

# THE TOWNSHIP OF SOUTH ORANGE VILLAGE RIVER GREENWAY PROJECT

## PHASE 5i

### PEDESTRIAN BRIDGE AND PATH IN NEW WATERLAND PARK AND CHYZOWYCH SOCCER FIELD SOUTH ORANGE, NEW JERSEY MAY 2024 RE-BID

#### UTILITIES

PUBLIC SERVICE ELECTRIC AND GAS (ELECTRIC AND STREET LIGHTING)
PUBLIC SERVICE ELECTRIC AND GAS (GAS)
EAST ORANGE WATER COMMISSION (WATER)
JOINT MEETING OF ESSEX AND UNION COUNTIES (SEWER)
VERIZON (TELEPHONE)
CABLEVISION (CABLE)

MID-POINT OF PROJECT  
LONGITUDE: 74°16' 6" W  
LATITUDE: 40°44' 22" N

THE TOWNSHIP OF SOUTH ORANGE VILLAGE  
BOARD OF TRUSTEES

VILLAGE PRESIDENT  
SHEENA COLLUM

BOARD OF TRUSTEES

BOBBY BROWN  
JENNIFER GREENBERG  
KAREN HARTSHORN HILTON  
BILL HASKINS  
SUMMER JONES  
OLIVIA LEWIS-CHANG

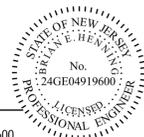
STANDARD ROADWAY-TRAFFIC CONTROL  
CONSTRUCTION DETAILS BOOKLET (2016)  
AND STANDARD ELECTRICAL DETAILS  
BOOKLET (2011) ARE APPLICABLE TO THIS  
PROJECT EXCEPT FOR THOSE DETAILS  
CONTAINED HEREIN

NJDOT STANDARD CONSTRUCTION  
SPECIFICATION (2019) SHALL BE CONSIDERED  
AS PART OF THE SPECIFICATION FOR THIS  
PROJECT.

CHANGES MADE TO THESE PLANS SINCE SIGNATURE BY THE  
CONSULTANT MAY BE DETERMINED BY COMPARISON OF THE  
PLANS FILED AT THE DEPARTMENT WITH THOSE FILED AT THE  
OFFICE OF THE CONSULTANT

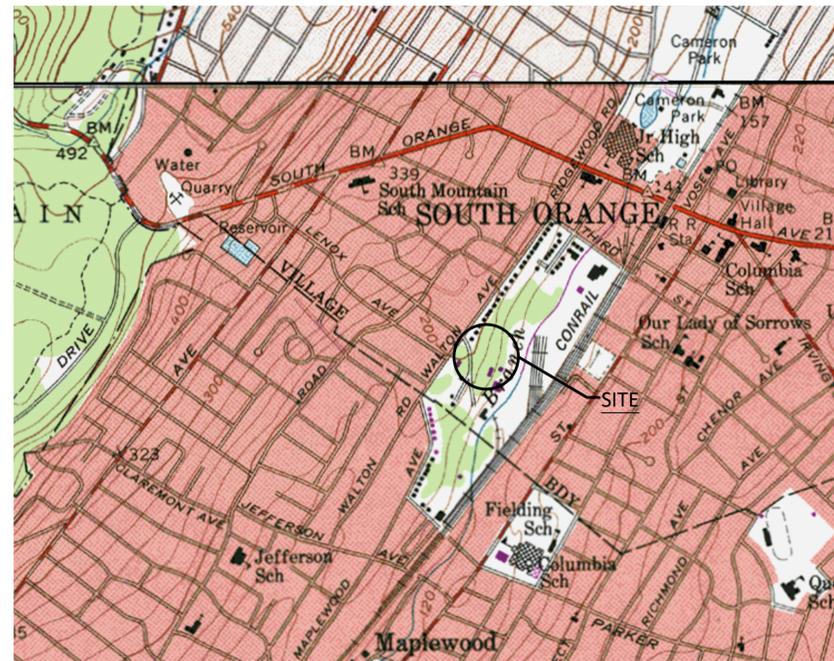
PREPARED AND RECOMMENDED BY:

**M M**  
MOTT  
MACDONALD  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
111 WOOD AVENUE SOUTH  
ISELIN, N.J. 08830-4112



BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

7/16/2024



REFERENCE: USGS MAP, 1981 ELIZABETH, NJ

LOCATION MAP



INDEX OF DRAWINGS	
DWG. NO.	DESCRIPTION
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2	ESTIMATE & DISTRIBUTION OF QUANTITIES SITE WORK
3	DEMOLITION LEGEND AND NOTES
4	KENNEL DEMOLITION PLAN
5	SITE LEGEND AND NOTES
6	ENVIRONMENTAL COMMITMENTS
7	CONSTRUCTION PLANS-A
8	CONSTRUCTION PLANS-B
9	CONSTRUCTION PLANS-C
10	CONSTRUCTION PLANS-D
11	GRADING AND UTILITY PLAN-A
12	GRADING AND UTILITY PLAN-B
13	GRADING AND UTILITY PLAN-C
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15	LANDSCAPE PLAN-A
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18	SOIL EROSION AND SEDIMENT CONTROL PLAN-A
19	SOIL EROSION AND SEDIMENT CONTROL PLAN-B
20	SOIL EROSION AND SEDIMENT CONTROL PLAN-C
21	SOIL EROSION AND SEDIMENT CONTROL PLAN-D
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23	CONSTRUCTION DETAILS
24	CONSTRUCTION DETAILS
25	CONSTRUCTION DETAILS
26	ESTIMATE OF QUANTITIES STRUCTURAL
27	GENERAL PLAN AND ELEVATION I
28	GENERAL PLAN AND ELEVATION II
29	EXCAVATION DETAILS
30	FOOTING AND PILE PLAN AND DETAILS
31	ABUTMENT PLANS AND ELEVATIONS
32	ABUTMENT AND WINGWALL DETAILS 1
33	ABUTMENT AND WINGWALL DETAIL 2
34	PIER PLANS AND ELEVATIONS
35	PIER DETAILS

SUBMITTED BY: \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY: \_\_\_\_\_ DATE \_\_\_\_\_

TOTAL LENGTH OF PROJECT = 880 FT. (.167 MILES) EAST BRANCH OF RAHWAY RIVER

N.J.D.O.T. 2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION  
AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS TO GOVERN

FILE NAMES: FILES USER: BUSERNAME\$  
 DATE: 8/16/2024 TIME: 8:10:55  
 DESIGNED BY: \_\_\_\_\_  
 DETAIL CHECKED BY: \_\_\_\_\_  
 IN CHARGE OF: \_\_\_\_\_  
 MOTT MACDONALD

MOTT MACDONALD  
 IN CHARGE OF  
 DESIGN CHECKED BY  
 DESIGNED BY  
 DETAILED BY  
 DETAIL CHECKED BY  
 USER:  
 FILE NAME:  
 DATE:  
 TIME:

SEQ. NO.	ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY	PLAN SHEET TOTALS	AS-BUILT QUANTITY	DISTRIBUTION: PLAN SHEET QUANTITIES													
							BASE BID ITEMS													
1	154003P	MOBILIZATION	LS	LUMP SUM	1															
2	157004M	CONSTRUCTION LAYOUT	DOLL	DOLLARS	1															
3	158003M	CAUTION FENCE	LF	1850	1850		C-4	525		C-15	50		C-16	1225		C-17			50	
4	158006M	SILT FENCE	LF	3730	3730		C-15	1150		C-16	1790		C-17	790						
5	158060M	CONSTRUCTION DRIVEWAY	T	15	15		C-2	15												
6	159003M	BREAKAWAY BARRICADE	U	8	8															
7	159012M	CONSTRUCTION SIGNS	SF	36	36															
8	159015M	CONSTRUCTION IDENTIFICATION SIGNS, 4' X 8'	U	3	3															
9	161003P	FINAL CLEANUP	LS	LUMP SUM	1															
10	201003P	CLEARING SITE	LS	LUMP SUM	1															
11	201006P	CLEARING SITE, STRUCTURES	LS	LUMP SUM	1															
12	202003P	STRIPPING	SY	6210	6210		C-4	960		C-5	3965		C-6	1285						
13	202009P	EXCAVATION, UNCLASSIFIED	CY	2106	2106		C-4	686		C-5	725		C-6	355		B-4			340	
14	202021P	REMOVAL OF PAVEMENT	SY	1500	1500		C-2	1500												
15	203041P	GEOTEXTILE ROADWAY STABILIZATION	SY	4432	4432		C-4	932		C-5	2330		C-6	1170						
16	302036P	DENSE GRADED AGGREGATE COURSE, 6" THICK	SY	4611	4611		C-4	1075		C-5	2356		C-6	1180						
17	509054P	CHAIN-LINK FENCE, GALVANIZED STEEL, 6' HIGH	LF	341	341		C-4	341												
18	601128P	24" REINFORCED CONCRETE PIPE	LF	20	20		C-4	20												
19	605183P	TEMPORARY CHAIN-LINK FENCE, 6' HIGH	LF	800	800		C-2	800												
20	606006P	HOT MIX ASPHALT SIDEWALK, 5" THICK	SY	3815	3815		C-4	920		C-5	1935		C-6	960						
21	606012P	CONCRETE SIDEWALK, 4" THICK (WITH HAUNCH)	SY	20	20		C-4	20												
22	606012P	CONCRETE SIDEWALK, 4" THICK	SY	161	161		C-4	125		C-5	26		C-6	10		0			0	
23	606084P	DETECTABLE WARNING SURFACE	SY	3	3		C-6	3												
24	610003M	TRAFFIC STRIPES 4"	LF	63	63		C-7	63												
25	610006M	TRAFFIC STRIPES 6"	LF	54	54		C-7	54												
26	610009M	TRAFFIC MARKINGS	SF	72	72		C-6	18		C-7	54									
27	612003P	REGULATORY AND WARNING SIGN (R4-11 BIKES MAY USE FULL LANE)	SF	24	24		C-6	6		C-7	18									
28	612003P	REGULATORY AND WARNING SIGN (R1-1 STOP SIGN)	SF	6	6		C-7	6			0									
29	614003M	TRASH RECEPTACLE, DECORATIVE	U	3	3		C-4	3												
30	701280M	FOUNDATION DECORATIVE LIGHTING STANDARD	U	43	43		C-4	12		C-5	20		C-6	11						
31	703010M	LIGHTING STANDARD DECORATIVE	U	18	18		C-4	1		C-5	17									
32	706003P	ELECTRICAL BOXES, CONDUIT, AND WIRES	LS	LUMP SUM	1		C-8			C-9										
33	750050P	ELECTRICAL WORK	LS	LUMP SUM	1		C-8			C-9										
34	801012M	SELECTIVE CLEARING	SY	1892	1892		C-5	1892												
35	802021M	TREE REMOVAL, OVER 6" TO 12" DIAMETER (DBH)	U	8	8		C-5	8												
36	802024M	TREE REMOVAL, OVER 12" TO 18" DIAMETER (DBH)	U	8	8		C-4	3		C-5	5									
37	802027M	TREE REMOVAL, OVER 18" TO 24" DIAMETER (DBH)	U	4	4		C-4	1		C-5	3									
38	803006M	PREPARATION OF EXISTING SOIL	SY	2780	2780		C-4	310		C-5	2020		C-6	450						
39	804014P	PLANTING PIT SOIL	CY	217	217		C-12	85		C-13	40		C-14	92						
40	804015P	BORROW TOPSOIL	CY	302	302		C-4	302												
41	806003M	FERTILIZING AND SEEDING TYPE A	SY	4516	4516		C-4	2046		C-5	2020		C-6	450						
42	809018M	WOOD MULCHING	SY	560	560		C-12	203		C-13	162		C-14	195						
43	811006M	LARGE DECIDUOUS TREE, 2-2 1/2" CALIPER, B&B	U	28	28		C-12	11		C-13	14		C-14	3						
44	811030M	SMALL DECIDUOUS TREE, 5'-6" HIGH, B&B	U	16	16		C-12	3		C-13	1		C-14	12						
45	811066M	DECIDUOUS SHRUB, 15-18", #2 CONTAINER	U	72	72		C-12	13		C-13	3		C-14	56						
46	NS-1	3 ROW BLEACHERS	U	2	2		C-4	2					0							
47	NS-2	GRANITE COBBLE PAVERS	SF	1336	1336		C-4	1100		C-5	236		0							
48	NS-3	BOLLARD, DECORATIVE	U	1	1		C-4	1					0							
49	NS-4	BENCH, DECORATIVE	U	9	9		C-4	6		C-5	3									
50	NS-5	LIGHTING STANDARD, SOLAR POWERED	U	25	25		C-4	11		C-5	3		C-6	11						
51	NS-6	RIPARIAN BUFFER SEED MIX	SY	275	275		C-12	275												
52	999999P	NO ITEM																		
53	999999P	NO ITEM																		
54	999999P	NO ITEM																		
55	203009P	I-9 SOIL AGGREGATE	CY	70	70		B-4	70												
56	203021P	I-14 SOIL AGGREGATE	CY	175	175		B-4	175												
57	501003P	TEMPORARY SHEETING	SF	740	740		B-4	740												
58	502003P	FURNISHING EQUIPMENT FOR DRIVING PILES	LS	1	1															
59	502006M	PREBORED HOLE	LF	25	25		B-5	25												
60	502009M	TEST PILE, FURNISHED	LF	260	260		B-5	260												
61	502012M	TEST PILE, DRIVEN	LF	230	230		B-5	230												
62	502015M	STATIC PILE LOAD TEST	U	1	1		B-5	1												
63	502016M	MICROPILE	U	12	12		B-5	12												

SEQ. NO.	ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY	PLAN SHEET TOTALS	AS-BUILT QUANTITY	DISTRIBUTION: PLAN SHEET QUANTITIES													
							BASE BID ITEMS													
64	502018M	DYNAMIC PILE LOAD TEST	U	6	6		B-5	6												
65	502165M	STEEL H-PILE, FURNISHED, HP 12 X 53	LF	545	545		B-5	545												
66	502183M	STEEL H-PILE, DRIVEN, HP 12 X 53	LF	520	520		B-5	520												
67	504006P	REINFORCEMENT STEEL, EPOXY-COATED	LB	6165	6165		B-5	2845		B-6	1490		B-9	1830						
68	504015P	CONCRETE FOOTING	CY	53	53		B-5	53												
69	504018P	CONCRETE WING WALL	CY	4	4		B-6	4												
70	504024P	CONCRETE ABUTMENT WALL	CY	15	15		B-6	15												
71	504027P	CONCRETE PIER COLUMN AND CAP	CY	12	12		B-9	12												
72	504036P	EPOXY WATERPROOFING	SY	20	20		B-6	8		B-9	12									
73	506018P	STEEL PEDESTRIAN BRIDGE	LS	1	1															
74	NS-7	LOW VOLTAGE LED LIGHTING HAND RAIL SYSTEM	LS	1	1															

NOTE:  
 1. QUANTITIES FOR ITEMS 55-74 AND A PORTION OF ITEM 13 ARE ALSO LISTED ON SHEET 26 - ESTIMATE OF QUANTITIES STRUCTURAL. THESE QUANTITIES ARE THE SAME AS REFERENCED ON THIS SHEET AND ARE NOT TO BE CONSIDERED ADDITIONAL QUANTITIES.

EDQ-1  
EDQ-1

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ESTIMATE-DISTRIBUTION OF QUANTITIES

RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

2  
35





FILE NAME: 240515  
DATE: 05/15/24  
TIME: 10:00 AM  
USER: BIERMAN@M

DESIGNED BY  
DETAIL CHECKED BY

DESIGNED BY  
DESIGN CHECKED BY

IN CHARGE OF

**M**  
MOTT  
MACDONALD

REMOVE  
AUXILIARY  
BUILDING



REMOVE KENNEL

REMOVE KENNEL



REMOVE KENNEL  
REMOVE CHAIN LINK FENCE  
REMOVE ASPHALT



EXISTING KENNEL  
NOT TO SCALE

**DEMOLITION NOTES**

1. REMOVE EXISTING BUILDING MATERIALS IN ITS ENTIRETY TO 2'-0" BELOW GRADE, INCLUDING BUT NOT LIMITED TO CONCRETE FOUNDATION WALL, CONCRETE BLOCK OR TERRA COTTA BACK UP AND BRICK VENEER EXTERIOR WALLS, TERRA COTTA AND PLASTER INTERIOR WALLS, CONCRETE ROOF DECKS, STRUCTURAL SYSTEMS, MECHANICAL SYSTEMS, AND DOOR ASSEMBLIES.
2. CONTRACTOR SHALL REMOVE ALL EXISTING PARTITIONS, CEILING, FINISHES, EQUIPMENT, CONDUITS, WIRING, DOORS, FRAMES, ETC
3. CONTRACTOR SHALL REMOVE AND CRUSH EXISTING CONCRETE FLOORS BELOW GRADE AND SLABS-ON-GRADE. ALL CONCRETE TO BE DISPOSED OF OFF-SITE.
4. THE "EXISTING BUILDING SYSTEMS COMPONENT CHART" PROVIDES INFORMATION OBTAINED BY HMM FROM AVAILABLE DOCUMENTS AND/OR LIMITED DESTRUCTIVE TESTING. INFORMATION OBTAINED MAY NOT REPRESENT ACTUAL CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE BIDDER/CONTRACTOR TO VERIFY EXISTING CONDITIONS AND ALL AREAS AND QUANTITIES.
5. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
6. PHOTOGRAPHS ARE INTENDED TO SHOW TYPICAL CONDITIONS AND CONSTRUCTION MATERIALS AND MAY NOT BE SIMILAR FOR ALL PORTIONS OF THE BUILDING.

ACM REMOVAL TABLE			
Location	Material	Approximate Quantity	
Kennel	Floor Time and Mastic (2 Layers)	312	Sq. Ft
Kennel	Exterior Window Glazing	64	Sq. Ft

EXISTING BUILDING SYSTEMS COMPONENT CHART			
Location	Material	Approximate Quantity	
Kennel	Fluorescent lamps	5	Ea.
Kennel	Phone	1	Ea.
Kennel	Mercury light switches	3	Ea.
Kennel	Lead acid battery	1	Ea.
Kennel	Electrical Panels	2	Ea.

C-2  
C-21



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**KENNEL DEMOLITION PLAN**

RIVER GREENWAY PROJECT  
BRIDGE IN CAMERON PARK  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024

BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

### LEGEND

#### EXISTING

	50' RIPARIAN ZONE
	LIMIT OF N.J. FLOOD HAZARD
	LIMIT OF 100 YR FLOOD
	STREET
	PATHWAY/ SIDEWALK
	WALL
	CHAIN LINK FENCE
	CONTOUR
	TREE TO REMAIN
	TREE TO REMOVE
	VEGETATION
	LIGHT
	UTILITY POLE
	BENCH
	MANHOLE
	SIGN
	GAME TABLE
	FIRE HYDRANT
	BICYCLE RACK

#### PROPOSED

	ASPHALT PATHWAY
	SILT FENCE
	LIMIT OF DISTURBANCE
	CONTOUR
	TREE PROTECTION
	SOLAR POWERED LIGHT
	REMOVABLE BOLLARD
	TRASH RECEPTACLE
	BENCH
	LAWN RESTORATION

### GENERAL CONSTRUCTION NOTES

- CONSTRUCTION LAYOUT MUST BE PERFORMED BY A LAND SURVEYOR LICENSED IN THE STATE OF NEW JERSEY.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING ALL UTILITIES MARKED OUT AND MAINTAINING MARK-OUTS DURING CONSTRUCTION.
- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS GOVERNING THE WORK INCLUDING BUT NOT LIMITED TO THE NJ UNIFORM CONSTRUCTION CODE, NATIONAL ELECTRIC CODE (NEC), NATIONAL PLUMBING CODE, NJDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION AND RELEVANT SECTIONS OF THE ASTM. ALL RELEVANT SECTIONS OF THE ASTM SHALL BE CONSIDERED PART OF THESE CONSTRUCTION DOCUMENTS.
- LAYOUT OF ALL WORK SHALL BE ADJUSTED IN THE FIELD TO MEET EXISTING SITE CONDITIONS AS APPROVED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE. ADJUSTMENT OF WORK SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- LAYOUT OF ALL CURBS AND OTHER NEW WORK AS SHOWN ON DRAWINGS IS TO BE DONE PRIOR TO CONSTRUCTION FOR THE ENGINEER'S OR THE OWNER'S REPRESENTATIVE APPROVAL. ANY LOCATIONS NOT APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE AND INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED AS PER THE ENGINEER'S OR OWNER'S REPRESENTATIVE'S INSTRUCTIONS AT NO ADDITIONAL COST TO THE OWNER.
- UPON ESTABLISHMENT OF PLANTING AREA LIMITS, THE CONTRACTOR SHALL CLEARLY MARK BOUNDARIES AND PROTECT AREAS FROM COMPACTION BY EQUIPMENT, FOOT TRAFFIC OR STOCKPILING OF CONSTRUCTION MATERIALS.
- PROTECTION OF EXISTING TREES, WALKS, AND OTHER SITE IMPROVEMENTS TO REMAIN SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AND ENGINEER AT NO ADDITIONAL EXPENSE TO THE OWNER.
- THE LOCATIONS SHOWN FOR TRASH RECEPTACLES, BENCHES, AND LIGHTS ARE APPROXIMATE ONLY. THE ENGINEER OR THE OWNER SHALL APPROVE FINAL LOCATIONS IN THE FIELD.
- CONTRACTOR IS REQUIRED TO PERFORM A SITE VISIT PRIOR TO SUBMITTING THEIR BID, AND IDENTIFY ALL EXISTING SITE FEATURES REQUIRED TO BE REMOVED THAT MAY CONFLICT WITH THE PROPOSED IMPROVEMENTS, OR BE WITHIN THE FOOTPRINT OF THE PROPOSED PATH. EXISTING FEATURES THAT REQUIRE REMOVAL AND ARE NOT SPECIFICALLY IDENTIFIED ON THE PLANS SHALL BE INCLUDED IN THE BID PRICE FOR THE CLEARING SITE ITEM. NO ADDITIONAL COMPENSATION WILL BE MADE FOR EXISTING FEATURES TO BE REMOVED DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE ENGINEER OR OWNERS REPRESENTATIVE.
- WHERE EXISTING FOOTINGS ARE TO BE REMOVED TO MAKE WAY FOR NEW IMPROVEMENTS THE CONTRACTOR IS TO BACKFILL THE HOLES WITH CERTIFIED CLEAN FILL MATERIAL APPROVED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE AND COMPACT TO A MINIMUM DENSITY OF 95% (MODIFIED PROCTOR). PROCTOR AND COMPACTION TESTING TO BE PERFORMED BY CONTRACTOR.
- THE CONTRACTOR IS TO MATCH ELEVATIONS OF ALL EXISTING UTILITY VALVES AND STRUCTURES (INCLUDING MANHOLES, HAND HOLES, UTILITY GRATES, ETC.) LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
- THE SITE MAY CONTAIN UNDERGROUND UTILITIES THAT ARE NOT INDICATED ON THE CONTRACT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NEW JERSEY ONE CALL AT 1-800-272-1000 FOR UTILITY MARK-OUT AND MAINTAINING THE MARK-OUT DURING THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL EXERCISE CARE DURING REMOVAL OPERATIONS TO PROTECT EXISTING FACILITIES AND SITE IMPROVEMENTS TO REMAIN INCLUDING BUT NOT LIMITED TO PAVEMENTS, UTILITIES, STRUCTURES, TREES, ETC. ANY FACILITY OR EXISTING SITE IMPROVEMENT TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR OR HIS SUB-CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER AND TO THE SATISFACTION OF THE ENGINEER OR OWNER'S REPRESENTATIVE.
- WHERE EXCAVATIONS ARE REQUIRED ADJACENT TO EXISTING TREES TO REMAIN, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR REMEDIAL WORK SUCH AS ROOT AND TOP PRUNING AS REQUIRED OR NECESSARY TO PREVENT THE LOSS OF PLANT MATERIAL. SUCH REPAIR OR REMEDIAL WORK SHALL INCLUDE COMPENSATORY PRUNING AND FERTILIZATION. ALL INVESTIGATIONS AND CORRECTIVE WORK SHALL BE DONE BY A CERTIFIED TREE EXPERT ENGAGED BY THE CONTRACTOR AS PART OF THIS CONTRACT.
- WHERE DAMAGE OR LOSS OF EXISTING TREES TO REMAIN IS DUE TO THE NEGLIGENCE OF THE CONTRACTOR OR THEIR SUB-CONTRACTOR, AS DETERMINED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF THE DAMAGED OR LOST TREE OR PROVIDING MONETARY COMPENSATION TO THE OWNER IN AN AMOUNT TO BE SOLELY DETERMINED BY THE OWNER'S REPRESENTATIVE.
- NO STOCKPILING OF ANY CONSTRUCTION MATERIALS OR PARKING OF CONSTRUCTION EQUIPMENT SHALL TAKE PLACE WITHIN THE DRIPLINE OF EXISTING TREES TO REMAIN.
- ALL MATERIAL TO BE REMOVED FROM THE SITE SHALL BE PROMPTLY DISPOSED OF IN A LEGAL MANNER, IN ACCORDANCE WITH HUDSON COUNTY AND NJDEP RULES AND REGULATIONS.
- TRANSITIONS FROM EXISTING GRADES TO PROPOSED GRADES ARE TO BE GRADUAL AND APPROVED BY THE ENGINEER AND LOCAL CODE OFFICIAL PRIOR TO FINAL INSTALLATIONS. UNACCEPTABLE GRADE CHANGES ARE TO BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- CONTRACTOR IS TO MAINTAIN PEDESTRIAN AND DRIVEWAY ACCESS THROUGHOUT THE DURATION OF CONSTRUCTION.
- THE REMOVAL OF ALL EXISTING ABOVE GRADE IMPROVEMENTS (TRASH RECEPTACLES, BENCHES, TREES, SIGNS, ETC.) ARE TO BE PAID UNDER CLEARING SITE.
- ALL EXISTING SIGNAGE IS TO BE REMOVED AND REPLACED IN EXISTING LOCATIONS. SEE GENERAL NOTE #20 FOR PAYMENT OF REMOVAL AND DISPOSAL OF EXISTING SIGNAGE. PAYMENT OF NEW SIGNAGE TO BE MADE UNDER REGULATORY AND WARNING SIGNS.
- ALL SIGNAGE AND STRIPING ARE TO COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION.
- CONTRACTOR IS TO REPLACE ALL EXISTING INLET FRAMES, GRATES, AND CURB HEADS.
- BEST MANAGEMENT PRACTICES WILL BE UTILIZED FOR THE PROJECT.
- IF THERE ARE ANY CHANGES TO THE PROPOSED ACTIVITIES, THE CHANGES MUST BE REEVALUATED BY BEPR TO DETERMINE THE NEED FOR ADDITIONAL REGULATORY COMPLIANCE.
- CONSTRUCTION STAGING ACTIVITIES (INCLUDING THE STAGING OF EQUIPMENT/ VEHICLES/ MATERIALS) ARE PROHIBITED IN ENVIRONMENTALLY SENSITIVE AREAS. IF THE CONTRACTOR WISHES TO USE THESE AREAS OR ACCESS THESE AREAS FOR ANY REASON, ALL APPROPRIATE PERMITS AND APPROVALS MUST BE OBTAINED PRIOR TO SUCH USE.
- IF THE PROPOSED ACTIVITIES INCLUDE DIRECT CONTACT WITH INLETS, THEY MUST BE RETROFITTED TO MEET THE NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM (NJPDES) STORMWATER REQUIREMENTS.
- ALL STEEL ITEMS SHOULD HAVE BUY AMERICA CERTIFICATES
- ANY CONTRACTOR(S) OR ANY OF THEIR SUBCONTRACTOR(S) WORKING AROUND THE RAILROAD TRACKS AND/OR WITHIN THE RAILROAD'S PROPERTY R.O.W. AND/OR ADJECENT TO THEIR FACILITIES WILL BE REQUIRED TO HAVE RAILROAD PROTECTIVE LIABILITY INSURANCE, IN ACCORDANCE WITH 23 CFR 646, SUBPART A. THE INSURANCE POLICY SHALL BE IN THE NAME OF NJ TRANSIT, AND ALL OPERATING RAILROADS ON THAT LINE, WITH A LIMIT OF NOT LESS THAN \$2,000,000.00 PER OCCURRENCE, AS A COMBINED SINGLE LIMIT FOR BODILY INJURY AND/OR PROPERTY DAMAGE AND \$6,000,000.00 PER ANNUAL AGGREGATE FOR DAMAGES ARISING OUT OF MORE THAN ONE OCCURRENCE.
- NO WORK IS TO BE DONE BEYOND THE 10' TALL CHAIN LINK FENCE THAT SEPARATES THE PARK FROM THE RAILROAD. THE FENCE IS TO REMAIN, NO CUTTING, PEELING, OR REMOVAL OF THE CHAIN LINK FENCE IN ANY WAY. SHOULD THE FENCE BE DAMAGED THE CONTRACTOR IS TO CONTACT THE RAILROAD IMMEDIATELY AND ALL WORK IS TO STOP WITHIN THE RAILROAD 200' RIGHT-OF-WAY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL COST ASSOCIATED WITH REPAIRING THE 10' CHAIN LINK FENCE AT NO ADDITIONAL COST TO VILLAGE OF SOUTH ORANGE.

### NJDEP PERMIT CONDITIONS

- ALL SEDIMENT BARRIERS AND OTHER SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING, GRADING OR CONSTRUCTION ONSITE, AND SHALL BE MAINTAINED IN PROPER WORKING CONDITION THROUGHOUT THE ENTIRE DURATION OF THE PROJECT.
- IN ORDER TO PROTECT GENERAL GAME FISH WITHIN THE EAST BRANCH OF THE RAHWAY RIVER, ANY ACTIVITY LOCATED WITHIN 50 FEET FROM THE TOP OF BANK OF THE WATERCOURSE WHICH WOULD LIKELY INTRODUCE SEDIMENT INTO THE WATERCOURSE AND/OR INCREASE ITS TURBIDITY IS PROHIBITED BETWEEN MAY 1ST AND JULY 31ST OF EACH YEAR. THE DIVISION RESERVES THE RIGHT TO SUSPEND ALL REGULATED ACTIVITIES ONSITE SHOULD IT BE DETERMINED THAT THE APPLICANT HAS NOT TAKEN PROPER PRECAUTIONS TO ENSURE CONTINUOUS COMPLIANCE WITH THIS CONDITION.
- VEGETATION WITHIN 50 FEET OF THE TOP OF THE BANK OF ALL ONSITE WATERCOURSES SHALL ONLY BE DISTURBED IN THE AREAS SHOWN ON THE APPROVED PLANS. SPECIFICALLY, THIS PERMIT AUTHORIZES 3199 SQ. FT. (0.073 AC) OF IMPERVIOUS SURFACE RESTORATION, 5036 SQ. FT. (0.116 AC) OF RIPARIAN ZONE ENHANCEMENT PLANTINGS, 7153 SQ FT (0.164 AC) OF TEMPORARY GRASS-TO-GRASS DISTURBANCE, 870 SQ. FT. (0.020 AC) OF PERMANENT VEGETATION DISTURBANCE FOR THE CONSTRUCTION OF THE NEW TRAIL AND IMPROVEMENTS TO THE EXISTING TRAIL, AND 963 SQ. FT. (0.022 AC) OF PERMANENT VEGETATION DISTURBANCE FOR THE CONSTRUCTION OF THE PEDESTRIAN FOOTBRIDGE.
- ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN A LAWFUL MANNER AND OUTSIDE ANY REGULATED FLOOD PLAIN, OPEN WATER, OR FRESHWATER WETLANDS, AND IN SUCH A WAY AS TO NOT INTERFERE WITH THE POSITIVE DRAINAGE OF THE RECEIVING AREA.
- UPON COMPLETION OF THE PROJECT, ALL TEMPORARILY DISTURBED AREAS WITHIN THE RIPARIAN ZONE OF THE EAST BRANCH OF THE RAHWAY RIVER SHALL BE REPLANTED WITH INDIGENOUS, NON-INVASIVE VEGETATION.

### LANDSCAPE NOTES

- EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC. AND NOTIFY THE ENGINEER IN REFERENCE TO ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
- ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 CURRENT EDITION. THE PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE PROJECT PROFESSIONAL RESERVES THE RIGHT TO REJECT PLANT MATERIAL WHEN DELIVERED TO THE SITE AND UP TO THE TIME OF FINAL ACCEPTANCE.
- NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARDS TO SIZE, SPECIES VARIETY, ETC. WITHOUT WRITTEN PERMISSION OF THE ENGINEER. WRITTEN PROOF OF PLANT MATERIAL UNAVAILABILITY MUST BE PROVIDED.
- LOCATION AND SPACING FOR PROPOSED VEGETATION IS AS SHOWN ON CONSTRUCTION PLANS. FINAL ADJUSTMENTS TO BE MADE IN THE FIELD AND AS DIRECTED BY THE ENGINEER TO REFLECT EXISTING SITE CONDITIONS.
- ALL PLANT MATERIAL SHALL BE PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS AND ACCEPTED HORTICULTURAL PRACTICES. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. CUT AND REMOVE BURLAP FROM THE TOP ONE-THIRD OF THE ROOT BALL. NO SYNTHETIC MATERIAL IS TO REMAIN IN PLANTING HOLE. SEE DETAIL SHEET FOR PLANTING DETAILS.
- THE ENGINEER SHALL HAVE FINAL ACCEPTANCE OF ALL PLANT MATERIAL.
- PLANT ROOT FLAIR SHALL BE EXPOSED AT TIME OF PLANTING. PLANTS SHALL BE INSTALLED AT SAME GRADE AS GROWN IN NURSERY.
- NEWLY INSTALLED PLANT MATERIAL SHALL BE THOROUGHLY WATERED AT THE TIME OF INSTALLATION BY THE LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE REGULAR WATERING OF PLANT MATERIAL THROUGH THE FIRST YEAR OF GROWTH, WHICH SHALL BEGIN UPON THE DAY OF FINAL ACCEPTANCE OF THE PLANT MATERIAL.
- ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE (1) YEAR AFTER THE DATE OF FINAL ACCEPTANCE. ANY REPLACEMENT PLANT/TREES/LAWN SHALL HAVE EXTENDED 1 YEAR GUARANTEE FROM THE DATE OF REPLACEMENT.
- ALL DISTURBED AREAS SHALL RECEIVE TEMPORARY AND PERMANENT STABILIZATION DEPENDING UPON STAGE OF WORK AND TIME OF YEAR (REFER TO N.J. SOIL EROSION AND SEDIMENT CONTROL REGULATIONS).
- WIRE BASKETS ARE TO BE CUT AND FOLDED TO BOTTOM OF PLANTING HOLE AWAY FROM SIDES OF ROOT BALL.
- PROVIDE SUSTAINED RELEASE 5-10-5 FERTILIZER FOR ALL PLANT MATERIAL IN QUANTITIES AS PER MANUFACTURER'S RECOMMENDATIONS. THOROUGHLY MIX IN TOP 12" OF ALL PLANTING AREAS.
- ALL PLANTS ARE SHOWN SEMI-MATURE SIZE ON PLANS. SIZES INDICATED IN PLANT LIST ARE THE APPROXIMATE SIZES AT TIME OF INSTALLATION.
- TREES TO BE HANDLED BY ROOT BALL ONLY. HANDLING OF TREES BY THE TRUNK OR THE PLACING OF STRAPS AROUND THE TRUNK WILL BE CAUSE FOR IMMEDIATE REJECTION OF PLANT MATERIAL BY THE PROJECT PROFESSIONAL.
- CONTRACTOR RESPONSIBLE FOR PROVIDING AND INSTALLING 4" LAYER OF SHREDDED HARDWOOD BARK MULCH IN ALL PLANTING BEDS UNLESS OTHERWISE NOTED.
- ALL DISTURBED AREAS TO BE RESTORED TO THE SATISFACTION OF THE ENGINEER.
- TREES TO BE INSTALLED WITH SAME ORIENTATION AS AT PLACE OF ORIGINAL GROWTH. NORTH SIDE OF TREE TO BE IDENTIFIED PRIOR TO DIGGING.
- CONTRACTOR IS RESPONSIBLE FOR THE INITIAL PRUNING OF TREES. PRUNING TO BE LIMITED TO CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF TREE STAKES 1 YEAR FROM THE DATE OF FINAL ACCEPTANCE.
- CONTRACTOR TO SCARIFY (LOOSEN SOIL) BOTTOMS AND SIDES OF PLANTING PITS PRIOR TO PLACING AMENDED PLANTING SOIL.

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NEW JERSEY DEPARTMENT OF TRANSPORTATION

### SITE LEGEND AND NOTES

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE



MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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FILE NAME: USER: MOTT MACDONALD  
 DATE: TIME: 11:00 AM  
 DESIGNED BY: DETAIL CHECKED BY: IN CHARGE OF:

**K. Environmental Commitments** (refer to MOA stipulations or other conditions noted in Section D, if applicable; permit conditions, etc.):

1. Best Management Practices will be utilized for this project.
2. **If there are any changes to the proposed activities, the changes must be reevaluated by BEPR to determine the need for additional regulatory compliance.**
3. Construction staging activities (including the storage of equipment/vehicles/ materials) are prohibited in environmentally sensitive areas. If the contractor wishes to use these areas or access these areas for any reason, all appropriate permits and approvals must be obtained prior to such use.
4. If the proposed activities include direct contact with inlets, they must be retrofitted to meet the New Jersey Pollutant Discharge Elimination System (NJPDES) stormwater requirements.

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IN CHARGE OF

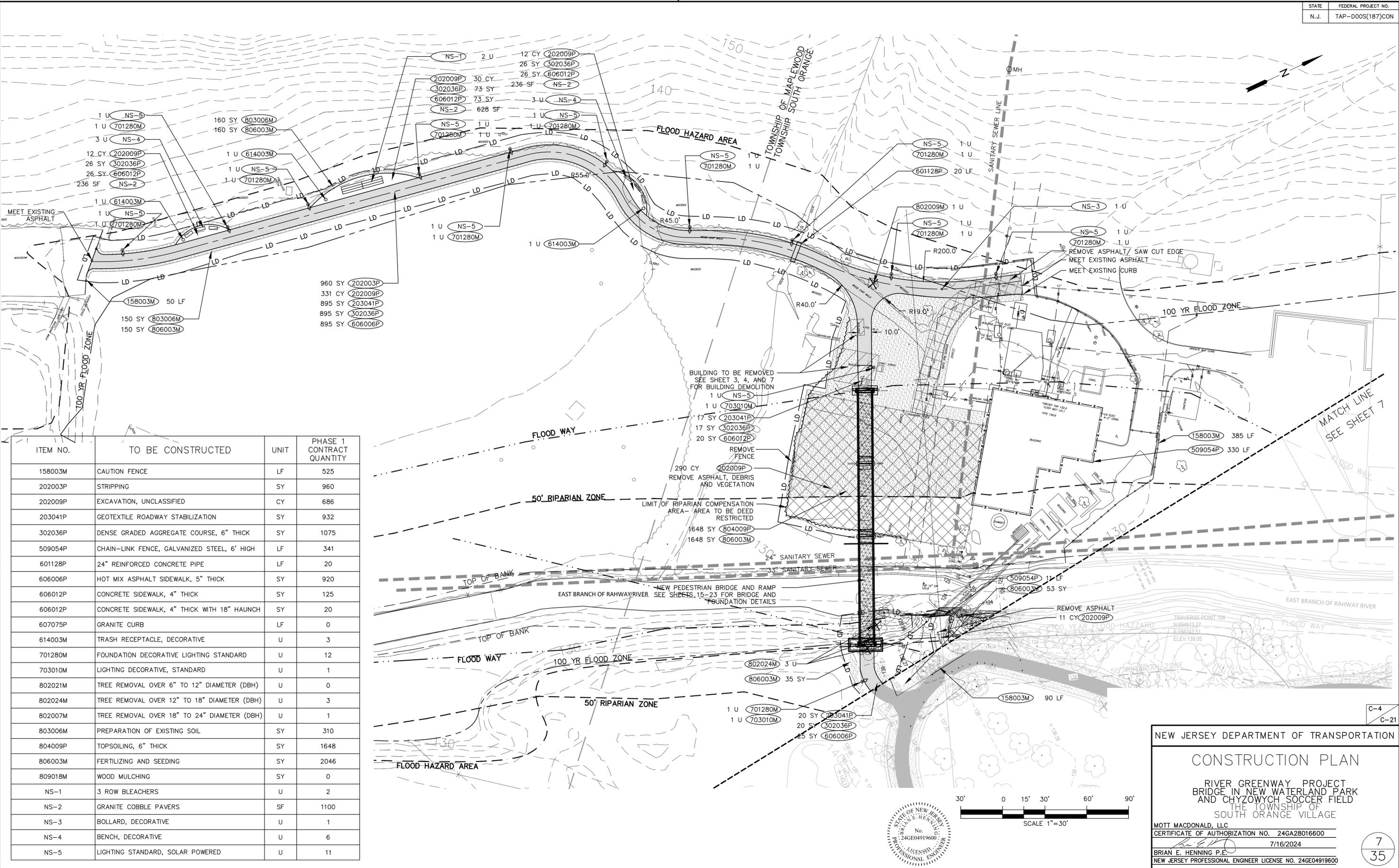
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NEW JERSEY DEPARTMENT OF TRANSPORTATION	
ENVIRONMENTAL COMMITMENTS	
RIVER GREENWAY PROJECT BRIDGE IN NEW WATERLAND PARK AND CHYZOWYCH SOCCER FIELD THE TOWNSHIP OF SOUTH ORANGE VILLAGE	
MOTT MACDONALD, LLC	CERTIFICATE OF AUTHORIZATION NO. 24GA28016600
<i>Brian E. Henning</i>	7/16/2024
BRIAN E. HENNING, P.E.	NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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 IN CHARGE OF: \_\_\_\_\_  
**M** MOTT MACDONALD



ITEM NO.	TO BE CONSTRUCTED	UNIT	PHASE 1 CONTRACT QUANTITY
158003M	CAUTION FENCE	LF	525
202003P	STRIPPING	SY	960
202009P	EXCAVATION, UNCLASSIFIED	CY	686
203041P	GEOTEXTILE ROADWAY STABILIZATION	SY	932
302036P	DENSE GRADED AGGREGATE COURSE, 6" THICK	SY	1075
509054P	CHAIN-LINK FENCE, GALVANIZED STEEL, 6' HIGH	LF	341
601128P	24" REINFORCED CONCRETE PIPE	LF	20
606006P	HOT MIX ASPHALT SIDEWALK, 5" THICK	SY	920
606012P	CONCRETE SIDEWALK, 4" THICK	SY	125
606012P	CONCRETE SIDEWALK, 4" THICK WITH 18" HAUNCH	SY	20
607075P	GRANITE CURB	LF	0
614003M	TRASH RECEPTACLE, DECORATIVE	U	3
701280M	FOUNDATION DECORATIVE LIGHTING STANDARD	U	12
703010M	LIGHTING DECORATIVE, STANDARD	U	1
802021M	TREE REMOVAL OVER 6" TO 12" DIAMETER (DBH)	U	0
802024M	TREE REMOVAL OVER 12" TO 18" DIAMETER (DBH)	U	3
802007M	TREE REMOVAL OVER 18" TO 24" DIAMETER (DBH)	U	1
803006M	PREPARATION OF EXISTING SOIL	SY	310
804009P	TOPSOILING, 6" THICK	SY	1648
806003M	FERTILIZING AND SEEDING	SY	2046
809018M	WOOD MULCHING	SY	0
NS-1	3 ROW BLEACHERS	U	2
NS-2	GRANITE COBBLE PAVERS	SF	1100
NS-3	BOLLARD, DECORATIVE	U	1
NS-4	BENCH, DECORATIVE	U	6
NS-5	LIGHTING STANDARD, SOLAR POWERED	U	11

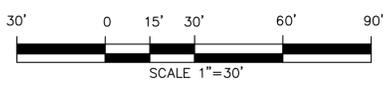
NEW JERSEY DEPARTMENT OF TRANSPORTATION

### CONSTRUCTION PLAN

RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024  
 BRIAN E. HENNING P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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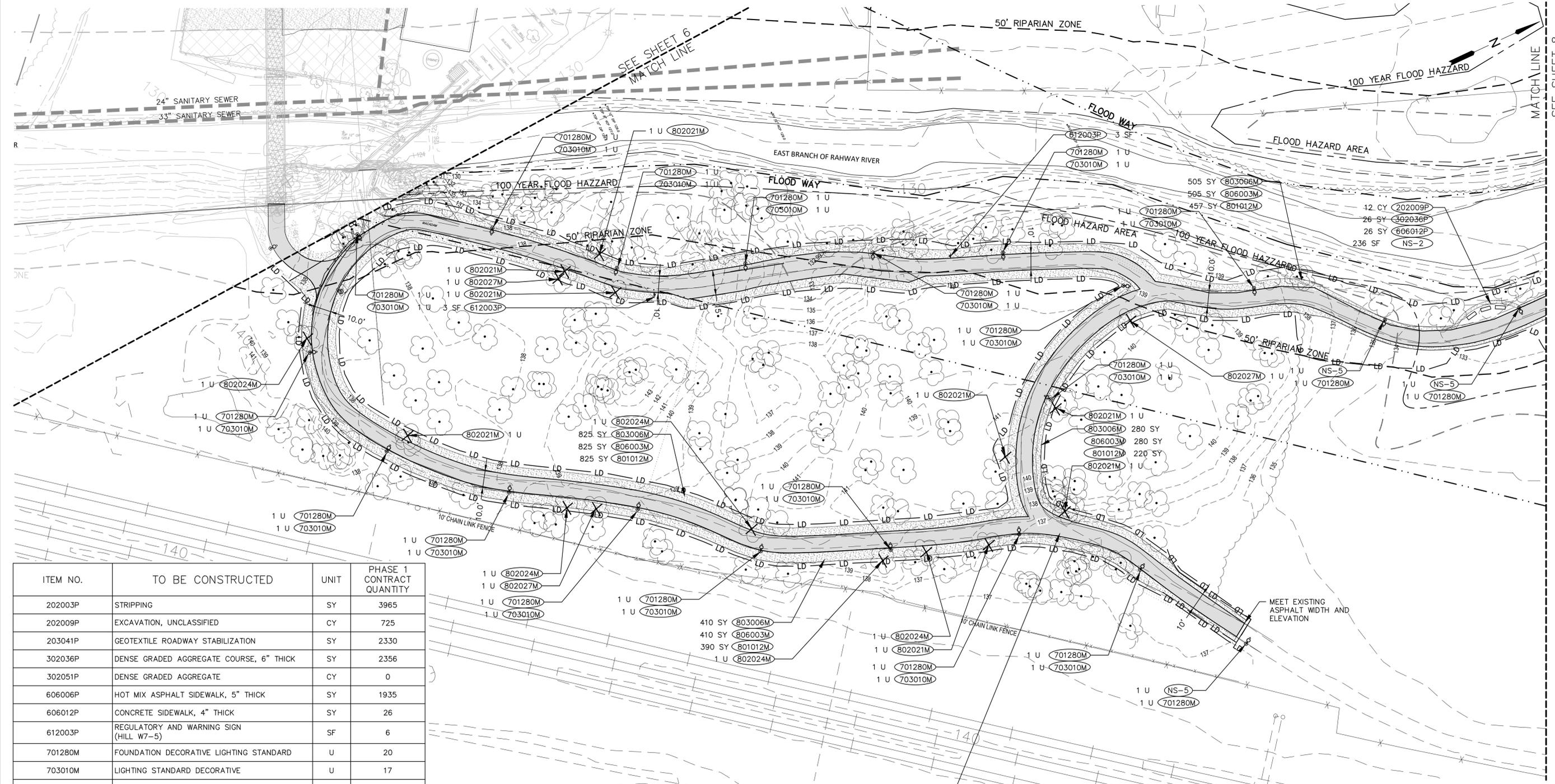


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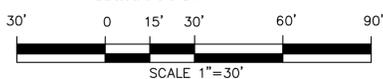
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ITEM NO.	TO BE CONSTRUCTED	UNIT	PHASE 1 CONTRACT QUANTITY
202003P	STRIPPING	SY	3965
202009P	EXCAVATION, UNCLASSIFIED	CY	725
203041P	GEOTEXTILE ROADWAY STABILIZATION	SY	2330
302036P	DENSE GRADED AGGREGATE COURSE, 6" THICK	SY	2356
302051P	DENSE GRADED AGGREGATE	CY	0
606006P	HOT MIX ASPHALT SIDEWALK, 5" THICK	SY	1935
606012P	CONCRETE SIDEWALK, 4" THICK	SY	26
612003P	REGULATORY AND WARNING SIGN (HILL W7-5)	SF	6
701280M	FOUNDATION DECORATIVE LIGHTING STANDARD	U	20
703010M	LIGHTING STANDARD DECORATIVE	U	17
801012M	SELECTIVE CLEARING	SY	1892
802021M	TREE REMOVAL OVER 6" TO 12" DIAMETER (DBH)	U	8
802024M	TREE REMOVAL OVER 12" TO 18" DIAMETER (DBH)	U	5
802027M	TREE REMOVAL OVER 18" TO 24" DIAMETER (DBH)	U	3
803006M	PREPARATION OF EXISTING SOIL	SY	2020
804009P	TOPSOILING, 6" THICK	SY	0
806003M	FERTILIZING AND SEEDING	SY	2020
NS-2	GRANITE COBBLE PAVERS	SF	236
NS-4	BENCH, DECORATIVE	U	3
NS-5	LIGHTING STANDARD, SOLAR POWERED	U	3

3965 SY (202003P)  
713 CY (202009P)  
2330 SY (203041P)  
2330 SY (302036P)  
1935 SY (606006P)



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION PLAN-B**

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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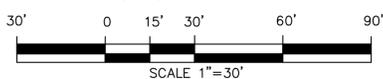
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IN CHARGE OF:

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ITEM NO.	TO BE CONSTRUCTED	UNIT	PHASE 1 CONTRACT QUANTITY
202003P	STRIPPING	SY	1285
202009P	EXCAVATION, UNCLASSIFIED	CY	355
203041P	GEOTEXTILE ROADWAY STABILIZATION	SY	1170
302036P	DENSE GRADED AGGREGATE COURSE, 6" THICK	SY	1170
606006P	HOT MIX ASPHALT SIDEWALK, 5" THICK	SY	960
606084P	DETECTABLE WARNING SURFACE	SY	3
606100P	CONCRETE SIDEWALK RAMP, TYPE 1	SY	9
610006M	TRAFFIC STRIPES 4"	LF	20
610008M	TRAFFIC MARKINGS	SF	18
612003P	REGULATORY AND WARNING SIGN (R4-11 BIKES MAY USE FULL LANE)	SF	6.0
701280M	FOUNDATION DECORATIVE LIGHTING STANDARD	U	11
803006M	PREPARATION OF EXISTING SOIL	SY	450
806003M	FERTILIZING AND SEEDING	SY	450
NS-5	LIGHTING STANDARD, SOLAR POWERED	U	11



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION PLAN-C**

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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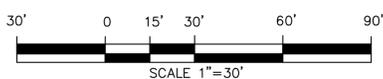
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ITEM NO.	TO BE CONSTRUCTED	UNIT	PHASE 1 CONTRACT QUANTITY
610006M	TRAFFIC STRIPES 6"	LF	644
610003M	TRAFFIC STRIPES 4"	LF	63
610008M	TRAFFIC MARKINGS	SF	54
612003P	REGULATORY AND WARNING SIGN (R4-11 BIKES MAY USE FULL LANE)	SF	18.0
612003P	REGULATORY AND WARNING SIGN (R1-1 STOP SIGN)	SF	6



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION PLAN-D**

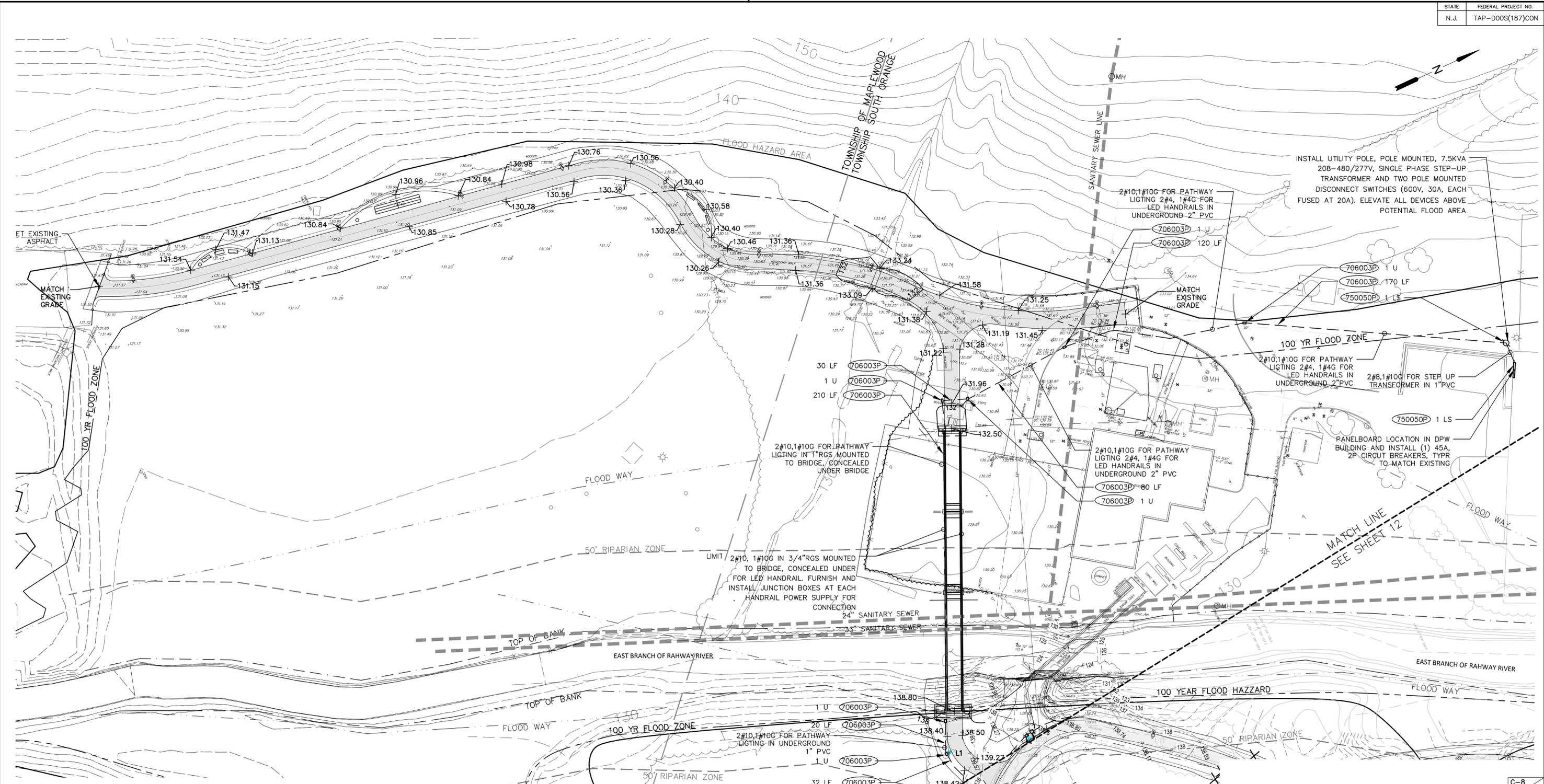
RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024

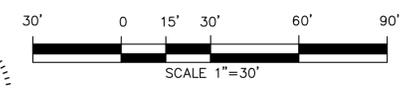
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
706003P	ELECTRICAL BOXES, CONDUIT, AND WIRES	LS	1
750050P	ELECTRICAL WORK	LS	1



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**GRADING AND UTILITY PLAN-A**

RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF SOUTH ORANGE VILLAGE

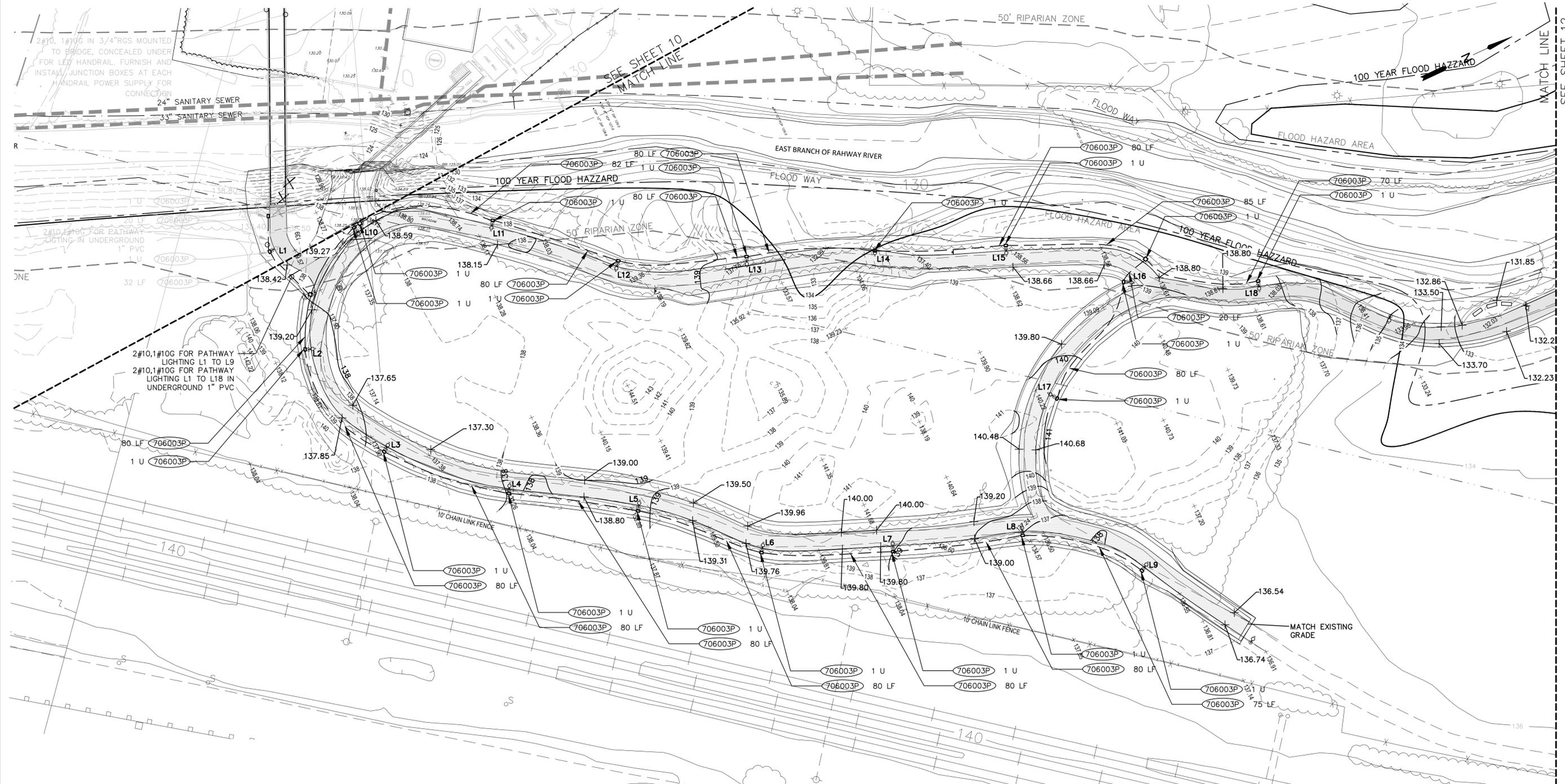
MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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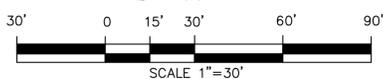
REVISED - ADDENDUM NO. 1	JRH	KEK	2/13/23
REVISION	BY	CK'D	DATE

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ITEM NO.	TO BE CONSTRUCTED	UNIT	PHASE 1 CONTRACT QUANTITY
706003P	ELECTRICAL BOXES, CONDUIT, AND WIRES	LS	1

REVISION	BY	CK'D	DATE
REVISED - ADDENDUM NO. 1	JRH	KEK	2/13/23



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**GRADING AND UTILITY PLAN-B**

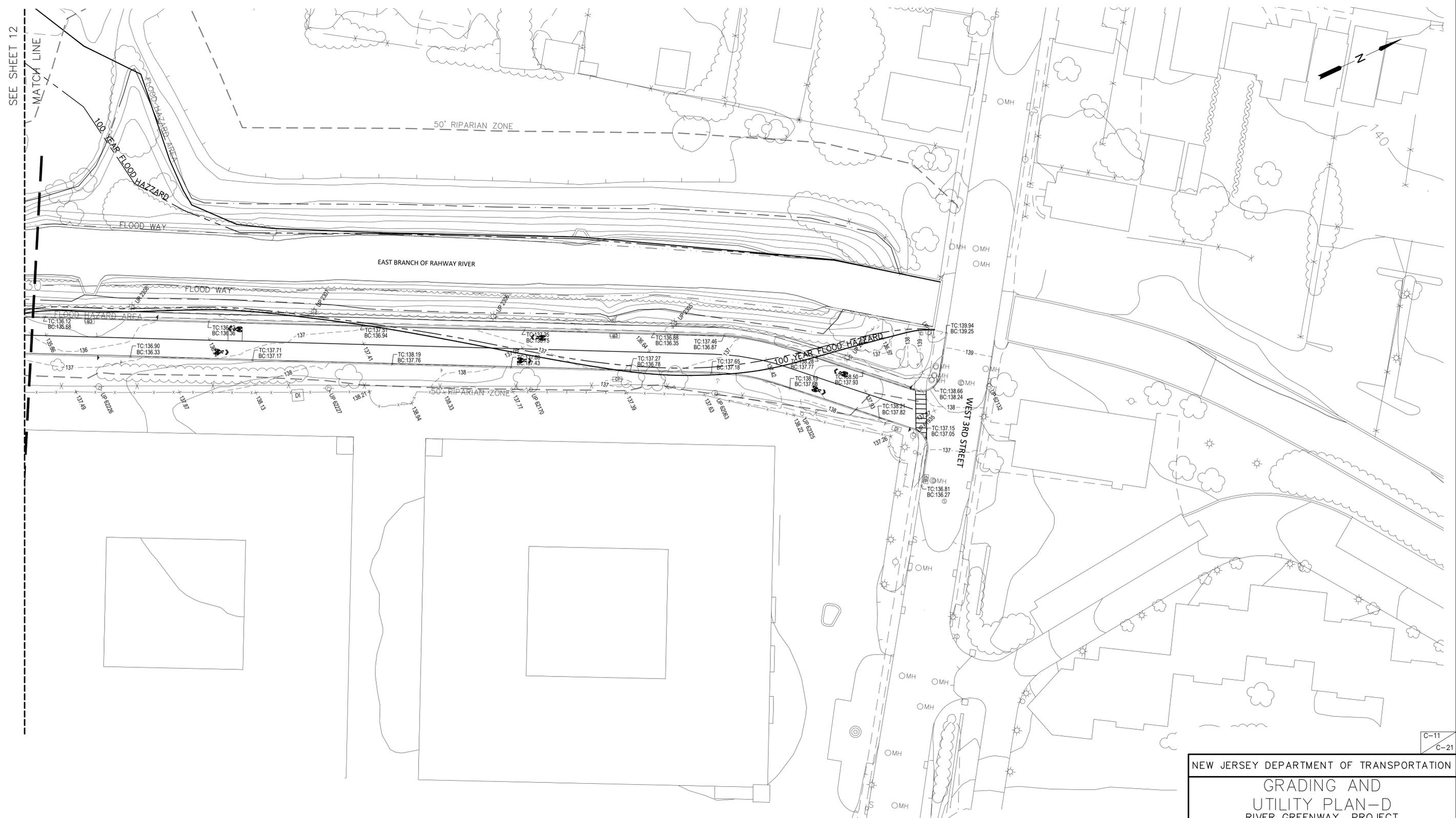
RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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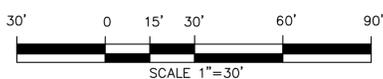
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NEW JERSEY DEPARTMENT OF TRANSPORTATION

**GRADING AND  
UTILITY PLAN-D**

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
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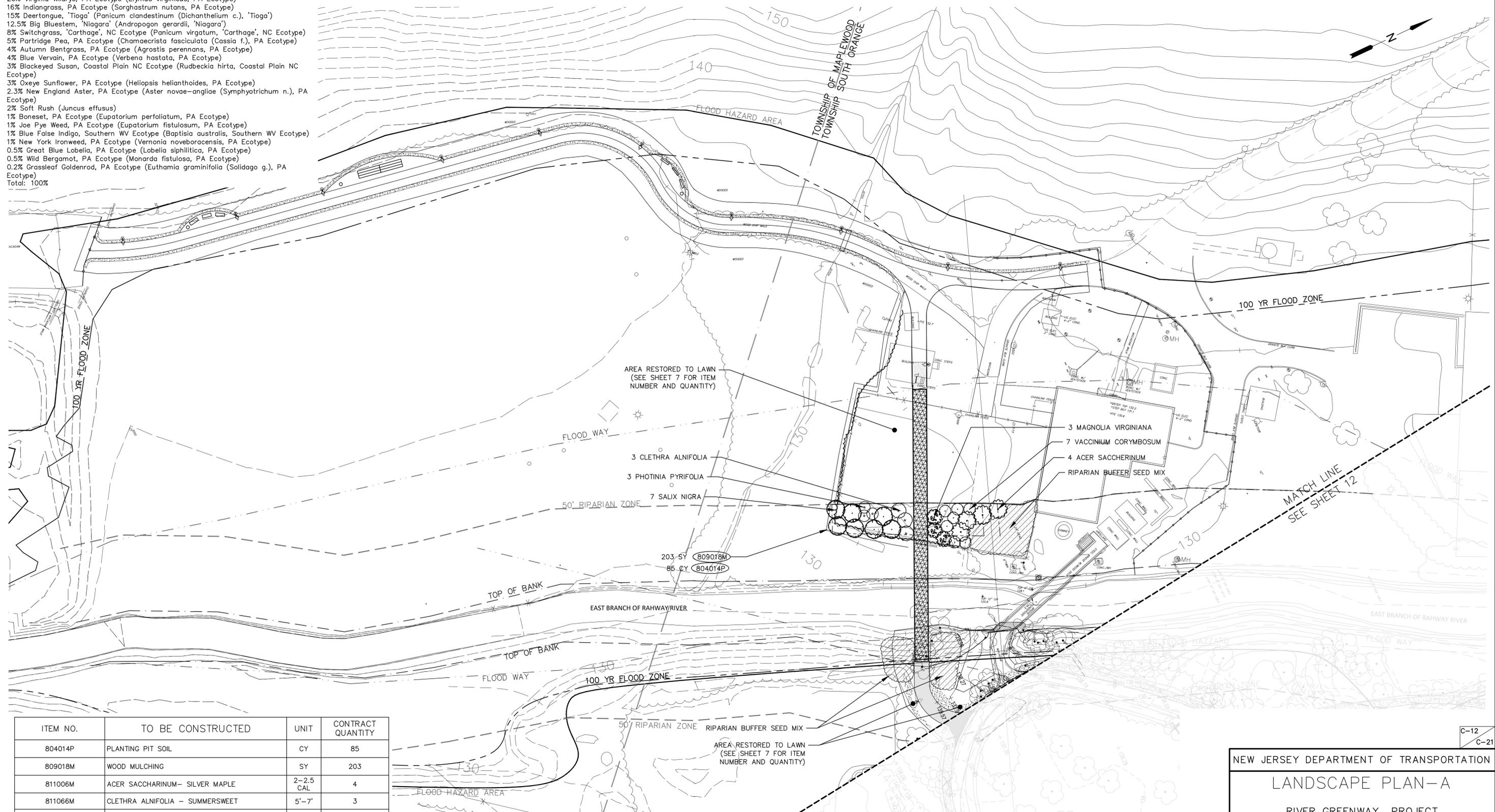
BRIAN E. HENNING P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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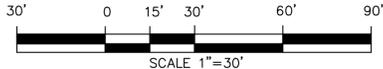
**RIPARIAN BUFFER SEED MIX**

- 20% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype)
- 16% Indiangrass, PA Ecotype (Sorghastrum nutans, PA Ecotype)
- 15% Deertongue, 'Tioga' (Panicum clandestinum (Dichantherium c.), 'Tioga')
- 12.5% Big Bluestem, 'Niagara' (Andropogon gerardii, 'Niagara')
- 8% Switchgrass, 'Carthage', NC Ecotype (Panicum virgatum, 'Carthage', NC Ecotype)
- 5% Partridge Pea, PA Ecotype (Chamaecrista fasciculata (Cassia f.), PA Ecotype)
- 4% Autumn Bentgrass, PA Ecotype (Agrostis perennans, PA Ecotype)
- 4% Blue Vervain, PA Ecotype (Verbena hastata, PA Ecotype)
- 3% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia hirta, Coastal Plain NC Ecotype)
- 3% Oxeye Sunflower, PA Ecotype (Heliopsis helianthoides, PA Ecotype)
- 2.3% New England Aster, PA Ecotype (Aster novae-angliae (Symphyotrichum n.), PA Ecotype)
- 2% Soft Rush (Juncus effusus)
- 1% Boneset, PA Ecotype (Eupatorium perfoliatum, PA Ecotype)
- 1% Joe Pye Weed, PA Ecotype (Eupatorium fistulosum, PA Ecotype)
- 1% Blue False Indigo, Southern WV Ecotype (Baptisia australis, Southern WV Ecotype)
- 1% New York Ironweed, PA Ecotype (Vernonia noveboracensis, PA Ecotype)
- 0.5% Great Blue Lobelia, PA Ecotype (Lobelia siphilitica, PA Ecotype)
- 0.5% Wild Bergamot, PA Ecotype (Monarda fistulosa, PA Ecotype)
- 0.2% Grassleaf Goldenrod, PA Ecotype (Euthamia graminifolia (Solidago g.), PA Ecotype)
- Total: 100%

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 DETAIL CHECKED BY: \_\_\_\_\_  
 IN CHARGE OF: \_\_\_\_\_



ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
804014P	PLANTING PIT SOIL	CY	85
809018M	WOOD MULCHING	SY	203
811006M	ACER SACCHARINUM- SILVER MAPLE	2-2.5 CAL	4
811066M	CLETHRA ALNIFOLIA - SUMMERSWEET	5'-7'	3
811030M	MAGNOLIA VIRGINIANA- SWEETBAY MAGNOLIA	5'-6'	3
811066M	PHOTINIA PYRIFOLIA- RED CHOKEBERRY	#2 CAN	3
811006M	SALIX NIGRA- BLACK WILLOW	2-2.5 CAL	7
811066M	VACCINIUM CORYMBOSUM- HIGH BUSH BLUEBERRY	#2 CAN	7
NS-6	RIPARIAN BUFFER SEED MIX	SY	275



NEW JERSEY DEPARTMENT OF TRANSPORTATION

**LANDSCAPE PLAN-A**

RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF  
 SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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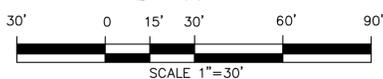
DESIGNED BY  
DETAIL CHECKED BY

IN CHARGE OF  
MOTT MACDONALD



- 1 MAGNOLIA VIRGINIANA
- 3 VACCINIUM CORYMBOSUM
- 5 ACER SACCHERINUM
- 3 SALIX NIGRA
- 6 ACER SACCHERINUM
- 809018M 162 CY
- 804014P 40 CY

ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
804014P	PLANTING PIT SOIL	CY	40
809018M	WOOD MULCHING	SY	162
811006M	ACER SACCHARINUM- SILVER MAPLE	2-2.5 CAL	11
811030M	MAGNOLIA VIRGINIANA- SWEETBAY MAGNOLIA	5'-6'	1
811006M	SALIX NIGRA- BLACK WILLOW	2-2.5 CAL	3
811066M	VACCINIUM CORYMBOSUM- HIGH BUSH BLUEBERRY	#2 CAN	3



NEW JERSEY DEPARTMENT OF TRANSPORTATION

LANDSCAPE PLAN-B

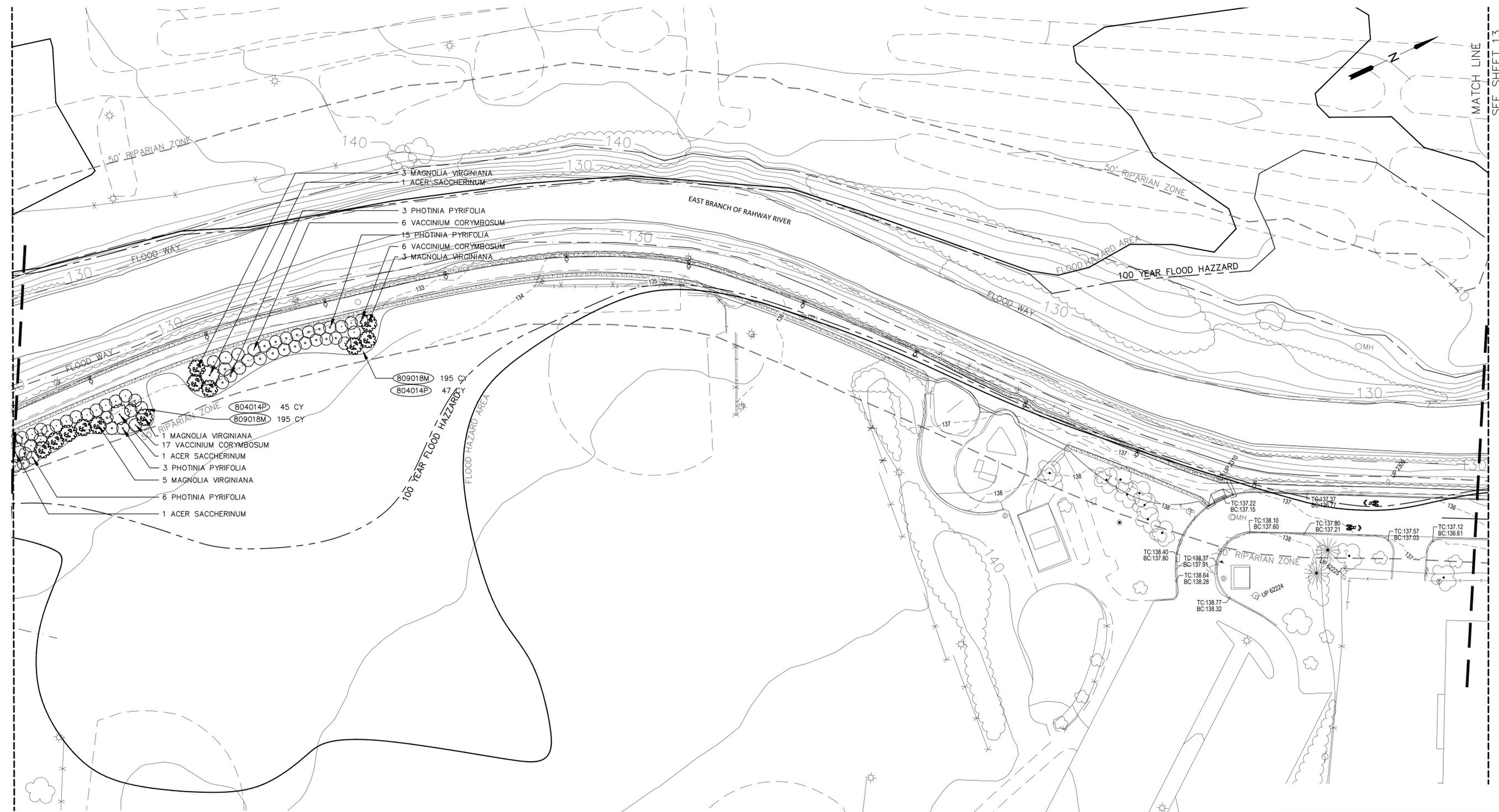
RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024

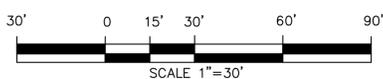
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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FILE NAME: USER: MOTT MACDONALD  
 DATE: TIME:  
 DESIGNED BY: MOTT MACDONALD  
 DETAIL CHECKED BY:  
 IN CHARGE OF:



ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
804014P	PLANTING PIT SOIL	CY	92
809018M	WOOD MULCHING	SY	195
811006M	ACER SACCHARINUM- SILVER MAPLE	2-2.5 CAL	3
811030M	MAGNOLIA VIRGINIANA- SWEETBAY MAGNOLIA	5'-6'	12
811066M	PHOTINIA PYRIFOLIA- RED CHOKEBERRY	#2 CAN	27
811066M	VACCINIUM CORYMBOSUM- HIGH BUSH BLUEBERRY	#2 CAN	29



NEW JERSEY DEPARTMENT OF TRANSPORTATION

LANDSCAPE PLAN-C

RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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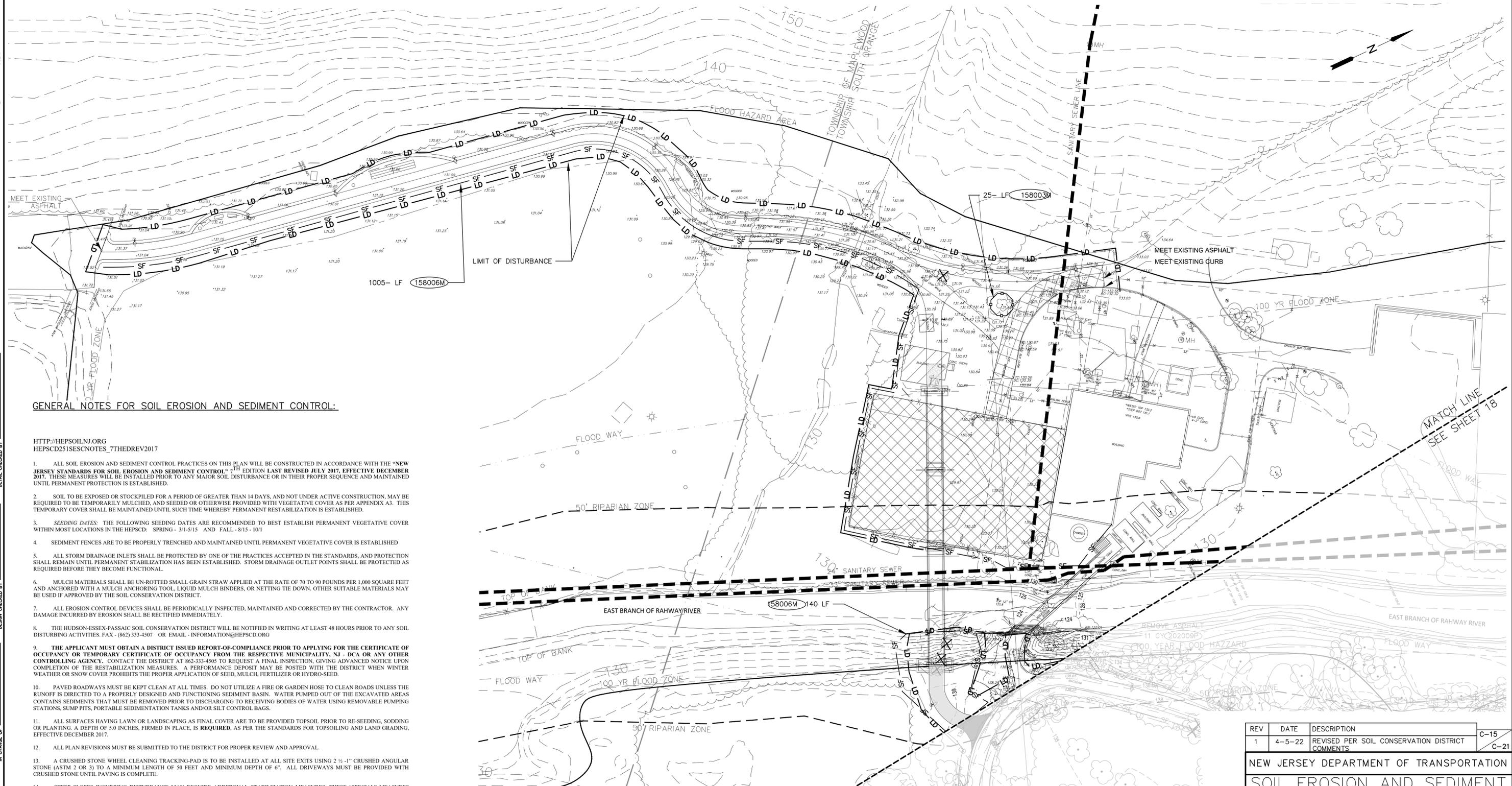
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IN CHARGE OF:

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MACDONALD



**GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL:**

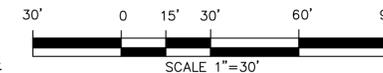
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- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN WILL BE CONSTRUCTED IN ACCORDANCE WITH THE "NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" 7TH EDITION LAST REVISED JULY 2017, EFFECTIVE DECEMBER 2017. THESE MEASURES WILL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- SOIL TO BE EXPOSED OR STOCKPILED FOR A PERIOD OF GREATER THAN 14 DAYS, AND NOT UNDER ACTIVE CONSTRUCTION, MAY BE REQUIRED TO BE TEMPORARILY MULCHED, AND SEEDED OR OTHERWISE PROVIDED WITH VEGETATIVE COVER AS PER APPENDIX A3. THIS TEMPORARY COVER SHALL BE MAINTAINED UNTIL SUCH TIME WHEREBY PERMANENT RESTABILIZATION IS ESTABLISHED.
- SEEDING DATES:** THE FOLLOWING SEEDING DATES ARE RECOMMENDED TO BEST ESTABLISH PERMANENT VEGETATIVE COVER WITHIN MOST LOCATIONS IN THE HEPSCD: SPRING - 3/1-5/15 AND FALL - 8/15 - 10/1
- SEDIMENT FENCES ARE TO BE PROPERLY TRENCHED AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED
- ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY ONE OF THE PRACTICES ACCEPTED IN THE STANDARDS, AND PROTECTION SHALL REMAIN UNTIL PERMANENT STABILIZATION HAS BEEN ESTABLISHED. STORM DRAINAGE OUTLET POINTS SHALL BE PROTECTED AS REQUIRED BEFORE THEY BECOME FUNCTIONAL.
- MULCH MATERIALS SHALL BE UN-ROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 70 TO 90 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING THE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
- ALL EROSION CONTROL DEVICES SHALL BE PERIODICALLY INSPECTED, MAINTAINED AND CORRECTED BY THE CONTRACTOR. ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.
- THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT WILL BE NOTIFIED IN WRITING AT LEAST 48 HOURS PRIOR TO ANY SOIL DISTURBING ACTIVITIES. FAX - (862) 333-4507 OR EMAIL - INFORMATION@HEPSCD.ORG
- THE APPLICANT MUST OBTAIN A DISTRICT ISSUED REPORT-OF-COMPLIANCE PRIOR TO APPLYING FOR THE CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY FROM THE RESPECTIVE MUNICIPALITY, NJ - DCA OR ANY OTHER CONTROLLING AGENCY. CONTACT THE DISTRICT AT 862-333-4505 TO REQUEST A FINAL INSPECTION, GIVING ADVANCED NOTICE UPON COMPLETION OF THE RESTABILIZATION MEASURES. A PERFORMANCE DEPOSIT MAY BE POSTED WITH THE DISTRICT WHEN WINTER WEATHER OR SNOW COVER PROHIBITS THE PROPER APPLICATION OF SEED, MULCH, FERTILIZER OR HYDRO-SEED.
- PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. DO NOT UTILIZE A FIRE OR GARDEN HOSE TO CLEAN ROADS UNLESS THE RUNOFF IS DIRECTED TO A PROPERLY DESIGNED AND FUNCTIONING SEDIMENT BASIN. WATER PUMPED OUT OF THE EXCAVATED AREAS CONTAINS SEDIMENTS THAT MUST BE REMOVED PRIOR TO DISCHARGING TO RECEIVING BODIES OF WATER USING REMOVABLE PUMPING STATIONS, SUMP PITS, PORTABLE SEDIMENTATION TANKS AND/OR SILT CONTROL BAGS.
- ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED TOPSOIL PRIOR TO RE-SEEDING, SODDING OR PLANTING. A DEPTH OF 5.0 INCHES, FIRMED IN PLACE, IS REQUIRED, AS PER THE STANDARDS FOR TOPSOILING AND LAND GRADING, EFFECTIVE DECEMBER 2017.
- ALL PLAN REVISIONS MUST BE SUBMITTED TO THE DISTRICT FOR PROPER REVIEW AND APPROVAL.
- A CRUSHED STONE WHEEL CLEANING TRACKING-PAD IS TO BE INSTALLED AT ALL SITE EXITS USING 2 1/2 - 1" CRUSHED ANGULAR STONE (ASTM 2 OR 3) TO A MINIMUM LENGTH OF 50 FEET AND MINIMUM DEPTH OF 6". ALL DRIVEWAYS MUST BE PROVIDED WITH CRUSHED STONE UNTIL PAVING IS COMPLETE.
- STEEP SLOPES INCURRING DISTURBANCE MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. THESE "SPECIAL" MEASURES SHALL BE DESIGNED BY THE APPLICANT'S ENGINEER AND BE APPROVED BY THE SOIL CONSERVATION DISTRICT.
- THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED, IN WRITING, FOR THE SALE OF ANY PORTION OF THE PROJECT OR FOR THE SALE OF INDIVIDUAL LOTS. NEW OWNERS' INFORMATION SHALL BE PROVIDED. ADDITIONAL MEASURES DEEMED NECESSARY BY DISTRICT OFFICIALS SHALL BE IMPLEMENTED AS CONDITIONS WARRANT.

NOTE:  
SEE SOIL EROSION AND SEDIMENT CONTROL DETAIL FOR TEMPORARY SEEDING AND TOPSOIL INSTRUCTIONS

SOIL MANAGEMENT NOTE:  
THE PROPOSED PROJECT DOES NOT REQUIRE COMPACTION  
REMEDICATION, AS PER EXEMPTION #2 UNDER SOIL  
MANAGEMENT AND PREPARATION STANDARDS FOR SOIL AND  
SEDIMENT CONTROL IN NEW JERSEY.

ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
158006M	SILT FENCE	LF	1150
158003M	TREE PROTECTION	LF	50



REV	DATE	DESCRIPTION	
1	4-5-22	REVISED PER SOIL CONSERVATION DISTRICT COMMENTS	C-15 C-21

NEW JERSEY DEPARTMENT OF TRANSPORTATION  
**SOIL EROSION AND SEDIMENT CONTROL PLAN**  
RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

FILE NAME: USER:  
 DATE: TIME:  
 DESIGNED BY: MOTT MACDONALD  
 DETAIL CHECKED BY: MOTT MACDONALD  
 IN CHARGE OF: MOTT MACDONALD



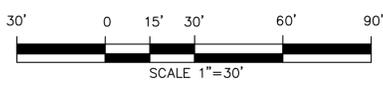
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SEE SHEET 19

NOTE:  
SEE SOIL EROSION AND SEDIMENT CONTROL DETAIL SHEET 20 (SESC DETAILS) FOR TEMPORARY SEEDING AND TOPSOIL INSTRUCTIONS

SOIL MANAGEMENT NOTE:  
THE PROPOSED PROJECT DOES NOT REQUIRE COMPACTION REMEDIATION, AS PER EXEMPTION #2 UNDER SOIL MANAGEMENT AND PREPARATION STANDARDS FOR SOIL AND SEDIMENT CONTROL IN NEW JERSEY.

ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
158006M	SILT FENCE	LF	1790
158003M	TREE PROTECTION	LF	1225



REV	DATE	DESCRIPTION	C-16
1	4-5-22	REVISED PER SOIL CONSERVATION DISTRICT COMMENTS	C-21

NEW JERSEY DEPARTMENT OF TRANSPORTATION

**SOIL EROSION AND SEDIMENT CONTROL PLAN-B**

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

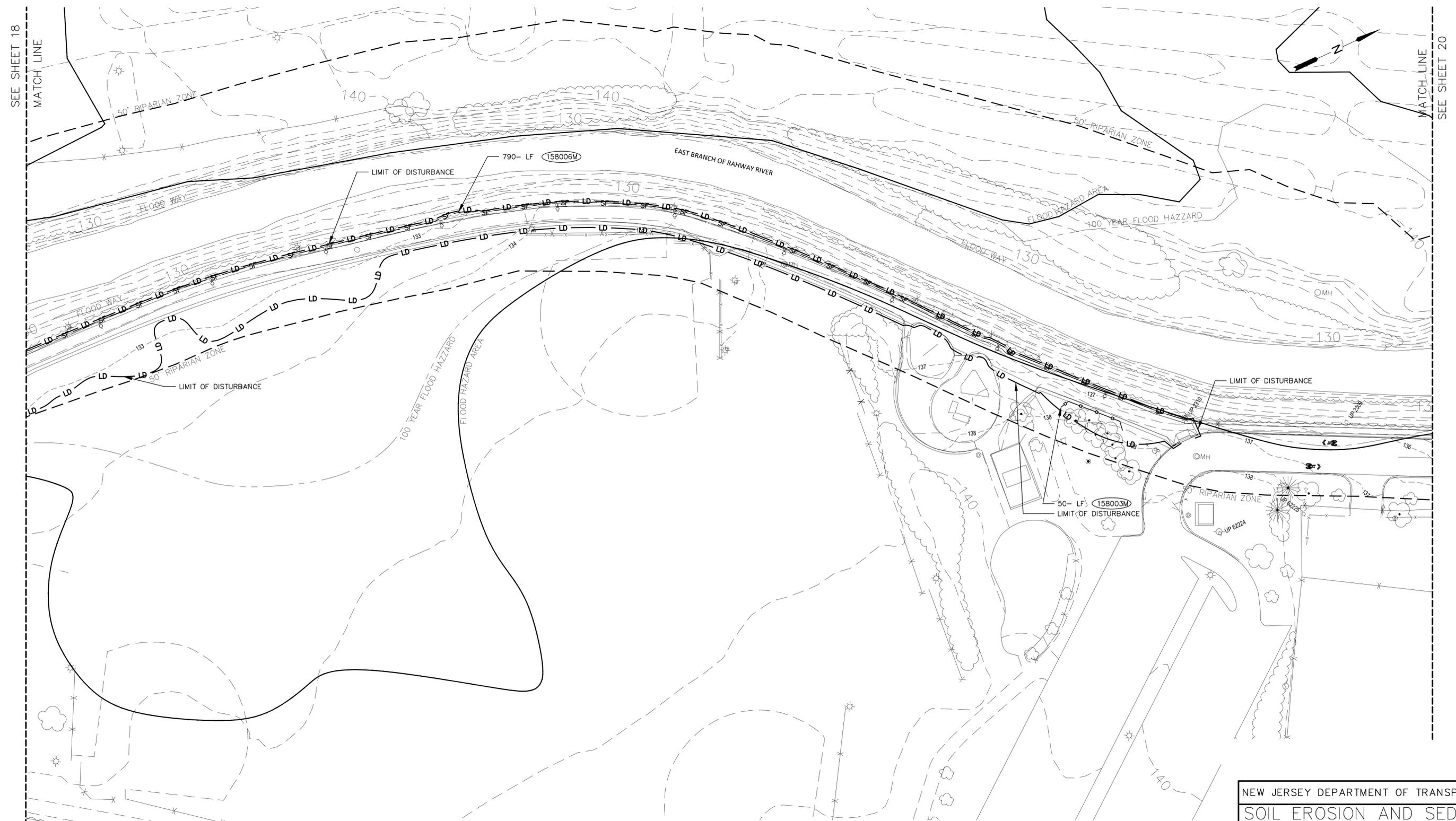
MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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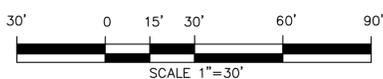
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MACDONALD



NOTE:  
SEE SOIL EROSION AND SEDIMENT CONTROL DETAIL SHEET 20 (SESC DETAILS) FOR TEMPORARY SEEDING AND TOPSOIL INSTRUCTIONS

SOIL MANAGEMENT NOTE:  
THE PROPOSED PROJECT DOES NOT REQUIRE COMPACTION REMEDIATION, AS PER EXEMPTION #2 UNDER SOIL MANAGEMENT AND PREPARATION STANDARDS FOR SOIL AND SEDIMENT CONTROL IN NEW JERSEY.

ITEM NO.	TO BE CONSTRUCTED	UNIT	CONTRACT QUANTITY
158006M	SILT FENCE	LF	790
158003M	TREE PROTECTION	LF	50

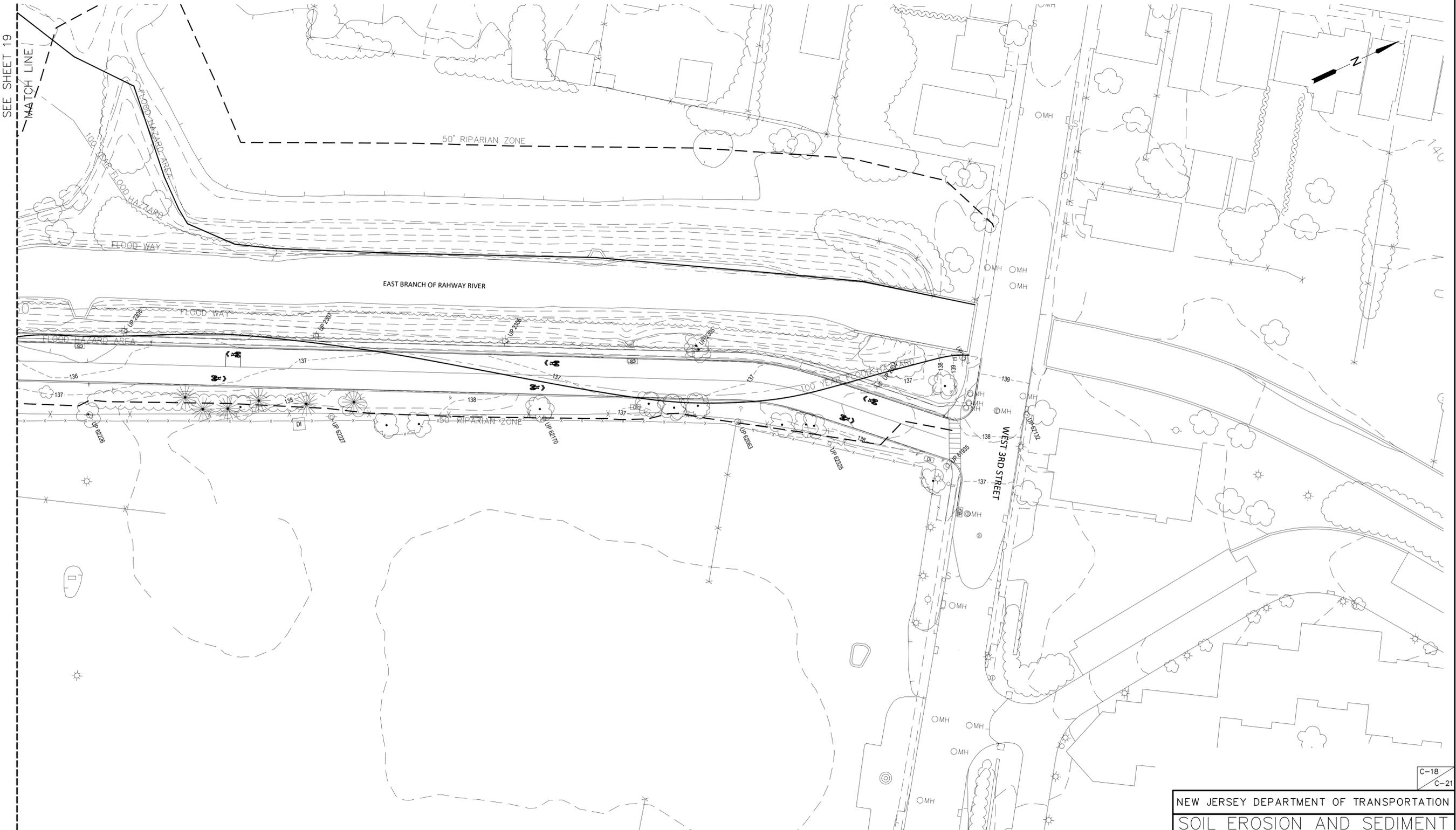


NEW JERSEY DEPARTMENT OF TRANSPORTATION  
**SOIL EROSION AND SEDIMENT CONTROL PLAN-C**  
 RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
 AND CHYZOWYCH SOCCER FIELD  
 THE TOWNSHIP OF SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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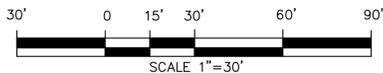
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IN CHARGE OF

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MOTT  
MACDONALD

**NOTE:**  
SEE SOIL EROSION AND SEDIMENT CONTROL DETAIL SHEET 20 (SESC DETAILS) FOR TEMPORARY SEEDING AND TOPSOIL INSTRUCTIONS

**SOIL MANAGEMENT NOTE:**  
THE PROPOSED PROJECT DOES NOT REQUIRE COMPACTION REMEDIATION, AS PER EXEMPTION #2 UNDER SOIL MANAGEMENT AND PREPARATION STANDARDS FOR SOIL AND SEDIMENT CONTROL IN NEW JERSEY.

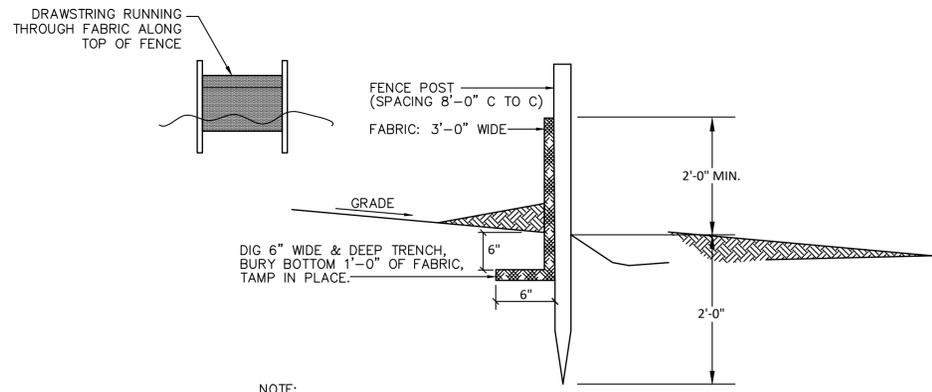


NEW JERSEY DEPARTMENT OF TRANSPORTATION	
SOIL EROSION AND SEDIMENT CONTROL PLAN-D	
RIVER GREENWAY PROJECT BRIDGE IN NEW WATERLAND PARK AND CHYZOWYCH SOCCER FIELD THE TOWNSHIP OF SOUTH ORANGE VILLAGE	
MOTT MACDONALD, LLC	CERTIFICATE OF AUTHORIZATION NO. 24GA28016600
<i>Brian E. Henning</i>	7/16/2024
BRIAN E. HENNING, P.E.	NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

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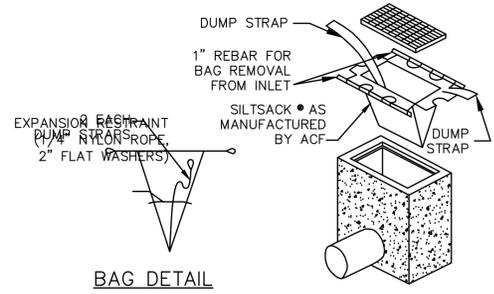
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NOTE:  
AT THE COMPLETION OF THE PROJECT AND AFTER SOIL STABILIZATION AND VEGETATIVE GROWTH HAVE BEEN ASSURED, THE SILT FENCE MUST BE COMPLETELY REMOVED AND THE EMBEDMENT TRENCH RESTORED TO A NATURAL CONDITION.

**SILT FENCE DETAIL**



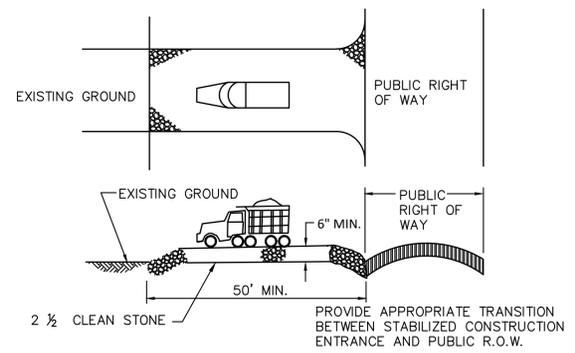
**INLET SEDIMENT CONTROL DEVICE DETAIL**  
NOT TO SCALE

**DESIGN CRITERIA OF STORM SEWER INLET PROTECTION:**

- MUST SLOW THE STORM WATER, PROVIDE THE COARSE SEDIMENT PARTICLES A CHANCE TO SETTLE, AND PROVIDE AN AREA TO RETAIN THE PARTICLES THAT HAVE SETTLED.
  - IN ALL CASES, INLET PROTECTION SHOULD NOT COMPLETELY CLOSE OFF THE INLET.
  - THE PROTECTION DEVICE WILL BE 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.
- OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
- INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.
- THE CONTRACTOR SHALL INSTALL STORM SEWER INLET PROTECTION IN ACCORDANCE WITH THE SESC IN NJ, #30, JULY 1999.

% SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COURSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FEET	100 FEET
2 TO 5%	100 FEET	200 FEET
> 5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE*	

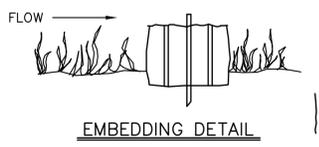
\* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY



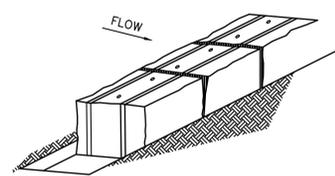
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**DESIGN CRITERIA OF STORM SEWER INLET PROTECTION:**

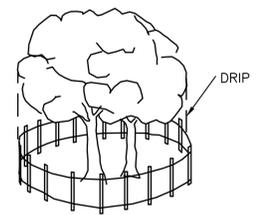
- LOCATION — THE SEDIMENT TANK SHALL BE LOCATED FOR EASE OF CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENT AND MINIMIZED INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND PEDESTRIAN TRAFFIC.
  - TANK SIZE — THE FOLLOWING FORMULA SHOULD BE USED IN DETERMINING THE STORAGE VOLUME OF THE SEDIMENT TANK: 1 CUBIC FOOT OF STORAGE FOR EACH PER GALLON PER MINUTE OF MUMP DISCHARGE CAPACITY.
  - TANKS MAY BE CONNECT IN SERIES. GEOTEXTILE FABRIC MESH SIZE MAY VARY FROM TANK TO TANK WITH DOWNSTREAM MOST LAYER MEETING GEOTEXTILE CLASS SE29 OR BETTER
- MAINTENANCE:**
- THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
  - THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED.



**EMBEDDING DETAIL**

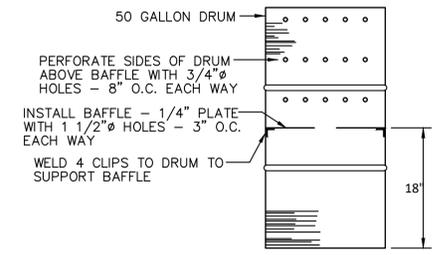


**STRAW BALE SILT FILTER DETAILS**  
NOT TO SCALE



NOTE:  
ALL SPECIMEN TREES AS SHOWN ON THE PLANS TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION. THE CONTRACTOR SHALL INSTALL SNOW FENCING AT THE DRIP LINE OF EACH SPECIMEN TREE BEFORE WORKING IN THE VICINITY OF THE TREE, AS DIRECTED BY THE ENGINEER.

**TREE PROTECTION FENCING**



NOTE: FOR USE WHEN PUMPING RATE IS 20 GPM OR LESS  
**SEDIMENT TRAP DETAIL FOR TRENCH DEWATERING OPERATIONS WITHIN PAVED AREAS**  
NOT TO SCALE

**TEMPORARY SEEDING DETAILS**

- SEED: CEREAL RYE AT 100 LBS./ACRE
  - FERTILIZER: 10-20-10 OR EQUIVALENT @ 11 LBS./1,000 SF WORKED INTO SOIL A MINIMUM OF 4 INCHES IF SEED IS DRILLED OVER BANDED FERTILIZER, THE RATE OF FERTILIZER IS REDUCED BY 50 PERCENT.
  - MULCH: UNROTTED SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 90 LBS./1,000 SF, TO BE APPLIED ACCORDING TO THE N.J. STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER). PETROLEUM BASED MULCH BINDERS WILL NOT BE PERMITTED FOR TEMPORARY STABILIZATION. MULCH SHALL BE SPREAD SUCH THAT 85% OF THE SOIL SURFACE IS COVERED.
  - LIME: 135 LBS./1,000 SF, GROUND LIMESTONE. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM AS FOLLOWS:
- | SOIL TEXTURE                           | TONS/ACRE | LBS/1,000 FEET |
|--|-----------|----------------|
| CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL | 3         | 135            |
| SANDY LOAM, LOAM, SILT LOAM            | 2         | 90             |
| LOAMY SAND, SAND                       | 1         | 45             |
- TEMPORARY SEEDING MUST BE DONE IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, LATEST REVISION.

**TOPSOIL:**

TOPSOIL SHALL NOT CONTAIN RECYCLED MATERIAL, GLASS, DEBRIS, OR METAL. STONES, LUMPS, ROOTS, OR SIMILAR OBJECTS SHALL NOT BE LARGER THAN 1 1/2" IN ANY DIMENSION. THE TOPSOIL SHALL NOT HAVE A pH VALUE LESS THAN 5.8. THE TOPSOIL SHALL ALSO BE CERTIFIED CLEAN BELOW THE MOST STRINGENT NUDEP SOIL CLEAN-UP CRITERIA. WHEN THE TOPSOIL HAS A pH LESS THAN 5.8, IT SHALL BE INCREASED BY APPLYING PULVERIZED LIMESTONE AT A RATE NECESSARY TO ATTAIN A 6.5 pH VALUE.

TOPSOIL SHALL HAVE A MINIMUM ORGANIC CONTENT OF NOT LESS THAN 2.75 PERCENT BY WEIGHT. WHEN THE ORGANIC CONTENT IS LESS THAN 2.75 PERCENT, IT SHALL BE INCREASED BY ADDING PEAT OR OTHER ACCEPTABLE ADDITIVE AT A RATE NECESSARY TO ATTAIN THE MINIMUM ORGANIC CONTENT.

TOPSOIL SHALL BE TESTED BY THE RUTGERS COOPERATIVE EXTENSION OR APPROVED EQUAL. THE TOPSOIL SHALL BE TESTED FOR SOIL PROPERTIES INCLUDING GRADATION, ORGANIC MATTER, pH, AND LEVEL OF NUTRIENTS NECESSARY FOR VEGETATIVE GROWTH. THE TOPSOIL TEST SHALL INCLUDE RECOMMENDATIONS FOR TOPSOIL AMENDMENTS AS NECESSARY FOR THE INTENDED VEGETATIVE GROWTH.

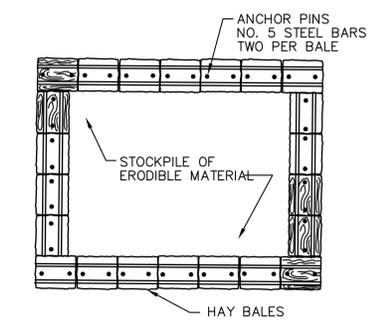
NOTE:  
SEE SOIL EROSION AND SEDIMENT CONTROL PLAN FOR GENERAL NOTES AND PERMANENT SEED INSTRUCTIONS

**PERMANENT STABILIZATION, VEGETATIVE COVER**

- SEEDBED PREPARATION:**
- SEEDING: SEED TYPES AND RATES
    - THE FOLLOWING SEED MIX SHALL BE SPREAD ON THE LANDFILL CAP: HARD FESCUE AT A RATE OF 120 LBS./ACRE, CREEPING FESCUE AT A RATE OF 30 LBS./ACRE, AND PERENNIAL RYEGRASS AT A RATE OF 10 LBS./ACRE.
    - SEED SPREADING MAY OCCUR BETWEEN MARCH 1, AND NOVEMBER 15.
    - METHOD OF SEEDING SHALL BE DONE UNIFORMLY BY HAND, CYCLONE SEEDER, DROP SEEDER, DRILL, OR CULTIPACKER SEEDER. ALL METHODS SHALL INCORPORATE THE SEED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION EXCEPT DRILLED OR CULTIPACKED. SEED SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4" TO 1/2" BY RAKING OR DRAGGING.
    - HYDROSEEDING SHALL ONLY OCCUR IN AREAS WHERE CONVENTIONAL SEEDING METHODS ARE NOT POSSIBLE AND SHALL FIRST BE APPROVED BY THE ENGINEER OR THE LOCAL SOIL CONSERVATION DISTRICT.
  - FERTILIZER: 10-20-10, OR EQUIVALENT @ 11 LBS./1,000 SF, WORKED INTO SOIL A MINIMUM OF 4 INCHES. FERTILIZER SHALL HAVE 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE.
  - MULCHING: ALL DISTURBED AREAS TO BE LANDSCAPED MUST BE MULCHED AND THE MULCH SHALL BE ANCHORED IMMEDIATELY AFTER GRADING UNLESS PERMANENT VEGETATION WILL BE ESTABLISHED WITHIN 30 DAYS OF GRADING. MULCH WILL ENSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. MULCH SHALL BE SPREAD SUCH THAT 85% OF THE SOIL SURFACE IS COVERED.
    - A.) THE FOLLOWING MATERIALS ARE SUITABLE FOR MULCHING: UNROOTED STRAW OR SALT HAY AT 1 1/2 TO 2 TONS/ACRE; ASPHALT EMULSION OR OUTBACK ASPHALT AT 600 TO 1200 GAL/ACRE; WOOD FIBER OR PAPER FIBER (HYDRO-SEEDING 100 LBS/ACRE; MULCH NETTING PAPER JUTE; EXCELSIOR, COTTON, OR PLASTIC.
    - B.) STRAW OR SALT HAY MULCHERS SHOULD BE IMMEDIATELY ANCHORED USING PEG TWINE NETTING, A MULCH ANCHORING TOOL OR LIQUID MULCH BINDERS.
  - LIME: GROUND LIMESTONE @ 135 LBS./1,000 SF. BY HYDROSEEDING AT A RATE OF 1500 LBS./ACRE APPLIED BETWEEN MARCH 1 AND MAY 15 OR AUGUST 15 AND OCTOBER 1.
- APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM AS FOLLOWS:
- | SOIL TEXTURE                           | TONS/ACRE | LBS/1,000 FEET |
|--|-----------|----------------|
| CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL | 4         | 180            |
| SANDY LOAM, LOAM, SILT LOAM            | 3         | 135            |
| LOAMY SAND, SAND                       | 2         | 90             |
- PERMANENT SEEDING MUST BE DONE IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, LATEST REVISION.

**DUST CONTROL NOTES**

- CONTRACTOR RESPONSIBLE FOR PROVIDING DUST CONTROL MEASURES FOR THE DURATION OF CONSTRUCTION USING THE FOLLOWING METHODS:
- MULCHES — UNROTTED SMALL-GRAIN STRAW, SYNTHETIC OR ORGANIC SOIL STABILIZERS, WOOD FIBER OR PAPER FIBER MULCH, MULCH NETTING, OR WOOD CHIPS. MEASURE SELECTED TO BE APPROVED BY OWNER PRIOR TO INSTALLATION AND INSTALLED AND MAINTAINED PER THE STANDARD OF STABILIZATION WITH MULCH, PG. 7-1 OF THE NEW JERSEY STANDARDS.
  - VEGETATIVE COVER — SEE PERMANENT AND TEMPORARY STABILIZATION REQUIREMENTS THIS SHEET.
  - SPRINKLING EXPOSED SOIL WITH WATER UNTIL SURFACE IS WET.
  - BARRIER: SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY.
- DUST CONTROL METHOD(S) TO BE APPROVED BY OWNER PRIOR TO USE.



**MATERIAL STOCKPILE DETAIL**  
NOT TO SCALE

**SEQUENCE OF CONSTRUCTION**

WEEK	DESCRIPTION
WEEK 1	MOBILIZATION, SESC MEASURES INSTALLATION
WEEKS 2-8	SITE CLEARING AND SITE PREPARATION
WEEKS 9-33	INSTALLATION OF IMPROVEMENTS
WEEK 34	PROJECT CLOSEOUT, SITE RESTORATION, REMOVAL OF SESC MEASURES AND DEMOBILIZATION

REV	DATE	DESCRIPTION	C-19
1	4-5-22	REVISED PER SOIL CONSERVATION DISTRICT COMMENTS	C-21

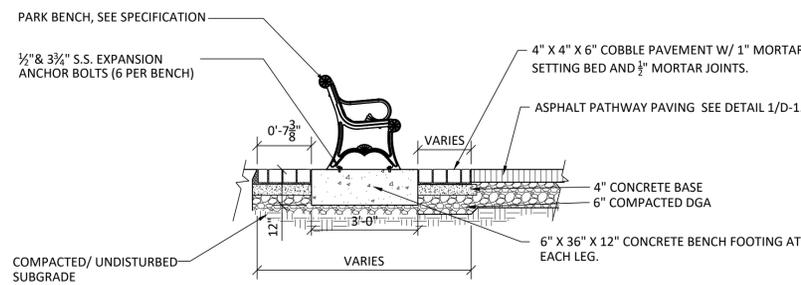
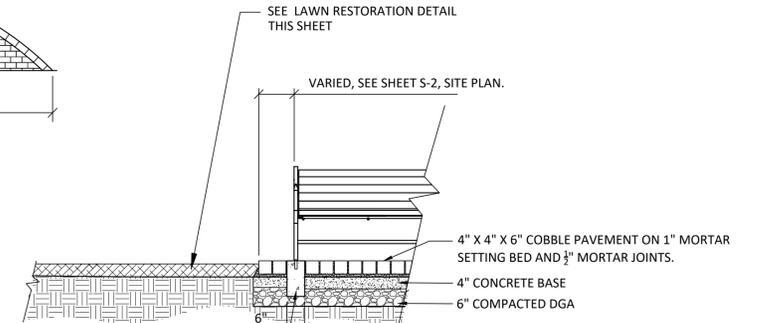
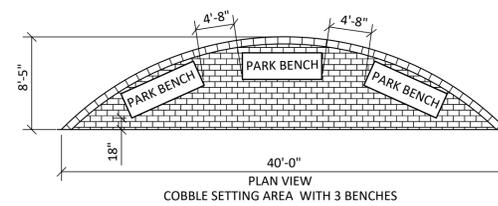
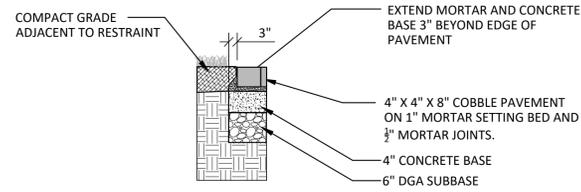
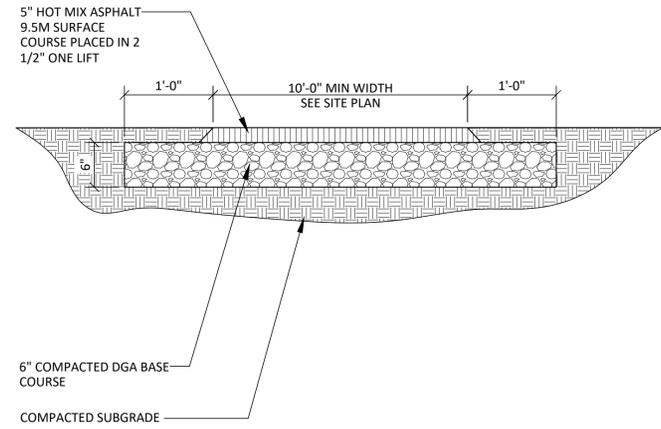
NEW JERSEY DEPARTMENT OF TRANSPORTATION

SOIL EROSION & SEDIMENT CONTROL DETAIL AND NOTES

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600





NOTES:  
 \* PARK BENCH TO BE 57-80PL BY DUMOR INC.

6" X 36" X 12" CONCRETE BENCH FOOTING AT EACH LEG. CONCRETE COLOR TO BE MATCH GRANITE COBBLE. (CONCRETE COLOR TO BE SELECTED BY PROJECT PROFESSIONAL.)

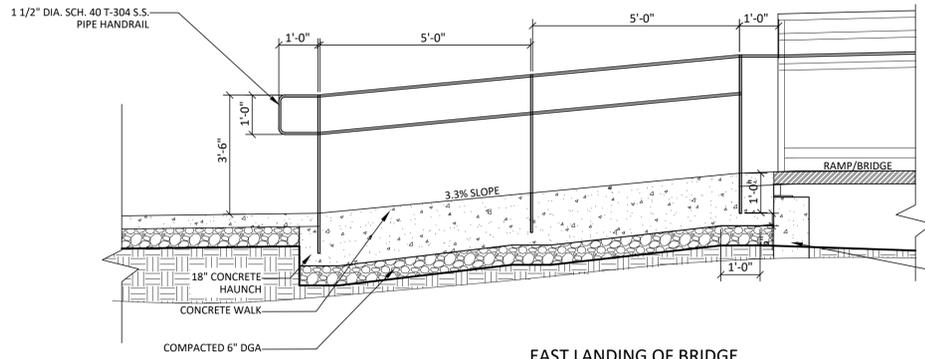
NOTE:  
 6" LENGTH PARK BENCH TO BE CLASSIC SERIES MODEL C-140 MANUFACTURED BY VICTOR STANLEY, MODEL BENCH 143 MANUFACTURED BY DUMOR, WALDORF SERIES MODEL WLB-WLRP MANUFACTURED BY THOMAS STEELE, OR EQUAL. COLOR TO BLACK

1 ASPHALT PATHWAY PAVEMENT DETAIL

SCALE NOT TO SCALE

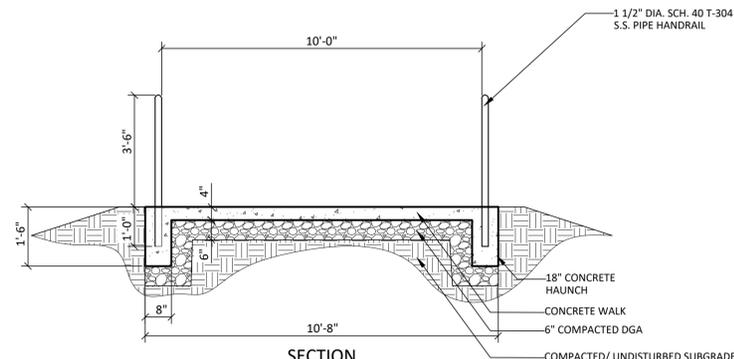
2 PARK BENCH AND COBBLE SEATING AREA DETAIL

SCALE NOT TO SCALE

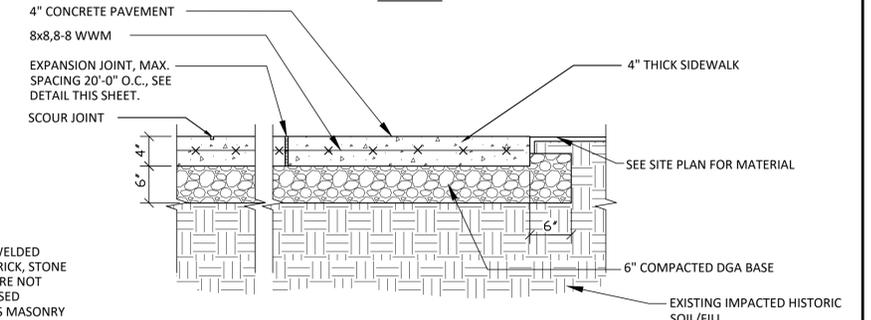
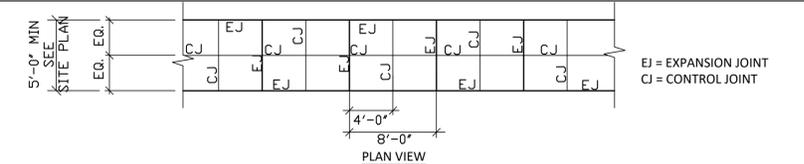


EAST LANDING OF BRIDGE

PROPOSED ABUTMENT SEE STRUCTURAL PLANS FOR DETAILS



SECTION



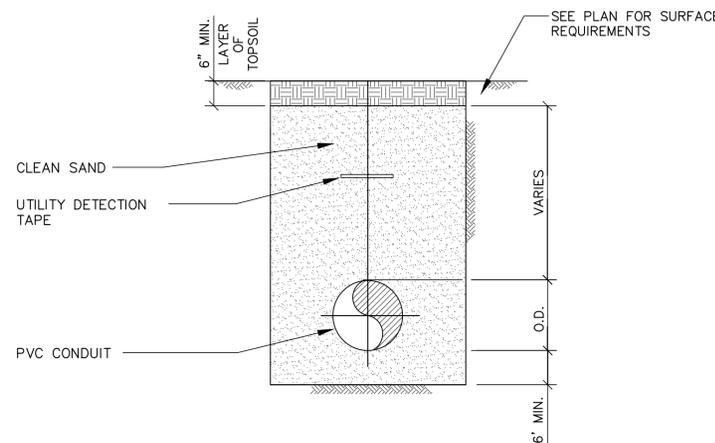
CONCRETE PAVEMENT NOTE:  
 CONTRACTOR TO SUPPORT WELDED WIRE MESH ON "CHAIRS" - BRICK, STONE OR CONSTRUCTION DEBRIS ARE NOT ACCEPTABLE. WHERE PROPOSED CONCRETE PAVEMENT ABUTS MASONRY STRUCTURES CONTRACTOR IS TO INSTALL EXPANSION JOINTS.

3 PATHWAY HANDRAIL

SCALE NOT TO SCALE

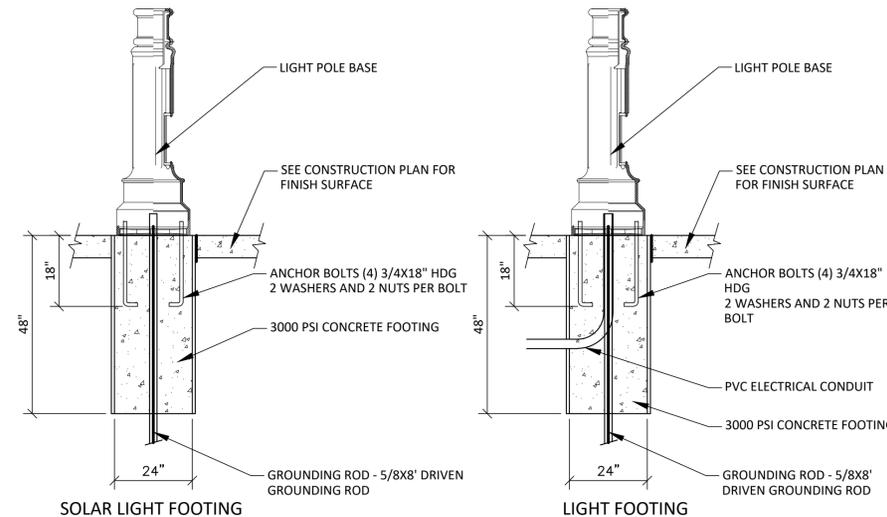
4 CONCRETE SIDEWALK DETAIL

SCALE NOT TO SCALE



5 TRENCHING DETAIL FOR ELECTRICAL CONDUIT

SCALE NOT TO SCALE

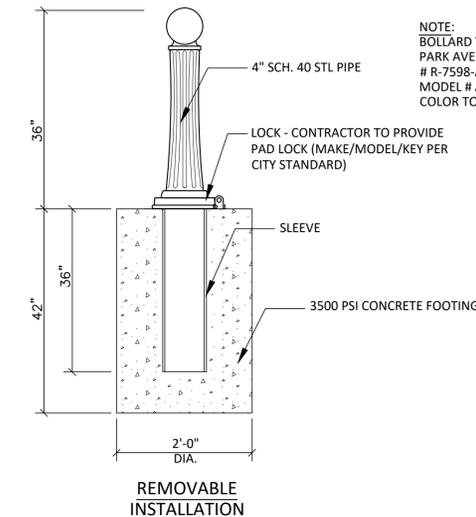


SOLAR LIGHT FOOTING

LIGHT FOOTING

6 PEDESTRIAN LIGHT FOOTING DETAIL

SCALE NOT TO SCALE



REMOVABLE INSTALLATION

7 BOLLARD DETAIL

SCALE NOT TO SCALE



NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

RIVER GREENWAY PROJECT  
 BRIDGE IN NEW WATERLAND PARK  
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 THE TOWNSHIP OF  
 SOUTH ORANGE VILLAGE

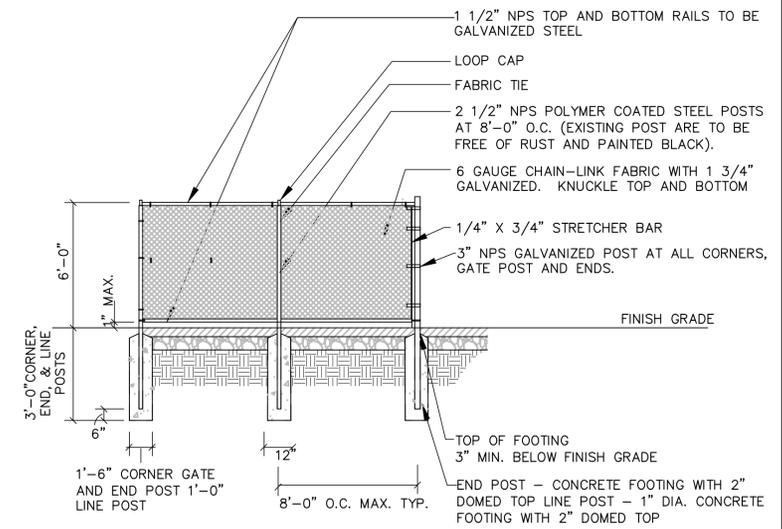
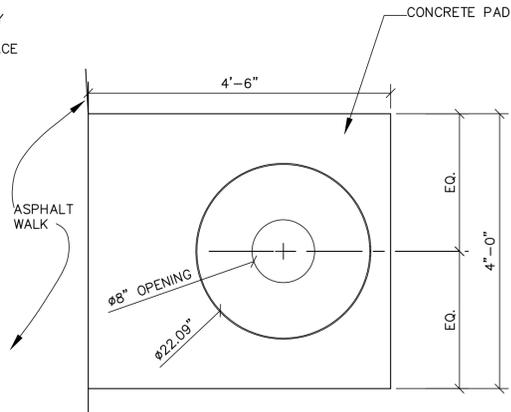
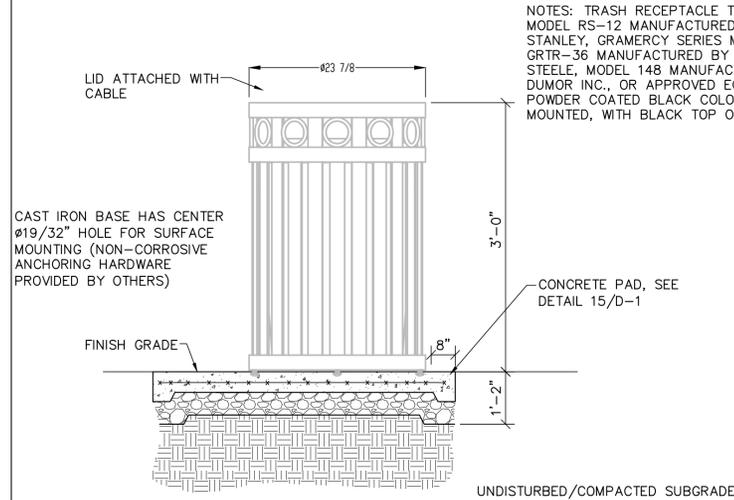
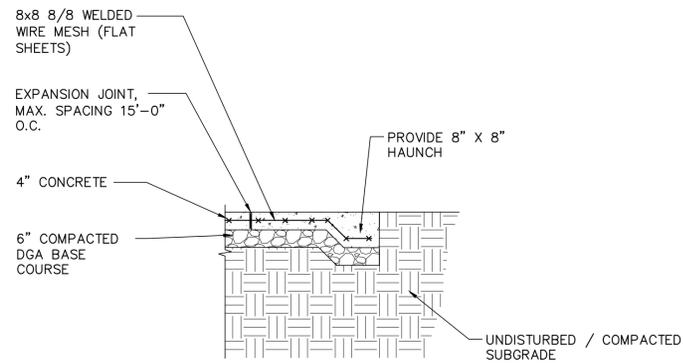
MOTT MACDONALD, LLC  
 CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
 7/16/2024

BRIAN E. HENNING, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

C-20  
 C-21

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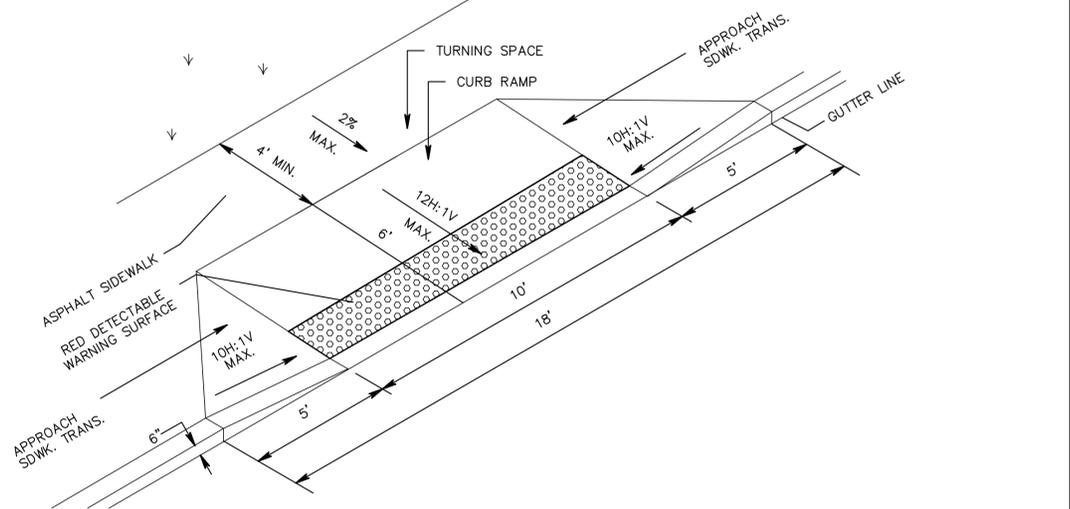
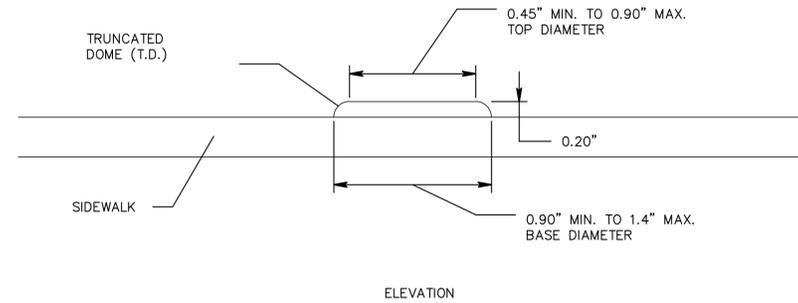
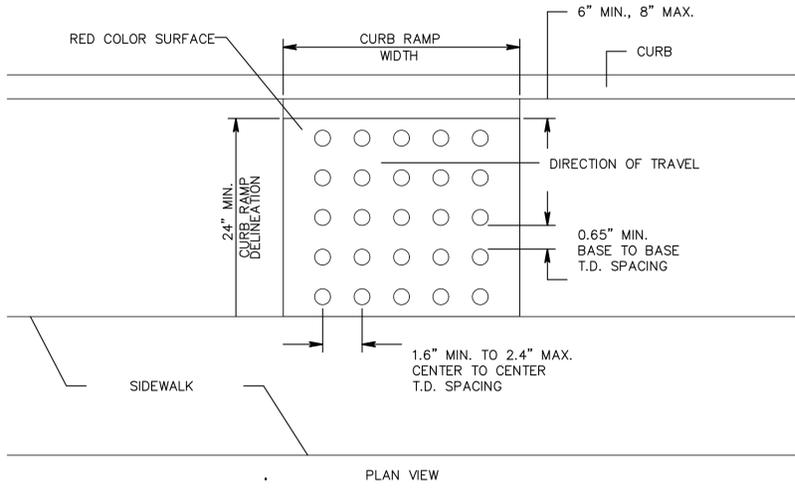
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 CHECKED BY: MOTT MACDONALD  
 IN CHARGE OF: MOTT MACDONALD  
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 TIME: 10:00 AM



1 CONCRETE PAD(BLEACHER/TRASH REC./ETC.)  
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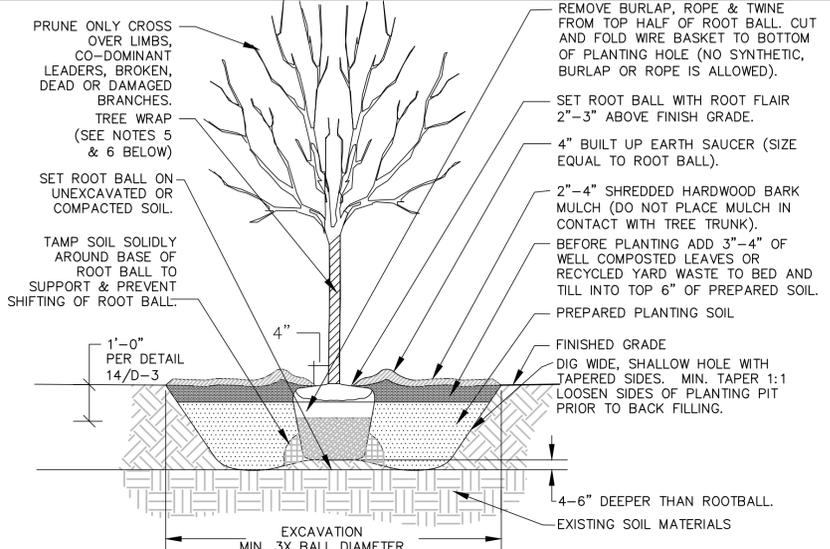
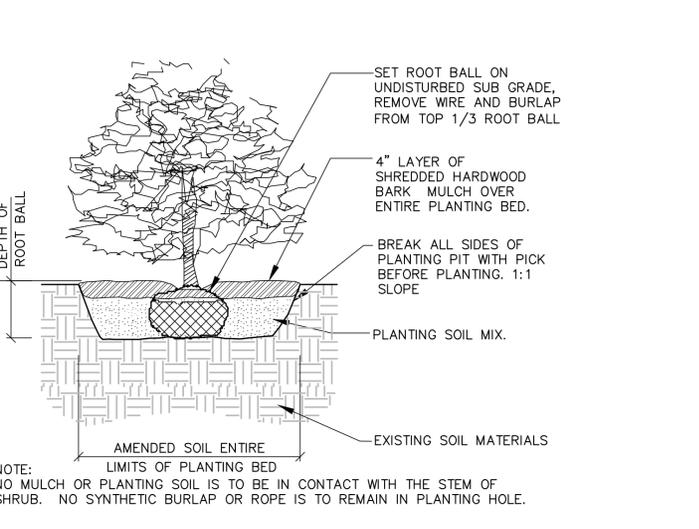
2 TRASH RECEPTACLE  
SCALE NOT TO SCALE

3 6' HT CHAIN LINK FENCE  
SCALE NOT TO SCALE



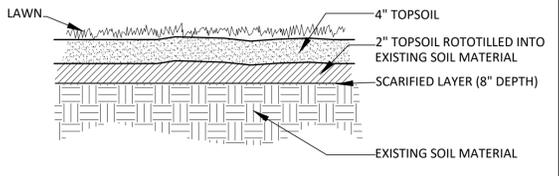
3 DETECTABLE WARNING SURFACE  
SCALE NOT TO SCALE

3 CURB RAMP TYPE 1  
SCALE NOT TO SCALE



**NOTES:**

- FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOL TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
- INCORPORATE COMMERCIALY PREPARED MYCORRHIZAE SPORES IN THE SOIL IMMEDIATELY AROUND THE ROOTBALL AT RATES SPECIFIED BY THE MANUFACTURER.
- THOROUGHLY SOAK THE TREE ROOTBALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AS PER MAINTENANCE SPECIFICATIONS.
- THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.
- TREES WHOSE ORIENTATION IS NOT CHANGED FROM THE NURSERY ARE NOT TO BE WRAPPED EXCEPT TREES WITH VERY THIN BARK, SUCH AS RED MAPLE OR AS DIRECTED BY PROJECT PROFESSIONAL. WRAPPING OF TREES, IS TO BE APPROVED BY THE PROJECT PROFESSIONAL.
- TREE WRAP TO BE FABRIC TYPE APPLIED FROM TRUNK FLAIR TO FIRST BRANCH. WRAP PAPER FROM BOTTOM UP WITH SUFFICIENT OVERLAP TO COVER ALL BARK. USE BIO/PHOTO-DEGRADABLE PLASTIC OR MASKING TAPE. TREE WRAP TO BE REMOVED WHEN DIRECTED BY LANDSCAPE ARCHITECT, BUT NO LATER THAN 12 MONTHS AFTER PLANTING.
- NORTH SIDE OF TREE TO BE IDENTIFIED ON TREE TRUNK WITH SEMI-PERMANENT MARKING POINT PRIOR TO DIGGING. NORTH ORIENTATION OF TREE TO BE MAINTAINED. ANY TREE WITHOUT NORTH ORIENTATION MARK WILL BE REJECTED BY PROJECT PROFESSIONAL.
- ROOT FLAIR/ COLLAR IS TO BE EXPOSED AT TIME OF PLANTING. CONTRACTOR TO REMOVE EXCESS SOIL FROM TOP OF ROOTBALL TO EXPOSE ROOT FLAIR/ COLLAR. ROOT FLAIR/ COLLAR TO BE VISIBLE AFTER PLANTING.



4 SHRUB PLANTING DETAIL  
SCALE NOT TO SCALE

5  
SCALE NOT TO SCALE

6 LAWN RESTORATION DETAIL  
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NEW JERSEY DEPARTMENT OF TRANSPORTATION

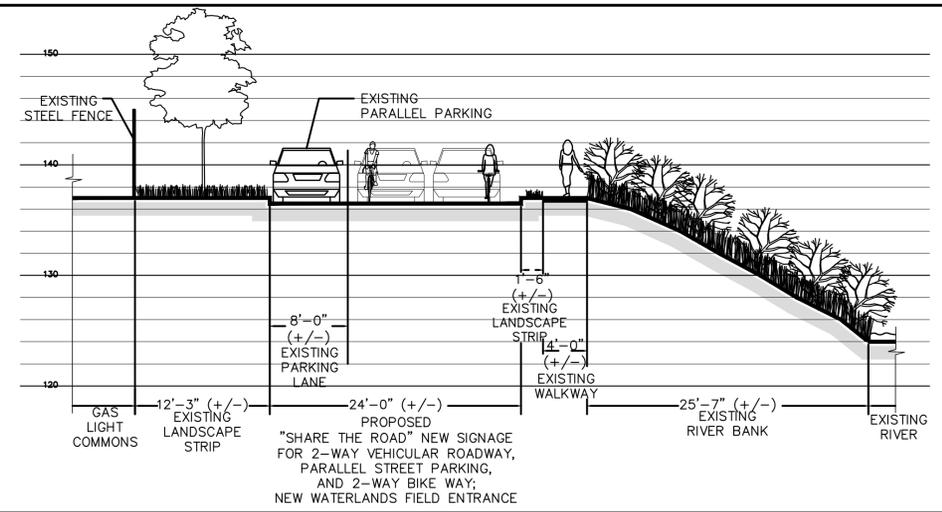
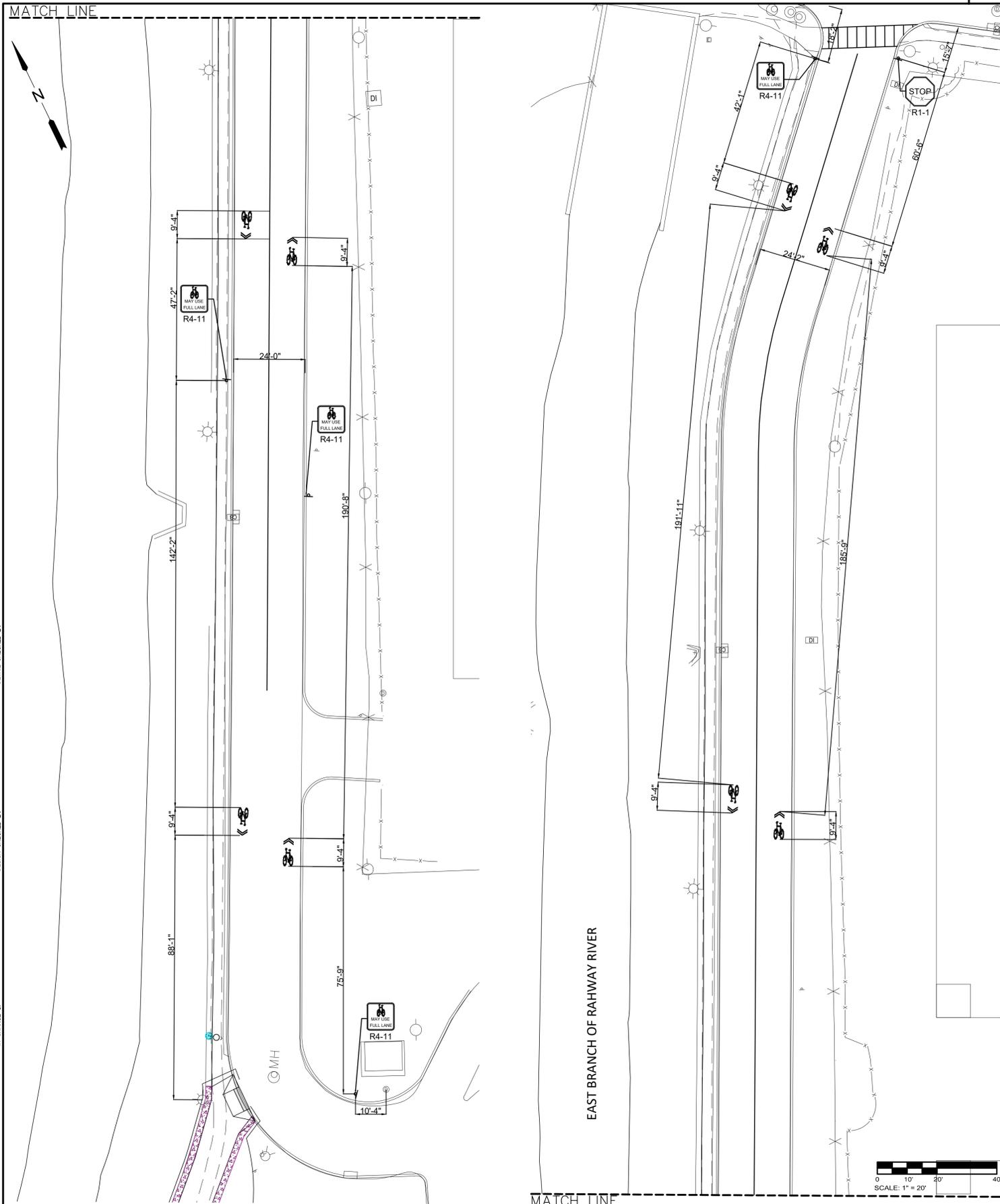
**CONSTRUCTION DETAILS**

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
CERTIFICATE OF AUTHORIZATION NO. 24GA28016600  
7/16/2024  
BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

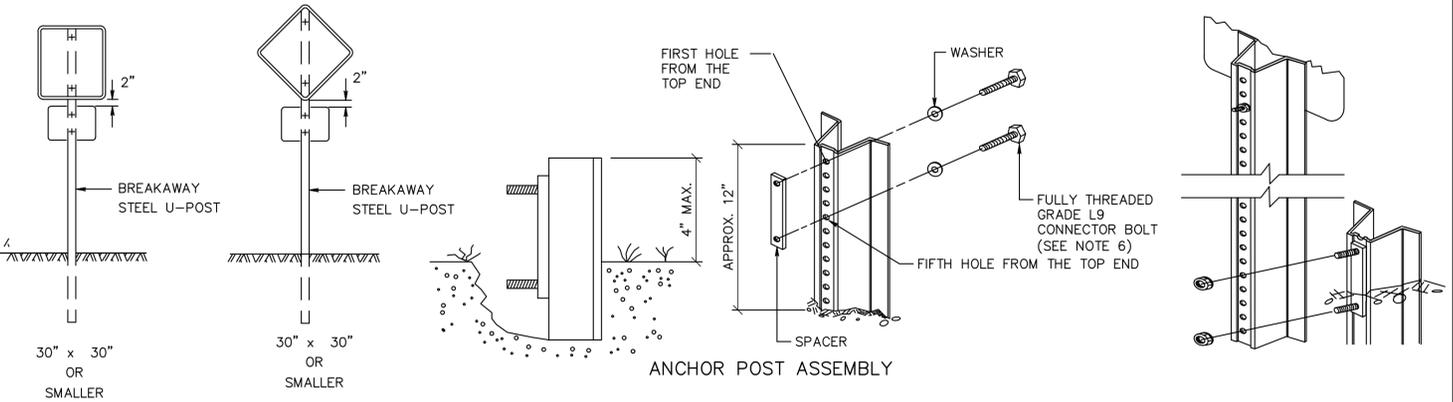
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2 TYPICAL CROSS SECTION OF ENTRANCE DRIVE

SCALE: NOT TO SCALE

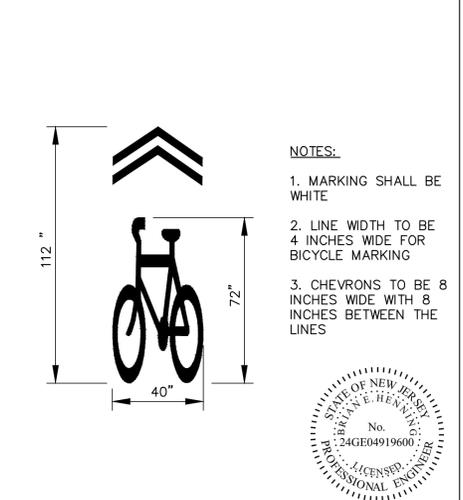


NOTES:

1. DRIVE ANCHOR POST ASSEMBLY TO WITHIN APPROXIMATELY 12 INCHES ABOVE GROUND LEVEL. PLACE BOLT AND WASHER IN FIRST AND FIFTH HOLES FROM THE TOP END, AND SECURELY TIGHTEN BOLTS ONTO THREADED SPACER.
2. DRIVE ANCHOR POST ASSEMBLY TO WITHIN A MAXIMUM OF 4 INCHES ABOVE GROUND LEVEL.
3. DIG OUT AROUND BACK OF ANCHOR POST ASSEMBLY TO ALLOW ROOM FOR TOP POST TO BE ATTACHED.
4. NEST TOP POST ASSEMBLY ONTO PROTRUDING ANCHOR POST ASSEMBLY BOLTS, THROUGH THE FIRST AND FIFTH HOLES FROM THE BOTTOM OF THE TOP POST.
5. PLACE AND TIGHTEN A SELF-LOCKING FLANGE NUT ON EACH BOLT. WHEN INSTALLATION IS COMPLETE, TOP OF GROUND POST SHALL NOT EXCEED 4 INCHES ABOVE GROUND LEVEL.
6. SIZE OF CONNECTOR BOLT FOR TYPE 1, 5/16 " x 1 1/2 " SIZE OF CONNECTOR BOLT FOR TYPE 2, 5/16 " x 2"

3 SIGN POST DETAIL

SCALE: NOT TO SCALE



4 STREET MARKING

SCALE: NOT TO SCALE



5 SIGN DETAIL

SCALE: NOT TO SCALE

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/ FT)
18" x 18"	1	2.5
18" x 24"	1	2.5
24" x 24"	1	2.5
24" x 30"	1	2.5
24" x 36"	1	2.5
30" x 24"	1	2.5
30" x 30"	1	2.5
36" x 12"	2	2.5
36" x 36"	2	2.5
30" x 36"	1	4.0

U-POST SELECTION TABLE BREAKAWAY SIGN SUPPORT

NEW JERSEY DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

RIVER GREENWAY PROJECT  
BRIDGE IN NEW WATERLAND PARK  
AND CHYZOWYCH SOCCER FIELD  
THE TOWNSHIP OF  
SOUTH ORANGE VILLAGE

MOTT MACDONALD, LLC  
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7/16/2024

BRIAN E. HENNING, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04919600

MOTT MACDONALD  
 IN CHARGE OF  
 DESIGNED BY  
 DETAIL CHECKED BY  
 FILE NAME:  
 DATE:  
 TIME:  
 USER:

PROJECT: PEDESTRIAN BRIDGE AND PATH IN NEW WATERLAND PARK AND CHYZOWYCH SOCCER FIELD

SEQ. NO.	STANDARD ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY	AS - BUILT QUANTITY	SEQ. NO.	STANDARD ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY	AS - BUILT QUANTITY
12	202009P	EXCAVATION, UNCLASSIFIED	CY	340							
55	203009P	I-9 SOIL AGGREGATE	CY	70							
56	203021P	I-14 SOIL AGGREGATE	CY	175							
57	501003P	TEMPORARY SHEETING	SF	740							
58	502003P	FURNISHING EQUIPMENT FOR DRIVING PILES	LS	1							
59	502006M	PREBORED HOLE	LF	25							
60	502009M	TEST PILE, FURNISHED	LF	260							
61	502012M	TEST PILE, DRIVEN	LF	230							
62	502015M	STATIC PILE LOAD TEST	U	1							
63	502016M	MICROPILE	U	12							
64	502018M	DYNAMIC PILE LOAD TEST	U	6							
65	502165M	STEEL H-PILE, FURNISHED, HP 12 X 53	LF	545							
66	502183M	STEEL H-PILE, DRIVEN, HP 12 X 53	LF	520							
67	504006P	REINFORCEMENT STEEL, EPOXY-COATED	LB	6165							
68	504015P	CONCRETE FOOTING	CY	53							
69	504018P	CONCRETE WING WALL	CY	4							
70	504024P	CONCRETE ABUTMENT WALL	CY	15							
71	504027P	CONCRETE PIER COLUMN AND CAP	CY	12							
72	504036P	EPOXY WATERPROOFING	SY	20							
73	506018P	STEEL PEDESTRIAN BRIDGE	LS	1							
74	NS-7	LOW VOLTAGE LED LIGHTED HAND RAIL SYSTEM	LS	1							

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MACDONALD  
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ESTIMATE OF QUANTITIES

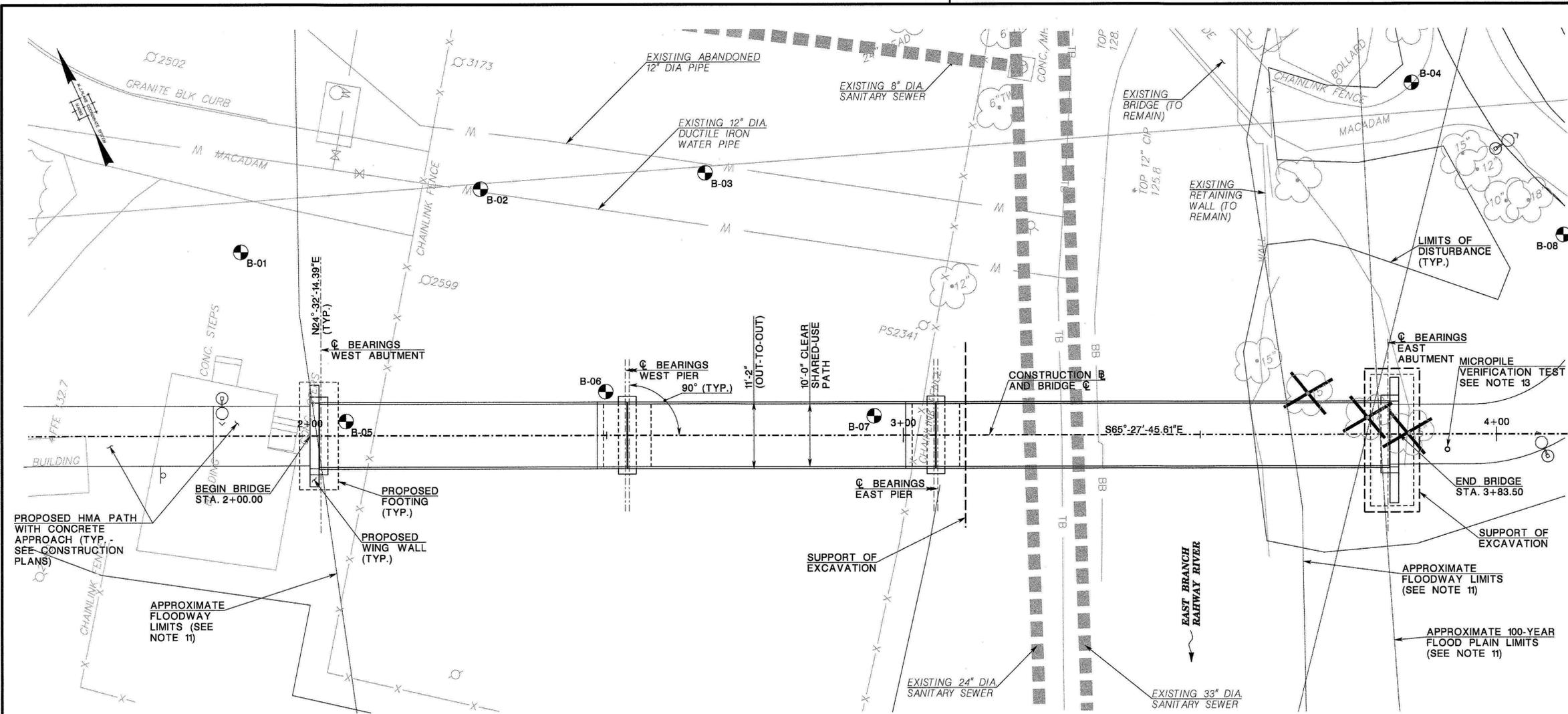
MOTT MACDONALD, LLC  
CERTIFICATE NO. 2462828016600  
MATTHEW W. COLON, P.E.  
REGISTERED PROFESSIONAL ENGINEER LICENSE NO. 2462828016600

26  
35

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-		
STRUCTURE NO.	N/A		
STRUCTURE NAME:	PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER		

**GENERAL NOTES:**

- DESIGN SPECIFICATIONS:  
THE 2017 (8TH EDITION) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AS MODIFIED BY THE 2009 AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES AND SECTION 3 OF THE 2016 (6TH EDITION) NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES.
- CONSTRUCTION SPECIFICATIONS:  
2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS MODIFIED BY THE SPECIAL PROVISIONS.
- LIVE LOAD:  
AASHTO LRFD H10 VEHICULAR LIVE LOADING OR 90 PSF PEDESTRIAN LIVE LOADING, WHICHEVER GOVERNS.
- CONCRETE DESIGN STRESSES:  
DESIGN COMPRESSIVE STRENGTHS (f'c):  
CLASS A ..... 4,000 PSI  
CLASS B ..... 3,000 PSI  
CLASS MIX DESIGN STRENGTHS:  
CLASS A ..... 4,600 PSI  
CLASS B ..... 3,700 PSI
- REINFORCEMENT STEEL:  
ASTM A615, GRADE 60 (EPOXY COATED)
- SUPERSTRUCTURE:  
STEEL PEDESTRIAN BRIDGE SHALL BE A HALF-THROUGH STEEL PONY TRUSS CONFORMING TO THE SPECIFICATIONS. BRIDGE SHALL BE SHOP PAINTED AS PER THE SPECIFICATIONS. REFER TO BRIDGE SHEET NO. B-3 FOR ADDITIONAL NOTES.
- SEISMIC DESIGN NOTES:  
SEISMIC ZONE = 1  
SITE CLASS DEFINITION = D
- BORINGS:  
B-X INDICATES LOCATION OF BORING NO. B-X
- FOUNDATION DESIGN CRITERIA:  
REFER TO BRIDGE SHEET NO. B-5 FOR PILE PROPERTIES AND DESIGN CRITERIA.
- ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29), ADD 1.00 FEET.
- FLOODWAY AND 100-YEAR FLOOD PLAIN PLAN LIMITS SHOWN ARE BASED ON RECORD NJDEP FLOOD MAPS DATED APRIL 1980.
- FOR GRADING OF APPROACHES BEHIND ABUTMENTS, SEE GRADING PLANS.
- FOLLOWING THE MICROPILE VERIFICATION TEST, THE TEST MICROPILE SHALL BE ABANDONED AND RESTORED TO GRADE.

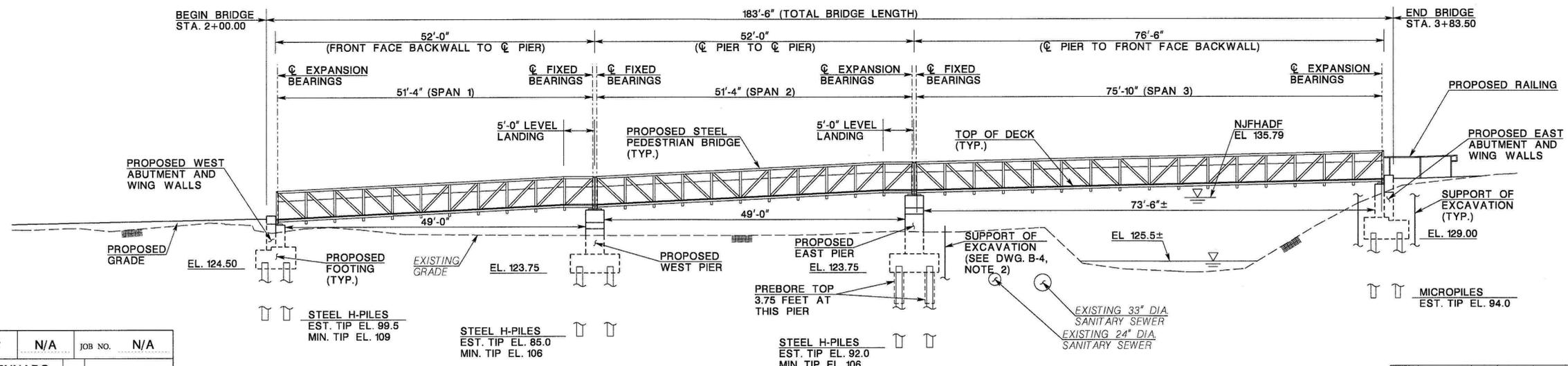


**HYDRAULIC AND HYDROLOGIC DATA**

FREQUENCY (YR.)	100 YR	NJFHADF*
DRAINAGE AREA (SQ. MI.)	4.24	4.24
DRAINAGE DISCHARGE (C.F.S.)	2051	2563
DESIGN WATER SURFACE ELEVATION (FT.)	134.84	135.79
ENERGY LINE ELEVATION (FT.)	134.95	135.91

\*BASED ON PROJECT HYDRAULIC MODEL 100 YR FLOOD + 25%

**PLAN**  
SCALE: 1"=10'



**ELEVATION**  
SCALE: 1"=10'

CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		

**NEW JERSEY DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF STRUCTURAL ENGINEERING**

**GENERAL PLAN AND ELEVATION I**

TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY

MOTT MACDONALD, LLC  
CERTIFICATE NO. 246A28016600

SCALE: AS NOTED

BRIDGE SHEET NO. B-2 OF B-10

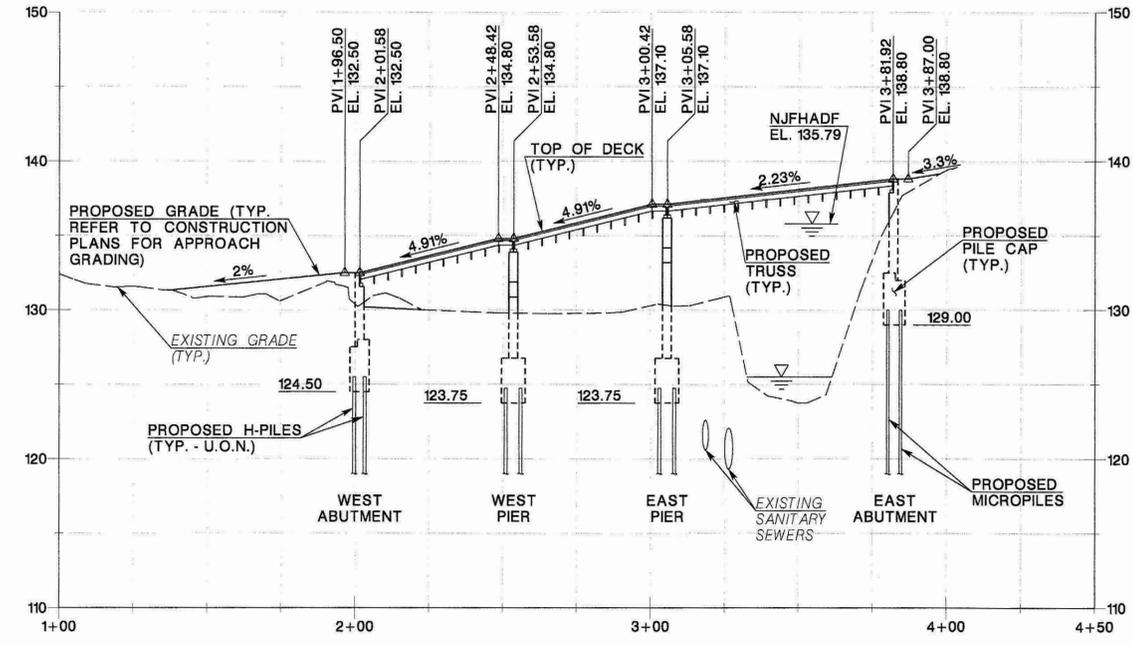
REVISION BY C'K'D DATE

27  
35

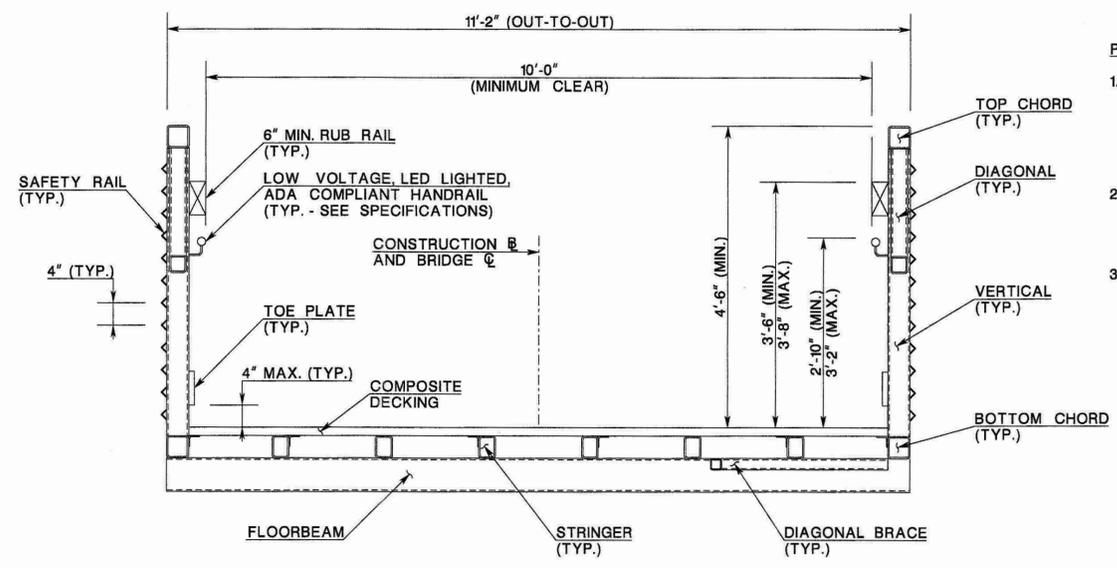
MOTT MACDONALD

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-	-	--
STRUCTURE NO.		N/A	
STRUCTURE NAME:			
PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

FILE NAME: 090904.dwg  
DATE: 09/09/09  
USER: CMM/MSJ



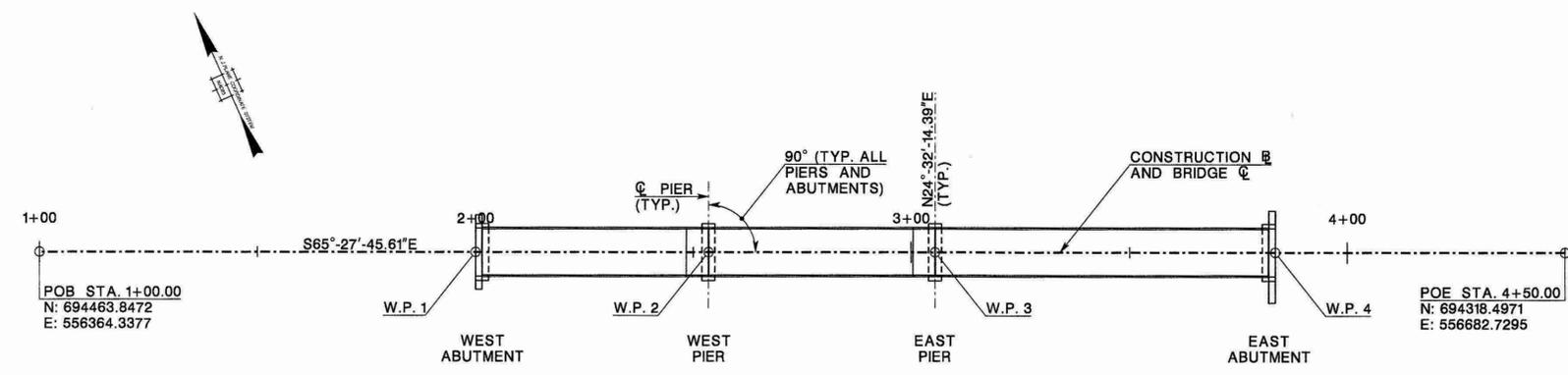
**BRIDGE PROFILE**  
SCALE (H): 1"=30'  
SCALE (V): 1"=6'



**PEDESTRIAN BRIDGE SECTION**  
SCALE: 3/4"=1'-0"

- PEDESTRIAN BRIDGE NOTES:**
- PRIOR TO FABRICATION OF THE STEEL TRUSS PEDESTRIAN BRIDGE, SUBMIT DESIGN CALCULATIONS AND WORKING DRAWINGS TO THE ENGINEER FOR REVIEW. ALL CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY A NEW JERSEY PROFESSIONAL ENGINEER.
  - INCLUDE COST OF ALL MATERIALS, LABOR, AND EQUIPMENT FOR FABRICATING, FURNISHING, AND INSTALLING THE STEEL TRUSS IN THE PAY ITEM "STEEL PEDESTRIAN BRIDGE".
  - ABUTMENT AND PIER SUBSTRUCTURES AND FOUNDATIONS WERE DESIGNED TO ACCOMMODATE STEEL PEDESTRIAN BRIDGE SPANS WITH THE FOLLOWING TOTAL SPAN DEAD LOADS:  
SPAN 1 = 30,000 LB MAX  
SPAN 2 = 30,000 LB MAX  
SPAN 3 = 46,000 LB MAX
- IF THE SELECTED TRUSS EXCEEDS THE LIMITS GIVEN ABOVE, THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS FOR REVISED SUBSTRUCTURES AND FOUNDATIONS TO ACCOMMODATE THE INCREASED DEAD LOADS. ALL CALCULATIONS SHALL BE SIGNED AND SEALED BY A NEW JERSEY PROFESSIONAL ENGINEER. ALL MODIFICATIONS TO THE EXISTING SUBSTRUCTURES AND FOUNDATIONS SHALL BE AT NO ADDITIONAL COST TO THE TOWNSHIP.

QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY
506018P	STEEL PEDESTRIAN BRIDGE	LS	1
NS-7	LOW VOLTAGE LED LIGHTED HAND RAIL SYSTEM	LS	1



**CONSTRUCTION BASELINE AND WORKING POINT LAYOUT**  
SCALE: 1"=20'

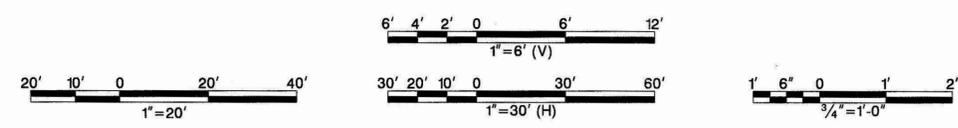
BRIDGE SHEET INDEX	
SHEET NO.	DESCRIPTION
B-1	ESTIMATE OF QUANTITIES
B-2	GENERAL PLAN AND ELEVATION I
B-3	GENERAL PLAN AND ELEVATION II
B-4	EXCAVATION AND PAY LIMIT DETAILS
B-5	FOOTING AND PILE PLAN AND DETAILS
B-6	ABUTMENT PLANS AND ELEVATIONS
B-7	ABUTMENT AND WINGWALL DETAILS I
B-8	ABUTMENT AND WINGWALL DETAILS II
B-9	PIER PLANS AND ELEVATIONS
B-10	PIER DETAILS

WORKING POINTS					
W.P. NO.	DESCRIPTION	STATION	OFFSET	NORTHING	EASTING
1	BEGIN BRIDGE	2+00.00	0'	694422.3186	556455.3068
2	☉ WEST PIER	2+53.50	0'	694400.1008	556503.9753
3	☉ EAST PIER	3+05.50	0'	694378.5059	556551.2792
4	END BRIDGE	3+83.50	0'	694346.1136	556622.2351

HORIZONTAL DATUM  
NORTH AMERICAN DATUM OF 1983 (NAD83)

VERTICAL DATUM  
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		



REVISION	BY	C'D	DATE

**NEW JERSEY DEPARTMENT OF TRANSPORTATION  
BUREAU OF STRUCTURAL ENGINEERING**

**GENERAL PLAN AND ELEVATION II**

TOWNSHIP OF SOUTH ORANGE VILLAGE    ESSEX COUNTY

MOTT MACDONALD, LLC  
CERTIFICATE NO. 24GA28016600

SCALE: AS NOTED

BRIDGE SHEET NO. B-3 OF B-10

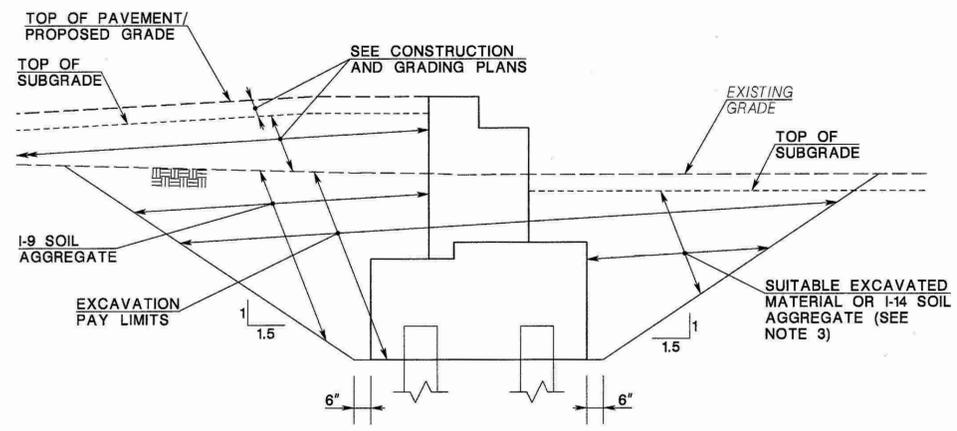
28  
35

MOTT MACDONALD

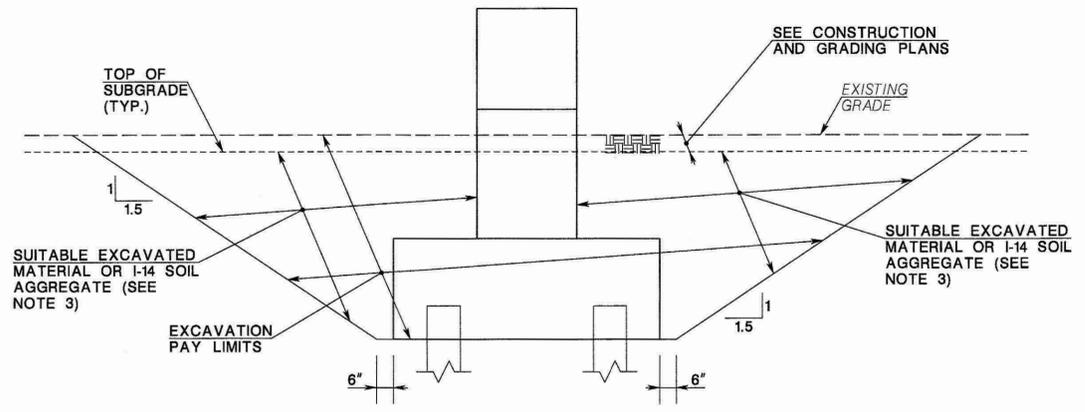
STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-	-	-
STRUCTURE NO.		N/A	
STRUCTURE NAME: PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

**NOTES:**

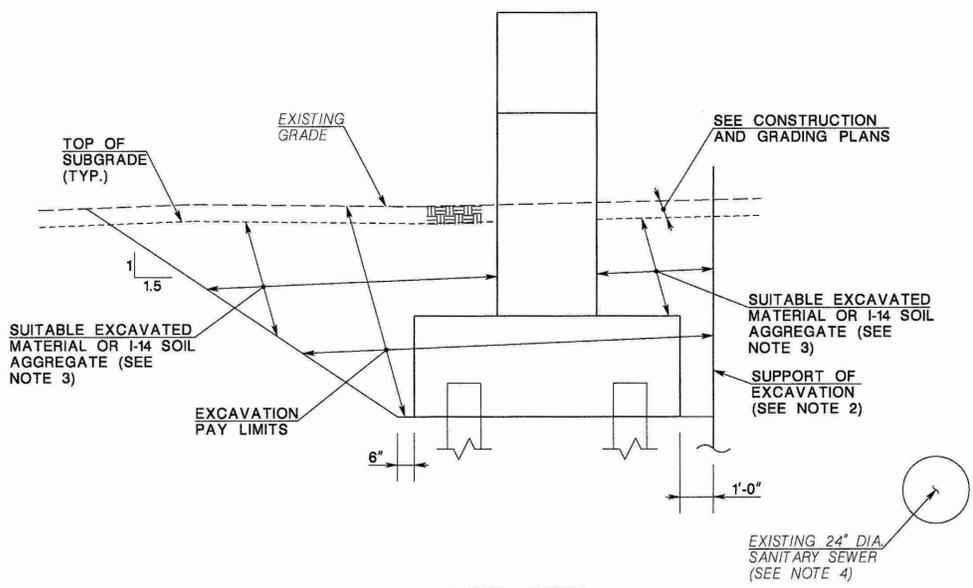
1. SUPPORT OF EXCAVATION SHALL BE PAID FOR UNDER THE BID ITEM "TEMPORARY SHEETING". SUBMIT WORKING DRAWINGS SIGNED AND SEALED BY A NEW JERSEY PROFESSIONAL ENGINEER FOR SELECTED METHOD(S) AS PER THE SPECIFICATIONS.
2. IN ORDER TO PROTECT EXISTING SANITARY SEWERS AT THE EAST PIER, DRIVING OF ANY SUPPORT OF EXCAVATION COMPONENTS WILL NOT BE PERMITTED ABOVE EL. 119. PRE-AUGER TO THIS EL. AS REQUIRED.
3. EXCAVATED MATERIAL MAY BE REUSED PROVIDED IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS.
4. LOCATE THE EXISTING 24" AND 33" DIA. SANITARY SEWERS PRIOR TO INSTALLATION OF ANY SUPPORT OF EXCAVATION COMPONENTS. INCLUDE COST UNDER THE BID ITEM "TEMPORARY SHEETING".



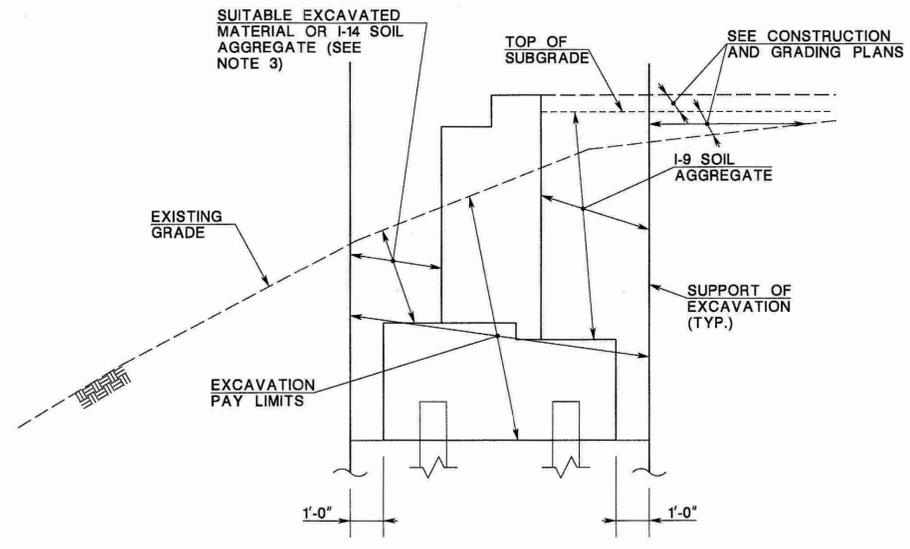
**WEST ABUTMENT SECTION**  
N.T.S.



**WEST PIER SECTION**  
N.T.S.



**EAST PIER SECTION**  
N.T.S.



**EAST ABUTMENT SECTION**  
N.T.S.

QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY
202009P	EXCAVATION, UNCLASSIFIED	CY	340
203009P	I-9 SOIL AGGREGATE	CY	70
203021P	I-14 SOIL AGGREGATE	CY	175
501003P	TEMPORARY SHEETING	SF	740

CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		

REVISION	BY	C'K'D	DATE

NEW JERSEY DEPARTMENT OF TRANSPORTATION  
BUREAU OF STRUCTURAL ENGINEERING

## EXCAVATION AND PAY LIMIT DETAILS

TOWNSHIP OF SOUTH ORANGE VILLAGE    ESSEX COUNTY

MOTT MACDONALD, LLC  
CERTIFICATE NO. 24GA28016600

*Matthew W. Colon*  
MATTHEW W. COLON, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04727100

SCALE: AS NOTED

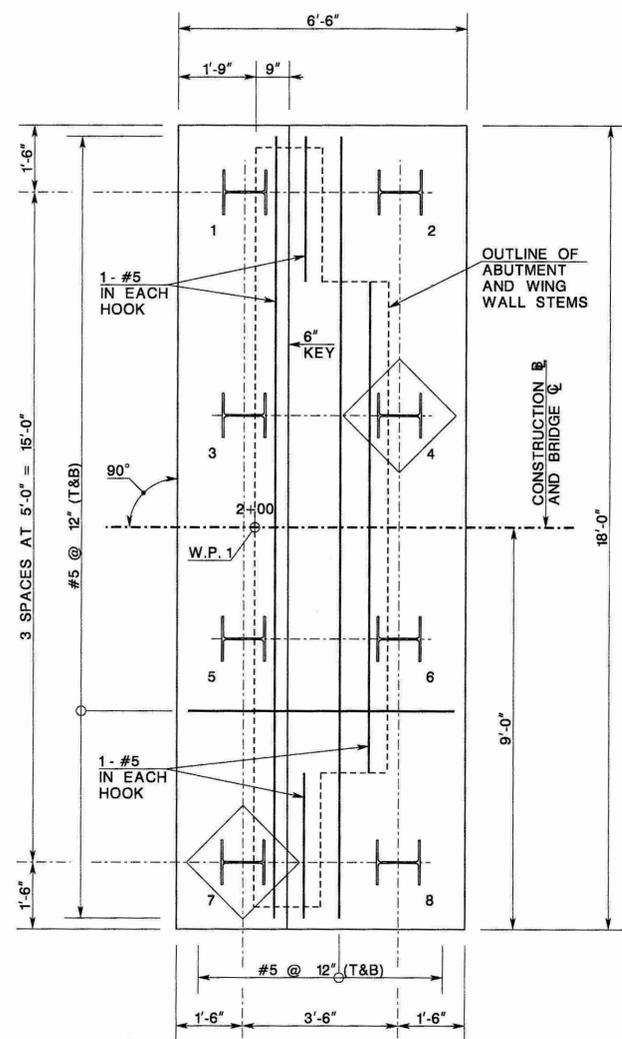
BRIDGE SHEET NO. B-4 OF B-10

29  
35

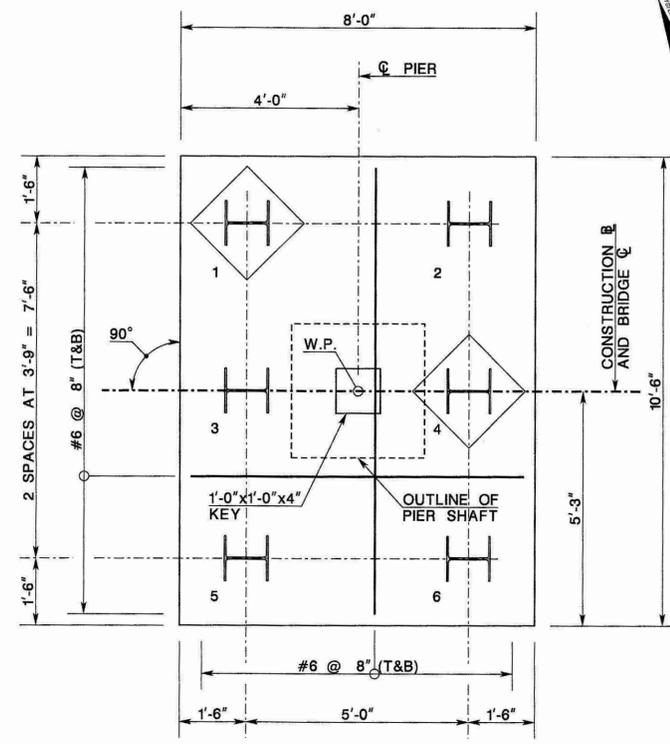
FILE NAME: EXCAVATION.DWG DATE: 08/20/2024 USER: MOTT MACDONALD

MOTT MACDONALD

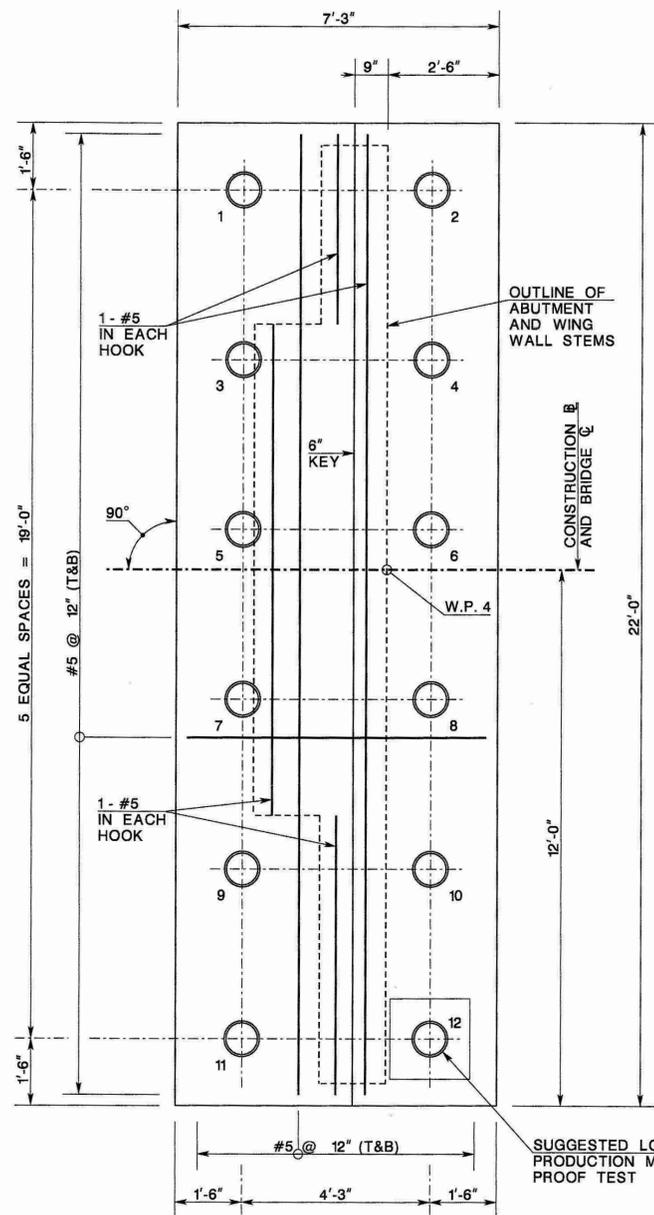
THE ENGINEER HAS REVIEWED THIS DRAWING FOR CONFORMANCE WITH THE PROFESSIONAL ENGINEERING ACT AND REGULATORY BOARD OF PROFESSIONAL ENGINEERS AND SURVEYORS, NEW JERSEY. DATE: 7/20/18 PM USER: CLMANNST



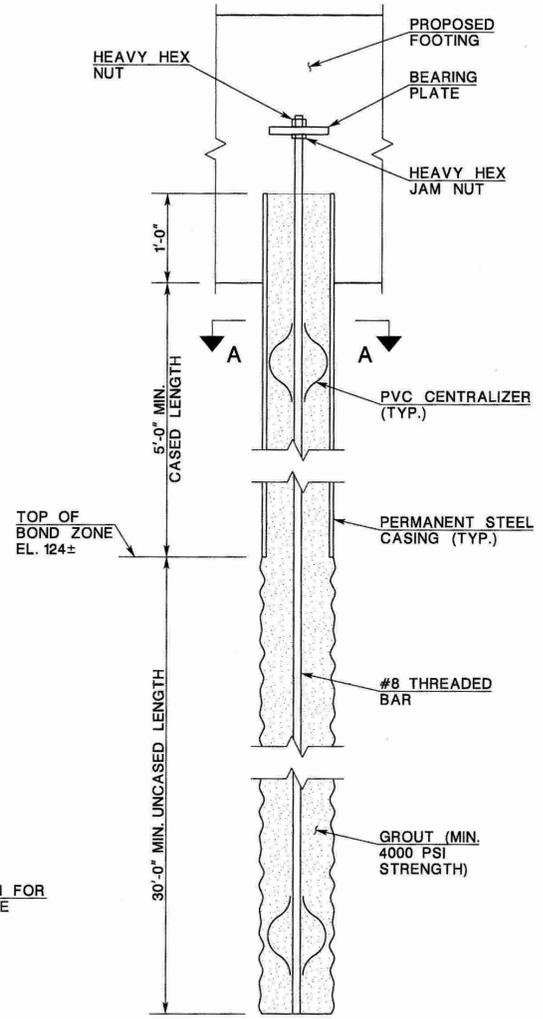
**WEST ABUTMENT FOOTING PLAN**  
SCALE: 1/2"=1'-0"



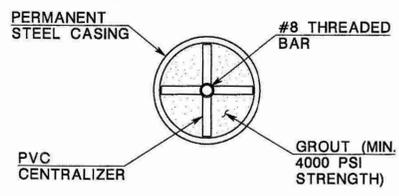
**PIER FOOTING PLAN**  
(TYPICAL FOR BOTH PIERS)  
SCALE: 1/2"=1'-0"



**EAST ABUTMENT FOOTING PLAN**  
SCALE: 1/2"=1'-0"



**MICROPILE DETAIL**  
N.T.S.



**MICROPILE SECTION A-A**  
N.T.S.

QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY
502003P	FURNISHING EQUIPMENT FOR DRIVING PILES	LS	1
502006M	PREBORED HOLE	LF	25
502009M	TEST PILE, FURNISHED	LF	260
502012M	TEST PILE, DRIVEN	LF	230
502015M	STATIC PILE LOAD TEST	U	1
502016M	MICROPILE	U	12
502018M	DYNAMIC PILE LOAD TEST	U	6
502165M	STEEL H-PILE, FURNISHED, HP 12 X 53	LF	545
502183M	STEEL H-PILE, DRIVEN, HP 12 X 53	LF	520
504006P	REINFORCEMENT STEEL, EPOXY-COATED	LB	2845
504015P	CONCRETE FOOTING	CY	53

**BAR LEGEND:**

F.F. FRONT FACE  
R.F. REAR FACE  
E.F. EACH FACE  
E.W. EACH WAY  
T TOP  
B BOTTOM  
EQ. SP. EQUALLY SPACED

**LEGEND:**

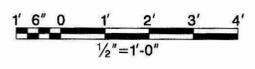
H PLUMB STEEL H-PILE  
H PLUMB STEEL TEST H-PILE  
O PLUMB MICROPILE  
O PLUMB PROOF TEST MICROPILE

**PILE DESIGN CRITERIA:**  
H-PILES (HP 12x53 ASTM A 572, GRADE 50)

NOMINAL AXIAL COMPRESSION RESISTANCE	100 KIPS	NOMINAL AXIAL COMPRESSION RESISTANCE	154 KIPS
NOMINAL DRIVING AXIAL COMPRESSION RESISTANCE	100 KIPS	FACTORED AXIAL COMPRESSION RESISTANCE	46 KIPS
FACTORED AXIAL COMPRESSION RESISTANCE	65 KIPS	NOMINAL UPLIFT RESISTANCE	154 KIPS
NOMINAL UPLIFT RESISTANCE	43 KIPS	FACTORED UPLIFT RESISTANCE	85 KIPS
FACTORED UPLIFT RESISTANCE	12 KIPS	FACTORED LATERAL RESISTANCE	14 KIPS
FACTORED LATERAL RESISTANCE	16 KIPS	ESTIMATED PILE TIP ELEVATIONS	SEE SHEET B-2
ESTIMATED PILE TIP ELEVATIONS	SEE SHEET B-2		

<b>WEST ABUTMENT AND WEST PIER</b>	<b>EAST PIER</b>
NOMINAL AXIAL COMPRESSION RESISTANCE	104 KIPS
FACTORED AXIAL COMPRESSION RESISTANCE	104 KIPS
NOMINAL UPLIFT RESISTANCE	67 KIPS
FACTORED UPLIFT RESISTANCE	47 KIPS
FACTORED LATERAL RESISTANCE	14 KIPS
ESTIMATED PILE TIP ELEVATIONS	16 KIPS
	SEE SHEET B-2

- NOTES:**
- ALL PILES AT EAST PIER INCLUDING TEST PILE SHALL BE PREBORED APPROXIMATELY 3.75 FEET TO ELEVATION 120.0.
  - MICROPILE FOOTING CONNECTION SHOWN IS FOR ILLUSTRATION ONLY. FINAL DETAIL TO BE SUBMITTED FOR APPROVAL.
  - ALL STEEL H-PILES ARE ROCK BEARING PILES. DRIVE TO REFUSAL AS DEFINED BY THE SPECIFICATIONS.
  - MICROPILES SHALL BE TYPE A. THREADED BAR SHALL HAVE A MINIMUM YIELD STRENGTH OF 50KSI AND SHALL BE EPOXY-COATED AS PER THE SPECIFICATIONS.
  - CONCRETE IN FOOTINGS SHALL BE CLASS B.
  - FOR WORKING POINT LOCATIONS, SEE BRIDGE SHEET NO. B-3.
  - FOR ABUTMENT AND WING WALL TYPICAL SECTIONS, SEE BRIDGE SHEET NOS. B-7 AND B-8.
  - FOR PIER TYPICAL SECTION, SEE BRIDGE SHEET NO. B-10.
  - FOR EXCAVATION PAY LIMITS, SEE BRIDGE SHEET NO. B-4.
  - FOR MICROPILE VERIFICATION TEST LOCATION, SEE BRIDGE SHEET NO. B-2.



REVISION	BY	C/K'D	DATE

**NEW JERSEY DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF STRUCTURAL ENGINEERING**  
**FOOTING AND PILE PLAN AND DETAILS**  
 TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY

MOTT MACDONALD, LLC  
 CERTIFICATE NO. 246A28016600  
 MATTHEW W. COLON, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 246E04727100

SCALE: AS NOTED  
 BRIDGE SHEET NO. B-5 OF B-10

**MOTT MACDONALD**

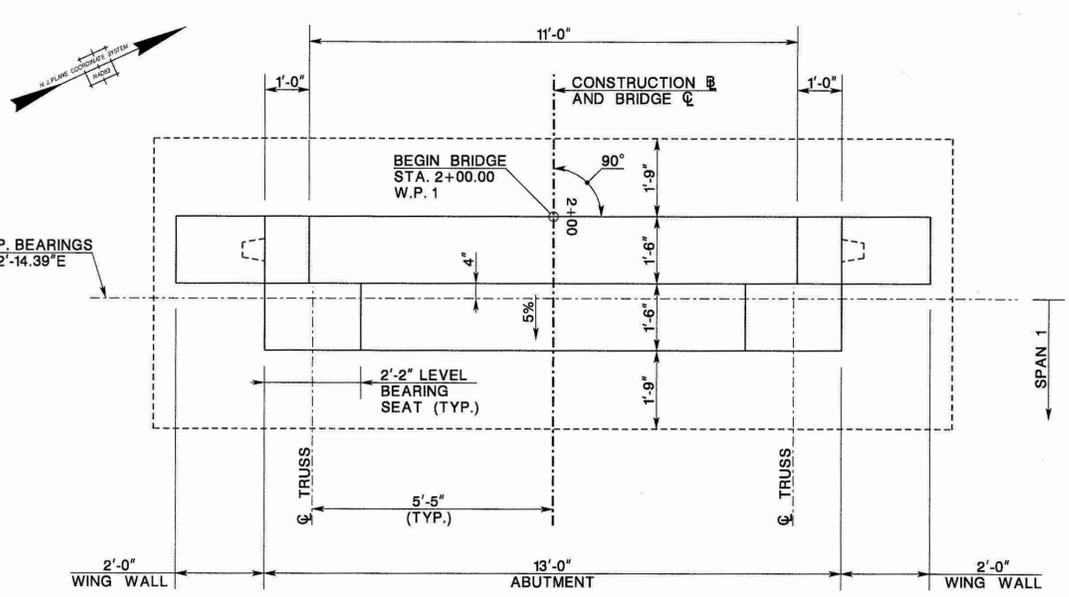
CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-	31	35
STRUCTURE NO.		N/A	
STRUCTURE NAME: PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

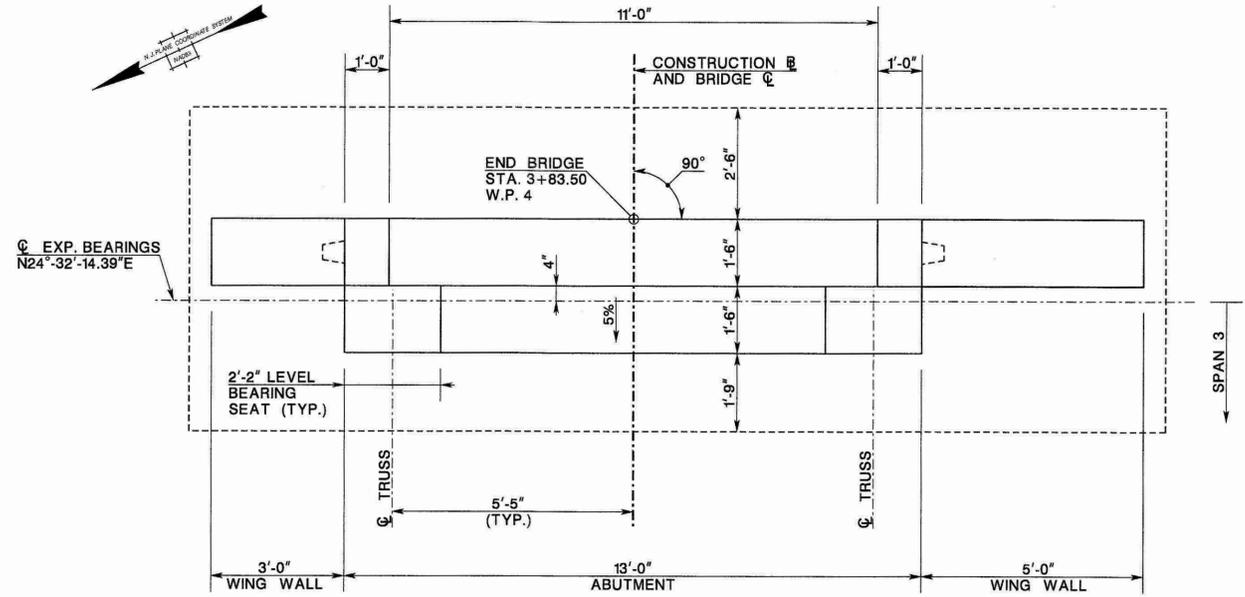
**NOTES:**

1. BEARING CENTERLINES, TRUSS CENTERLINES, AND ABUTMENT SEAT ELEVATIONS ARE APPROXIMATED AND SHALL BE VERIFIED BY SELECTED TRUSS FABRICATOR. IF REQUIRED, DETAIL AND SUBMIT ALL CHANGES TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
2. CONCRETE IN ABUTMENTS AND WING WALLS SHALL BE CLASS B.
3. ALL EXISTING AND PROPOSED GRADE LINES SHOWN ARE ALONG THE FRONT FACE OF ABUTMENTS OR WING WALLS UNLESS OTHERWISE NOTED.
4. FOR WORKING POINT LOCATIONS, SEE BRIDGE SHEET NO. B-3.
5. FOR ABUTMENT AND WING WALL TYPICAL SECTIONS AND ADDITIONAL DETAILS, SEE BRIDGE SHEET NOS. B-7 AND B-8.
6. FOR BEARING SEAT LAYOUT AND ADDITIONAL REINFORCEMENT, SEE BRIDGE SHEET NO. B-7.
7. FOR FOOTING AND PILE PLAN AND DETAILS, SEE BRIDGE SHEET NO. B-5.
8. FOR EXCAVATION PAY LIMITS, SEE BRIDGE SHEET NO. B-4.

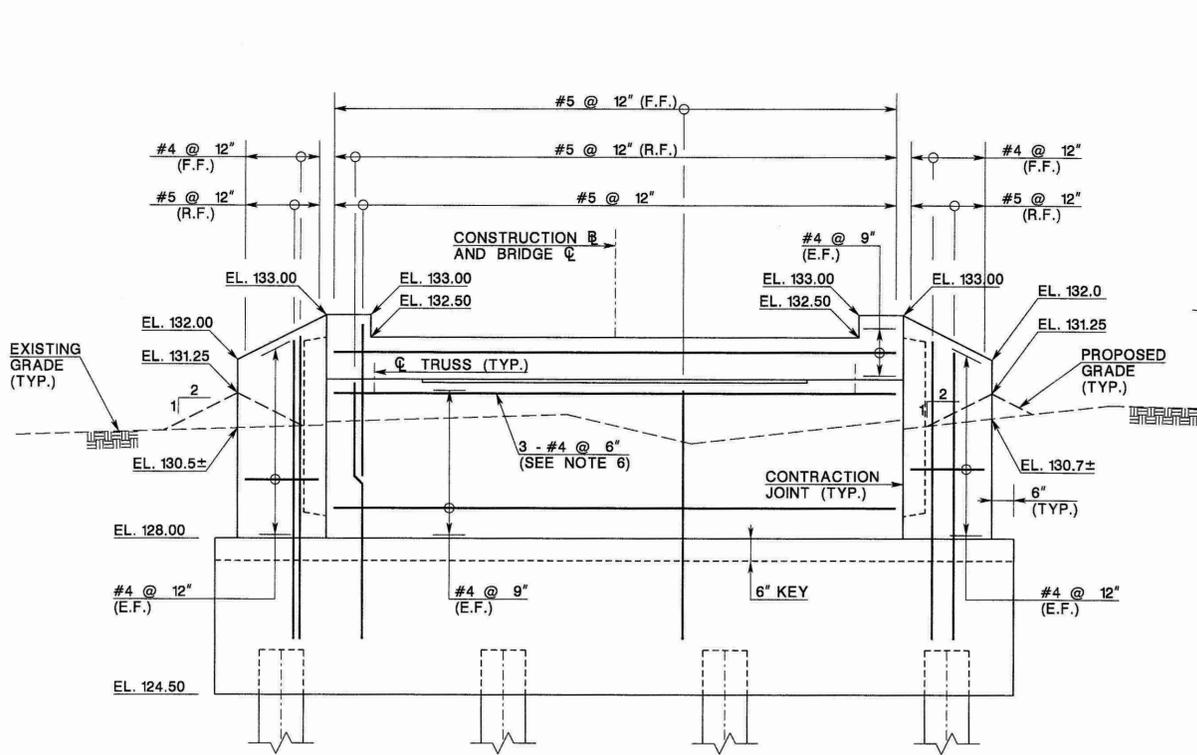
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 DATE: 3/20/20  
 TIME: 7:00:00 PM  
 USER: COLON



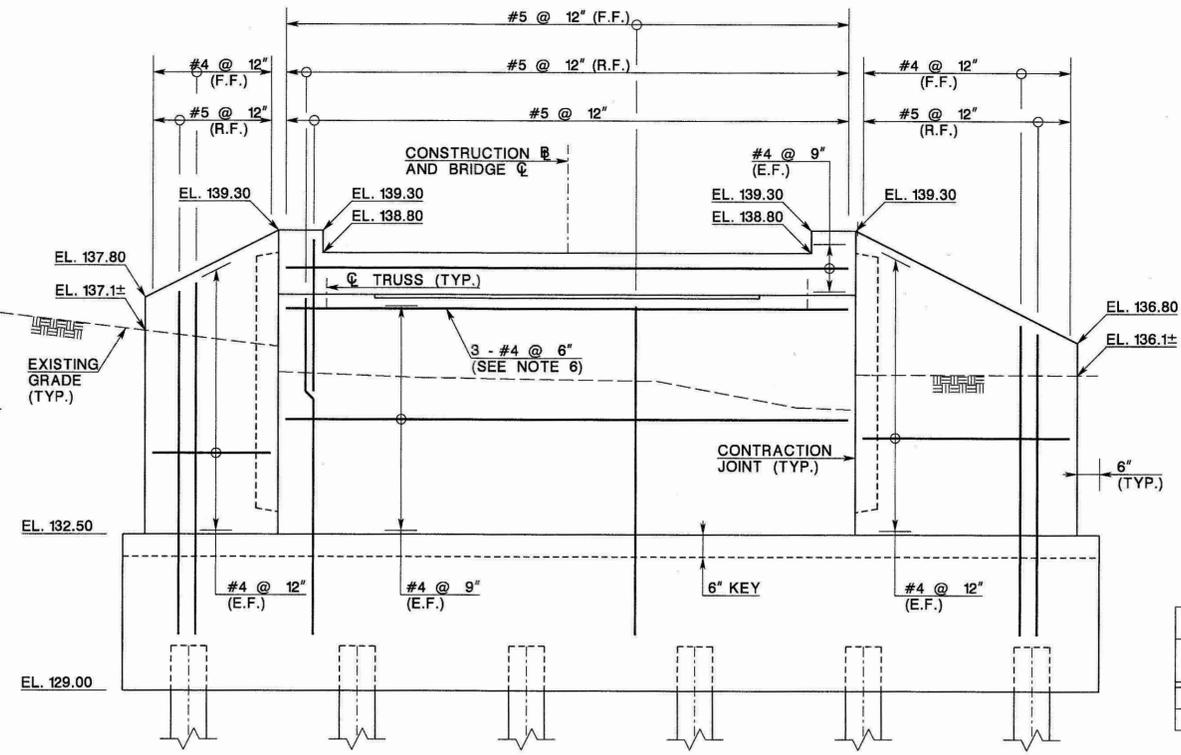
**WEST ABUTMENT PLAN**  
SCALE: 1/2" = 1'-0"



**EAST ABUTMENT PLAN**  
SCALE: 1/2" = 1'-0"



**WEST ABUTMENT ELEVATION**  
SCALE: 1/2" = 1'-0"

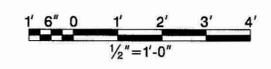


**EAST ABUTMENT ELEVATION**  
SCALE: 1/2" = 1'-0"

ABUTMENT SEAT ELEVATIONS	
LOCATION	TOP OF SEAT ELEVATION AT $\bar{C}$ TRUSS BEARINGS
WEST ABUTMENT	131.56
EAST ABUTMENT	137.86

**BAR LEGEND:**  
 F.F. FRONT FACE  
 R.F. REAR FACE  
 E.F. EACH FACE  
 E.W. EACH WAY  
 T TOP  
 B BOTTOM  
 EQ. SP. EQUALLY SPACED

QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY
504006P	REINFORCEMENT STEEL, EPOXY-COATED	LB	1490
504018P	CONCRETE WING WALL	CY	4
504024P	CONCRETE ABUTMENT WALL	CY	15
504036P	EPOXY WATERPROOFING	SY	8



REVISION	BY	C/K'D	DATE

**NEW JERSEY DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF STRUCTURAL ENGINEERING**  
**ABUTMENT PLANS AND ELEVATIONS**  
 TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY

MOTT MACDONALD, LLC  
 CERTIFICATE NO. 24GA28016600  
 MATTHEW W. COLON, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04727100

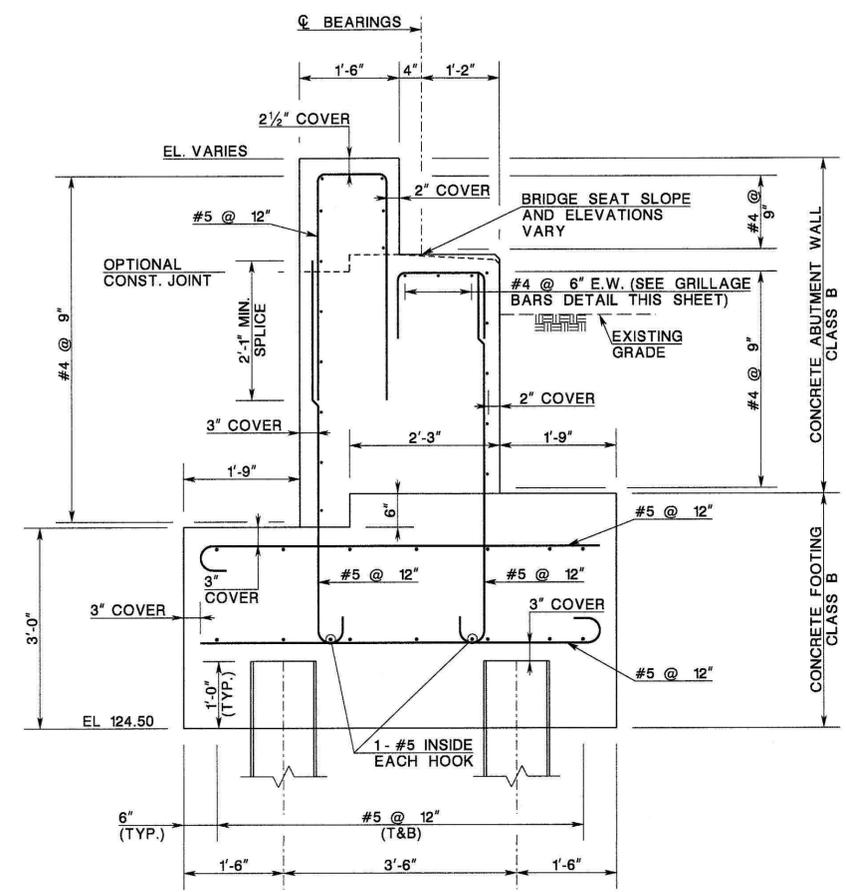
SCALE: AS NOTED  
 BRIDGE SHEET NO. B-6 OF B-10

**MOTT MACDONALD**

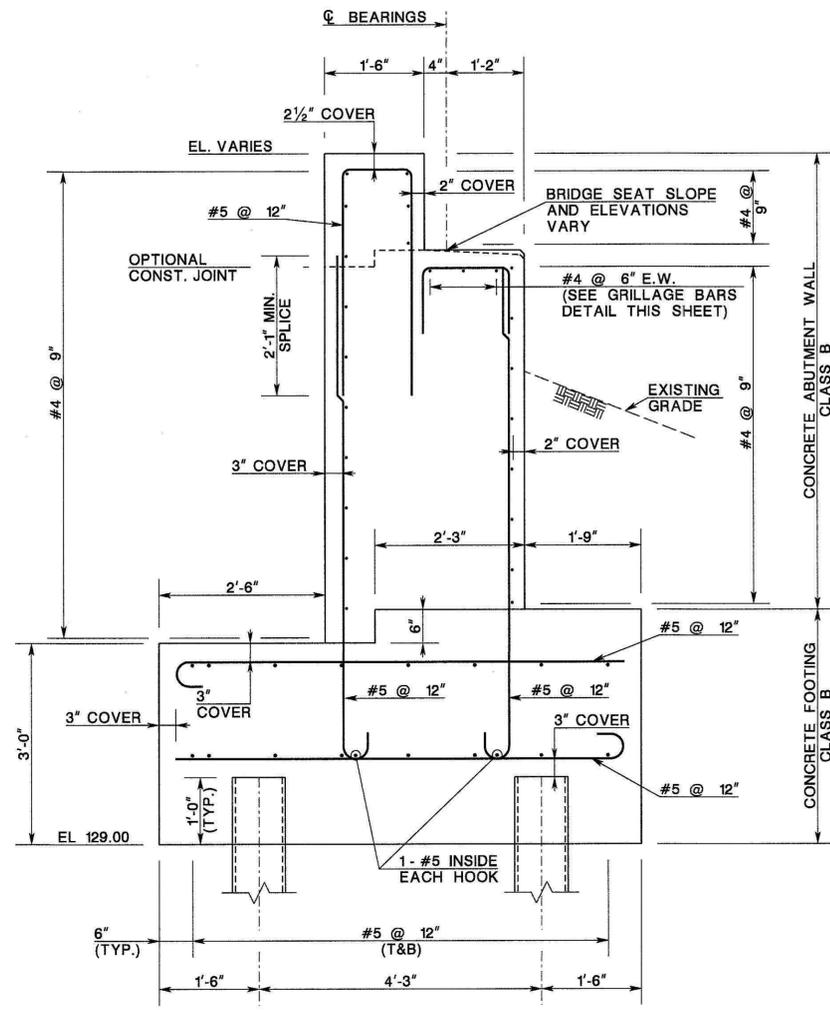
CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-		
STRUCTURE NO.		N/A	
STRUCTURE NAME:			
PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

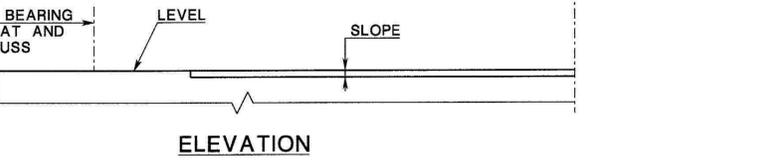
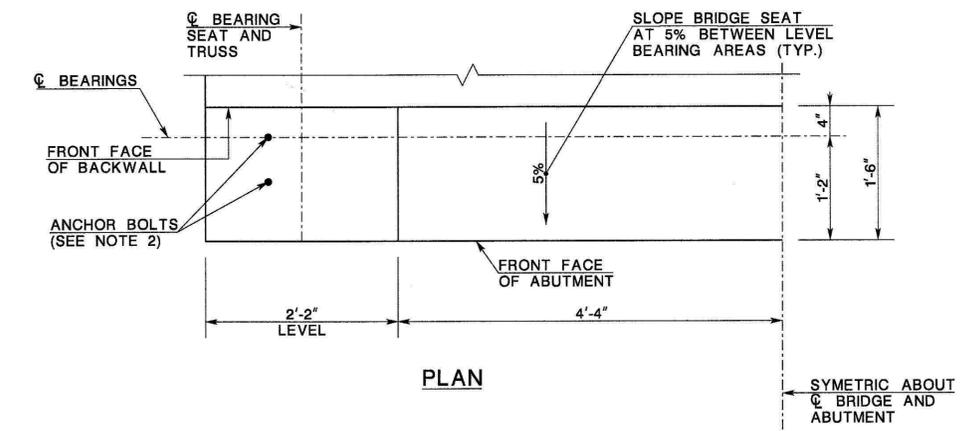
- NOTES:
1. BEARING CENTERLINES, TRUSS CENTERLINES, AND ABUTMENT SEAT ELEVATIONS ARE APPROXIMATED AND SHALL BE VERIFIED BY SELECTED TRUSS FABRICATOR. IF REQUIRED, DETAIL AND SUBMIT ALL CHANGES TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
  2. ANCHOR BOLT SIZES AND LOCATIONS SHALL BE AS SPECIFIED BY SELECTED TRUSS FABRICATOR. ADJUST GRILLAGE REINFORCEMENT AS REQUIRED TO CLEAR ANCHOR BOLT LOCATIONS. BOLTS SHALL EITHER BE CAST-IN-PLACE OR INSTALLED IN A 3" DIAMETER CORRUGATED CAST-IN-PLACE SLEEVE WITH NON-SHRINK GROUT. NO DRILLING INTO SEAT WILL BE PERMITTED. NO SEPARATE PAYMENT WILL BE MADE FOR ANCHOR BOLTS.
  3. FOR ABUTMENT PLANS AND ELEVATIONS, SEE BRIDGE SHEET NO. B-6.
  4. FOR FOOTING AND PILE PLAN AND DETAILS, SEE BRIDGE SHEET NO. B-5.
  5. FOR EXCAVATION PAY LIMITS, SEE BRIDGE SHEET NO. B-4.



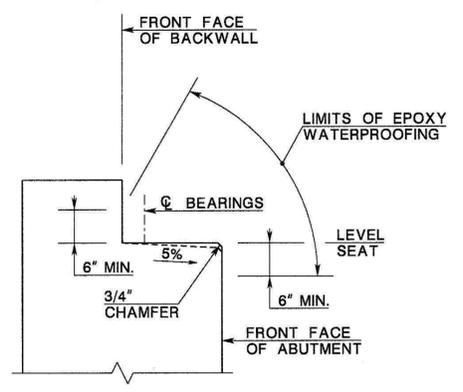
**WEST ABUTMENT TYPICAL SECTION**  
SCALE: 3/4"=1'-0"



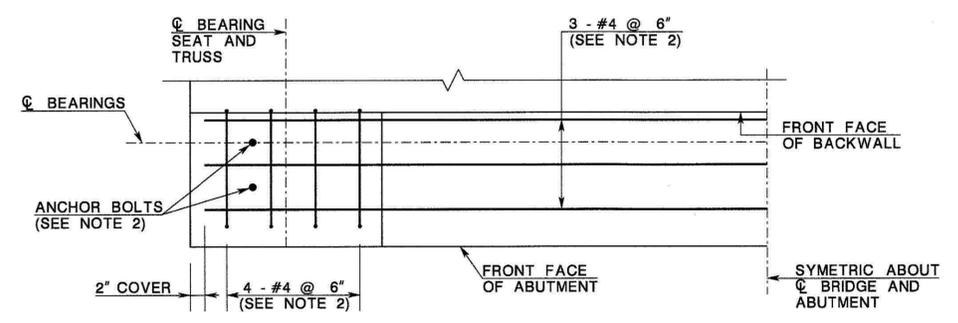
**EAST ABUTMENT TYPICAL SECTION**  
SCALE: 3/4"=1'-0"



**ABUTMENT BEARING SEAT LAYOUT**  
SCALE: 1"=1'-0"



**FINISHING DETAIL AT ABUTMENTS**  
N.T.S.

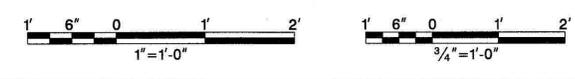


**ABUTMENT BEARING SEAT GRILLAGE BARS DETAIL**  
SCALE: 1"=1'-0"

BAR LEGEND:

F.F.	FRONT FACE
R.F.	REAR FACE
E.F.	EACH FACE
E.W.	EACH WAY
T	TOP
B	BOTTOM
EQ. SP.	EQUALLY SPACED

CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		



REVISION	BY	C'K'D	DATE

NEW JERSEY DEPARTMENT OF TRANSPORTATION  
BUREAU OF STRUCTURAL ENGINEERING

**ABUTMENT AND WINGWALL DETAILS I**

TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY

MOTT MACDONALD, LLC  
CERTIFICATE NO. 24GA28016600

SCALE: AS NOTED

BRIDGE SHEET NO. B-7 OF B-10

32  
35

REVISION BY C'K'D DATE

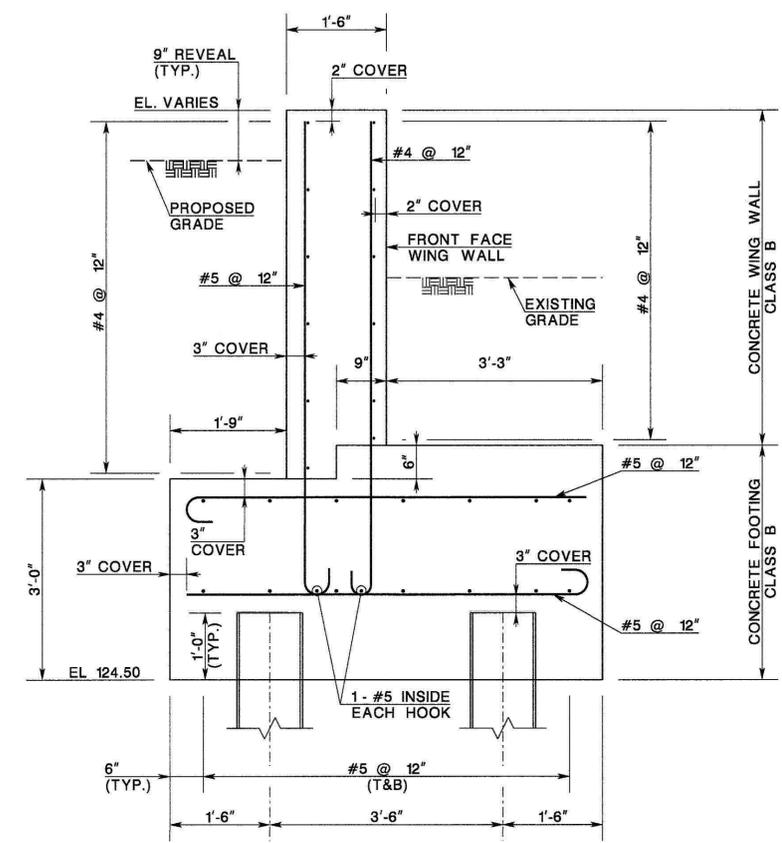
MATTHEW W. COLON, P.E.  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04727100

MOTT MACDONALD

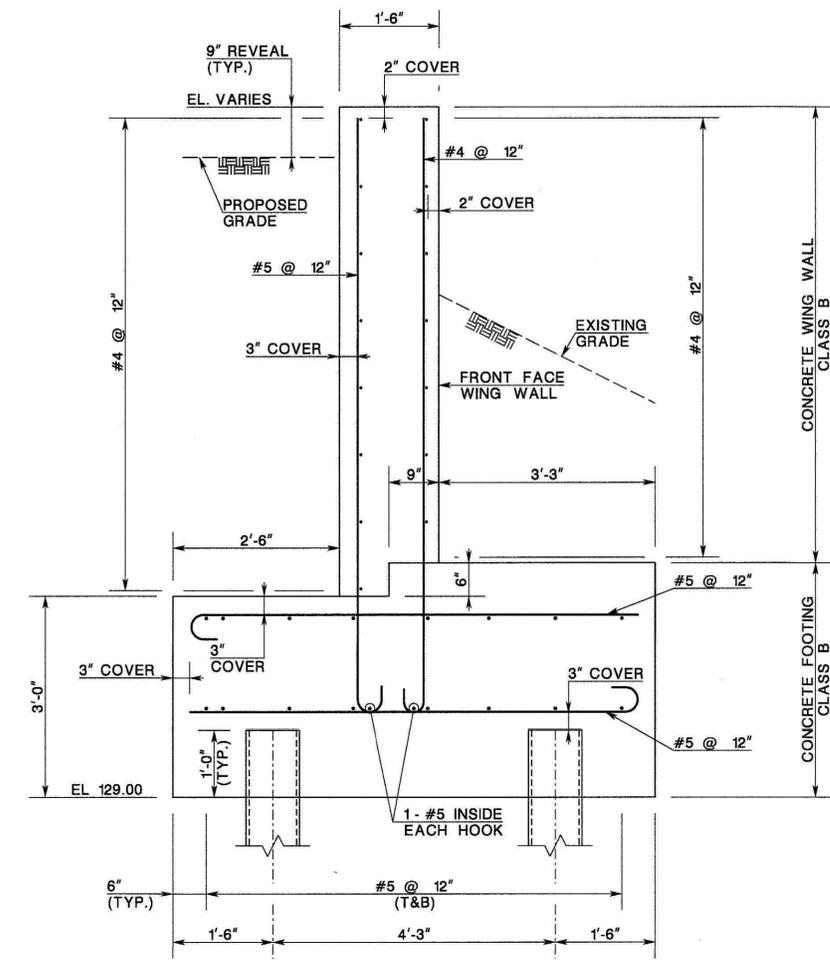
STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-		
STRUCTURE NO.		N/A	
STRUCTURE NAME: PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

- NOTES:
- FOR ABUTMENT AND WING WALL PLANS AND ELEVATIONS, SEE BRIDGE SHEET NO. B-6.
  - FOR FOOTING AND PILE PLAN AND DETAILS, SEE BRIDGE SHEET NO. B-5.
  - FOR EXCAVATION PAY LIMITS, SEE BRIDGE SHEET NO. B-4.

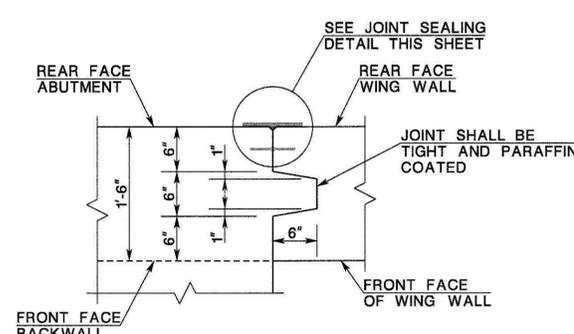
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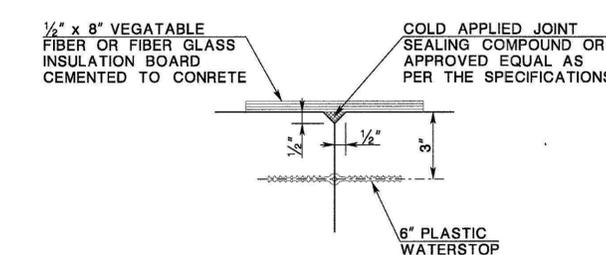
**WEST WING WALLS  
TYPICAL SECTION**  
SCALE: 3/4"=1'-0"



**EAST WING WALLS  
TYPICAL SECTION**  
SCALE: 3/4"=1'-0"



**CONTRACTION JOINT  
DETAIL**  
N.T.S.

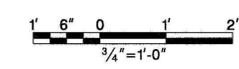


**JOINT SEALING  
DETAIL**  
N.T.S.

BAR LEGEND:

F.F.	FRONT FACE
R.F.	REAR FACE
E.F.	EACH FACE
E.W.	EACH WAY
T	TOP
B	BOTTOM
EQ. SP.	EQUALLY SPACED

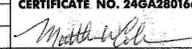
CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		



REVISION	BY	C'K'D	DATE

**NEW JERSEY DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF STRUCTURAL ENGINEERING**  
**ABUTMENT AND WINGWALL  
DETAILS II**

**TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY**

MOTT MACDONALD, LLC  
 CERTIFICATE NO. 24GA28016600  
  
 MATTHEW W. COLON, P.E.  
 NEW JERSEY PROFESSIONAL  
 ENGINEER LICENSE NO. 24GE0472100

SCALE: AS NOTED

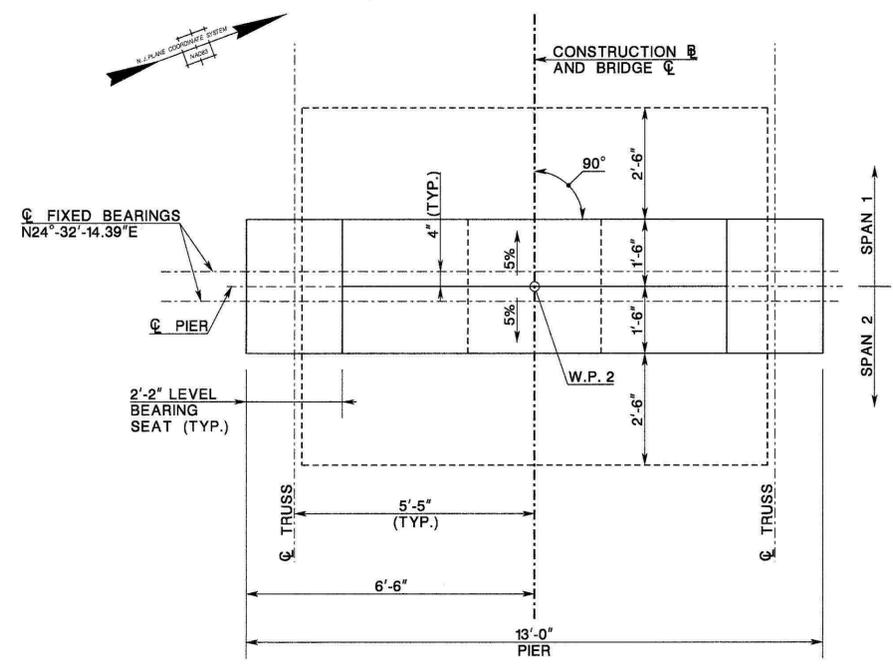
BRIDGE SHEET NO. B-8 OF B-10

33  
35

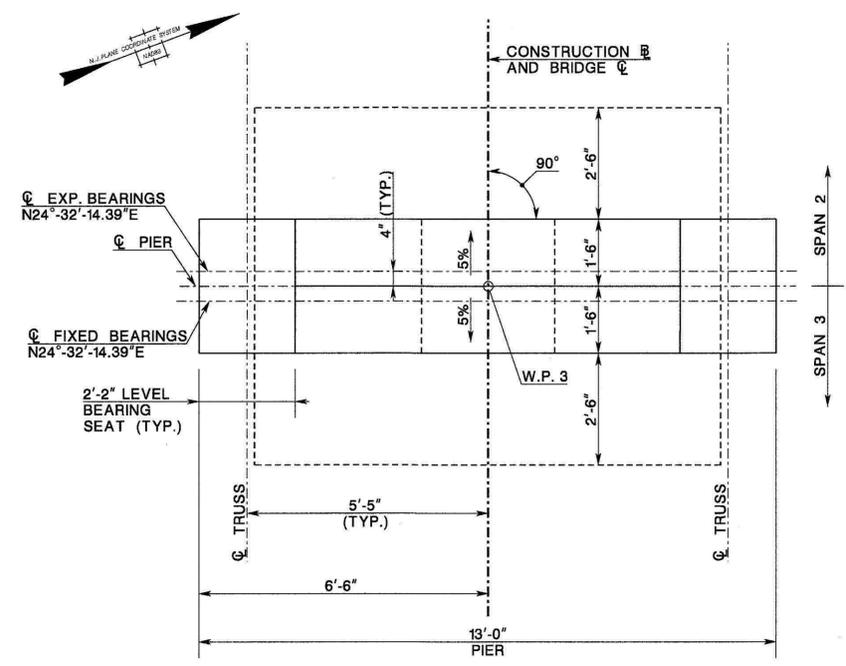
**MOTT MACDONALD**

STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-		
STRUCTURE NO.		N/A	
STRUCTURE NAME:			
PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

- NOTES:**
1. BEARING CENTERLINES, TRUSS CENTERLINES, AND PIER SEAT ELEVATIONS ARE APPROXIMATED AND SHALL BE VERIFIED BY SELECTED TRUSS FABRICATOR. IF REQUIRED, DETAIL AND SUBMIT ALL CHANGES TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
  2. CONCRETE IN PIER COLUMNS AND CAPS SHALL BE CLASS A.
  3. FOR WORKING POINT LOCATIONS, SEE BRIDGE SHEET NO. B-3.
  4. FOR PIER TYPICAL SECTION AND ADDITIONAL DETAILS, SEE BRIDGE SHEET NO. B-10.
  5. FOR BEARING SEAT LAYOUT AND ADDITIONAL REINFORCEMENT, SEE BRIDGE SHEET NO. B-10.
  6. FOR FOOTING AND PILE PLAN AND DETAILS, SEE BRIDGE SHEET NO. B-5.
  7. FOR EXCAVATION PAY LIMITS, SEE BRIDGE SHEET NO. B-4.

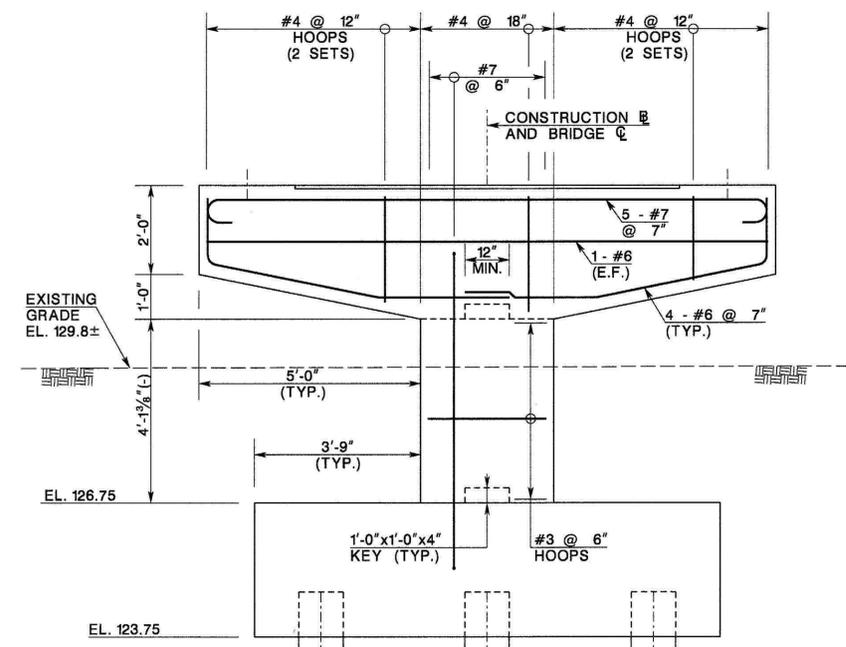


**WEST PIER PLAN**  
SCALE: 1/2"=1'-0"

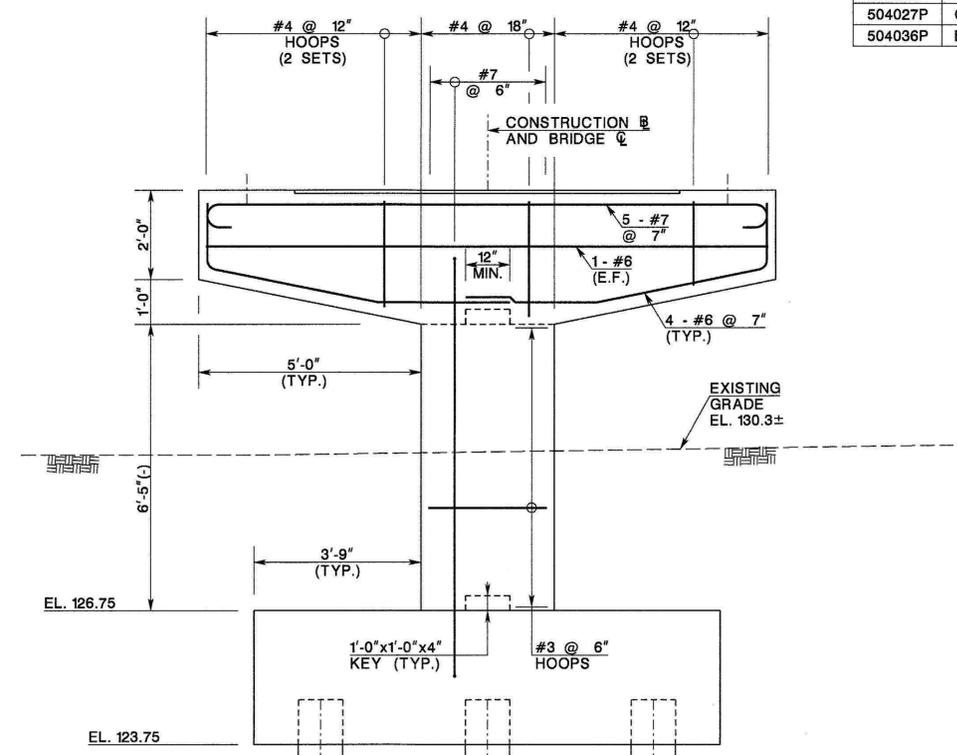


**EAST PIER PLAN**  
SCALE: 1/2"=1'-0"

QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	CONTRACT QUANTITY
504006P	REINFORCEMENT STEEL, EPOXY-COATED	LB	1830
504027P	CONCRETE PIER COLUMN AND CAP	CY	12
504036P	EPOXY WATERPROOFING	SY	12



**WEST PIER ELEVATION**  
SCALE: 1/2"=1'-0"



**EAST PIER ELEVATION**  
SCALE: 1/2"=1'-0"

PIER SEAT ELEVATIONS	
LOCATION	TOP OF SEAT ELEVATION AT @ TRUSS BEARINGS
WEST PIER	133.86
EAST PIER	136.16

**BAR LEGEND:**

F.F. FRONT FACE  
R.F. REAR FACE  
E.F. EACH FACE  
E.W. EACH WAY  
T TOP  
B BOTTOM  
EQ. SP. EQUALLY SPACED

CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		

NEW JERSEY DEPARTMENT OF TRANSPORTATION  
BUREAU OF STRUCTURAL ENGINEERING

**PIER PLANS AND ELEVATIONS**

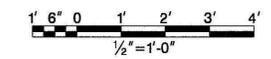
TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY

MOTT MACDONALD, LLC  
CERTIFICATE NO. 24GA28016600

SCALE: AS NOTED

BRIDGE SHEET NO. B-9 OF B-10

34  
35



REVISION	BY	C/K'D	DATE

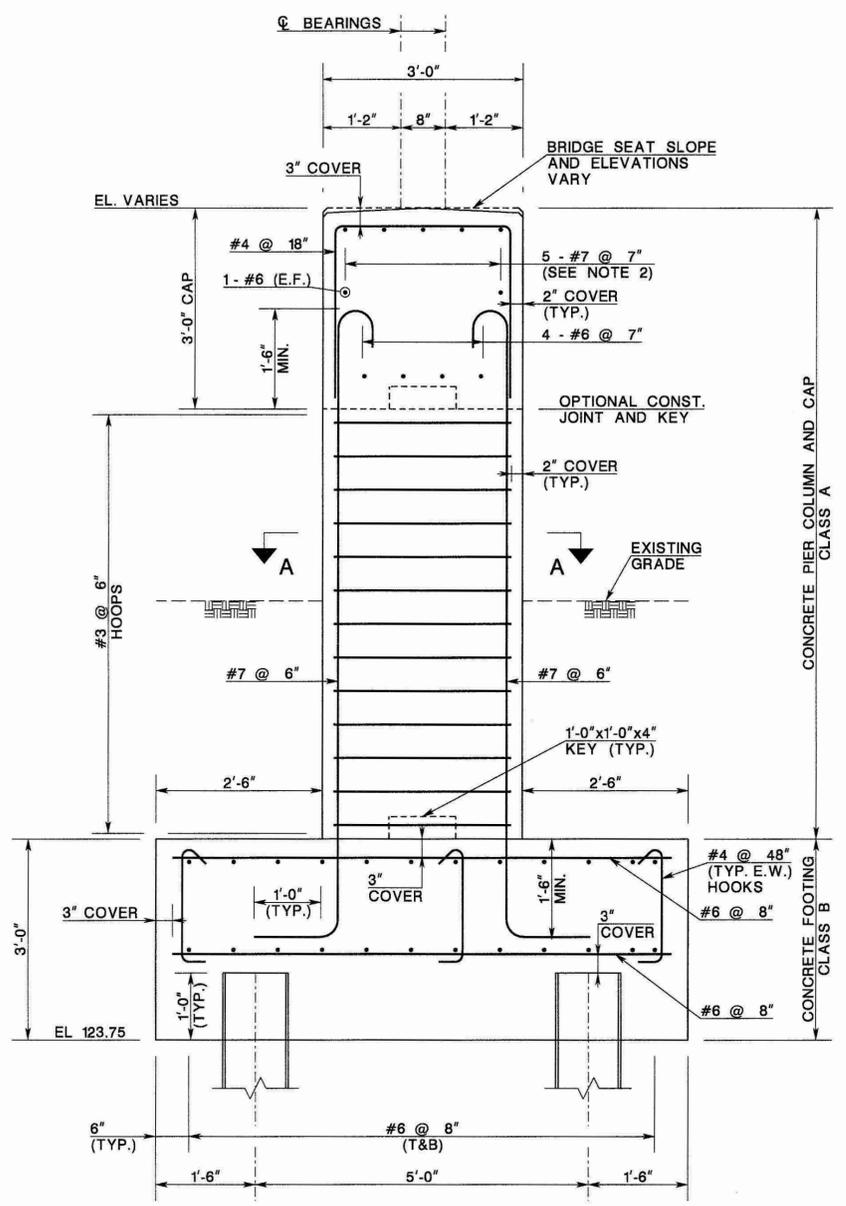
MOTT MACDONALD

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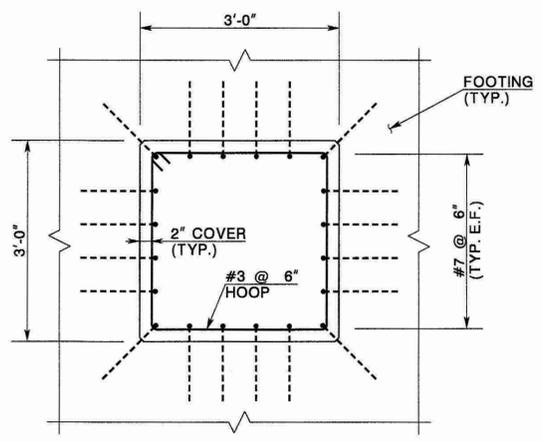
STATE	FEDERAL PROJECT NO.	SHEET	TOTAL SHEETS
N.J.	-		
STRUCTURE NO.		N/A	
STRUCTURE NAME:			
PEDESTRIAN BRIDGE IN WATERLAND PARK OVER EAST BRANCH OF RAHWAY RIVER			

- NOTES:**
1. BEARING CENTERLINES, TRUSS CENTERLINES, AND ABUTMENT SEAT ELEVATIONS ARE APPROXIMATED AND SHALL BE VERIFIED BY SELECTED TRUSS FABRICATOR. IF REQUIRED, DETAIL AND SUBMIT ALL CHANGES TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
  2. ANCHOR BOLT SIZES AND LOCATIONS SHALL BE AS SPECIFIED BY SELECTED TRUSS FABRICATOR. ADJUST PIER CAP REINFORCEMENT AS REQUIRED TO CLEAR ANCHOR BOLT LOCATIONS. BOLTS SHALL EITHER BE CAST-IN-PLACE OR INSTALLED IN A 3" DIAMETER CORRUGATED CAST-IN-PLACE SLEEVE WITH NON-SHRINK GROUT. NO DRILLING INTO SEAT WILL BE PERMITTED. NO SEPARATE PAYMENT WILL BE MADE FOR ANCHOR BOLTS.
  3. FOR PIER PLANS AND ELEVATIONS, SEE BRIDGE SHEET NO. B-9.
  4. FOR FOOTING AND PILE PLAN AND DETAILS, SEE BRIDGE SHEET NO. B-5.
  5. FOR EXCAVATION PAY LIMITS, SEE BRIDGE SHEET NO. B-4.

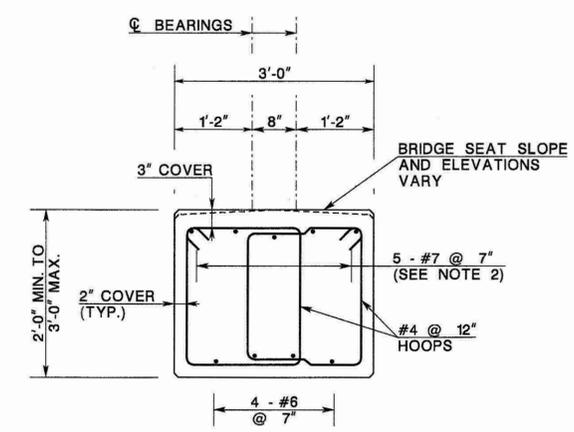
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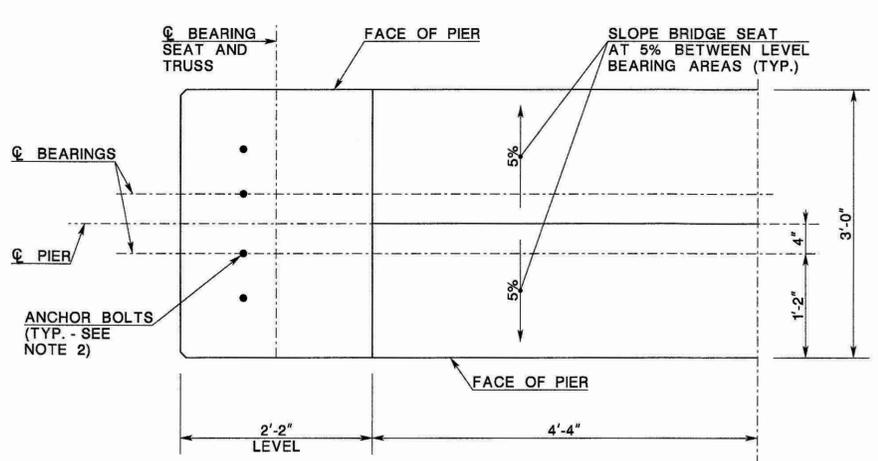
**TYPICAL PIER SECTION**  
(EAST PIER SHOWN, WEST SIMILAR)  
SCALE: 3/4"=1'-0"



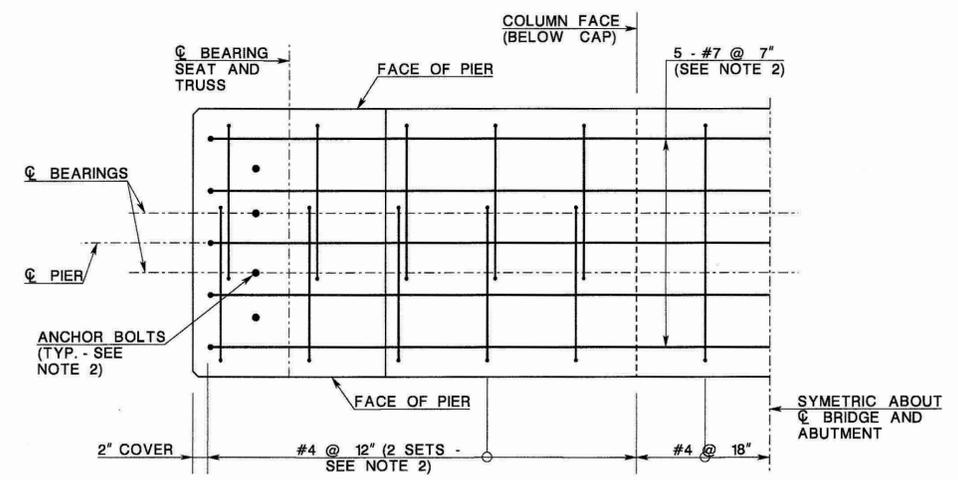
**PIER COLUMN SECTION A-A**  
SCALE: 3/4"=1'-0"



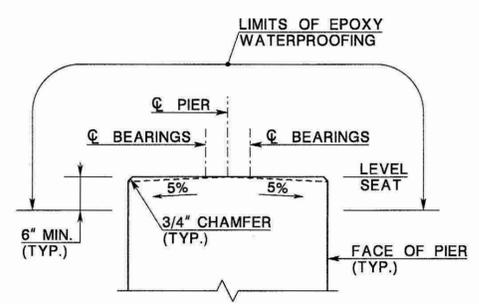
**PIER CAP CANTILEVER SECTION**  
(HOOP OVERLAP OFFSET FOR CLARITY)  
SCALE: 3/4"=1'-0"



**PIER BEARING SEAT LAYOUT**  
SCALE: 1"=1'-0"



**PIER BEARING SEAT REINFORCEMENT DETAIL**  
SCALE: 1"=1'-0"



**FINISHING DETAIL AT PIERS**  
N.T.S.

**BAR LEGEND:**

F.F.	FRONT FACE
R.F.	REAR FACE
E.F.	EACH FACE
E.W.	EACH WAY
T	TOP
B	BOTTOM
EQ. SP.	EQUALLY SPACED

CONTROL SECTION	N/A	JOB NO.	N/A
DES. BY	GENNARO	CHK. BY	COLON
DWN. BY	GENNARO		
IN CHARGE OF	COLON		

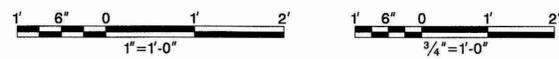
**NEW JERSEY DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF STRUCTURAL ENGINEERING**

**PIER DETAILS**

**TOWNSHIP OF SOUTH ORANGE VILLAGE ESSEX COUNTY**

MOTT MACDONALD, LLC  
 CERTIFICATE NO. 246A28016600  
 MATTHEW W. COLON, P.E.  
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04727100

SCALE: AS NOTED  
 BRIDGE SHEET NO. B-10 OF B-10



**MOTT MACDONALD**