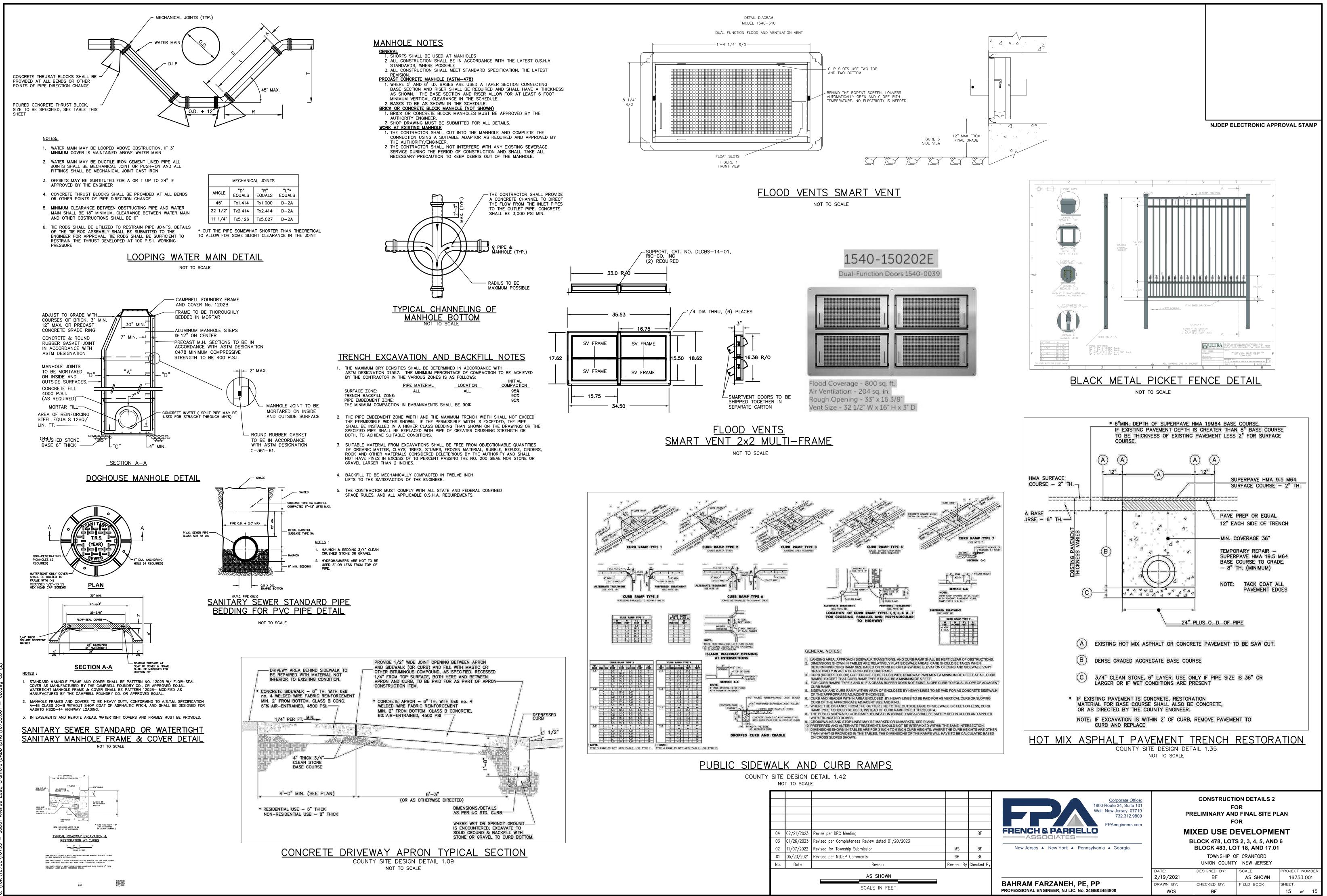
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Parking Lot Within Property Lines	
Parking Lot Within Property Lines	

	1			
04	02/21/2023	Revise per DR	C Meeting	
03	01/26/2023	Revised per C	ompleteness Review d	ated 01/20/2023
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URFACE_	TOWNSHIP OF CRANFORD ENGINEERING DEPARTMENT TOWNSHIP DOWN DULKS 8 Byringthal Arms Statistic Constantion, J.J. 07016 Phone (000)778-7816 Pax (000)878-8778
	Richard A. Marsden Jr.



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