

**GENERAL NOTES:**

- FOR THE PURPOSE OF THIS PROJECT  
OWNER - UNITED WAY OF RHODE ISLAND  
50 VALLEY STREET  
PROVIDENCE, RI 02909
  - OWNERS REP. - CAP EX ADVISORY GROUP  
PO BOX 13003  
BALTIMORE, MD 21203
  - CONTACT - TONJA POTTER
  - ENGINEER - RMA GEO-ENVIRONMENTAL  
20 MAIN STREET  
WICKFORD, RI 02852
  - CONTACT - JOSHUA ROSENBERG, PE
  - WETLANDS - MCCUE ENVIRONMENTAL, LLC  
LAFAYETTE MILL COMPLEX - 650 TEN ROD ROAD  
NORTH KINGSTOWN, RI 02852
  - CONTACT - JOE MCCUE, PWS
- THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER. THE OWNER HAS OBTAINED NECESSARY REGULATORY PERMITS REQUIRED FOR THE WORK IN REGULATED AREAS. THE CONTRACTOR SHALL REQUEST COPIES OF THOSE REGULATORY PERMITS AND MAKE PROVISION IN THIS WORK AND IN THE COST OF THE WORK FOR ALL APPLICABLE CONDITIONS OF THOSE PERMITS. FAILURE TO CONSIDER ANY CONDITION OF THE REGULATORY PERMITS AS A PART OF THE BID SHALL NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO APPLY THOSE CONDITIONS TO HIS WORK AT NO ADDITIONAL COST TO THE OWNER
  - EXISTING SITE LAYOUT DEVELOPED USING THE 50 VALLEY LAND CONDOMINIUM UNIT (RETAINING WALL PLAN) DEVELOPED BY COMMONWEALTH LAND SURVEYORS, INC., DATED 4/22/2024. ADDITIONAL SITE FEATURES DEVELOPED FROM AVAILABLE GEOSPATIAL DATA, & AERIAL IMAGERY FROM RIGIS, FIELD-BASED DATA COLLECTED BY RMA & MCCUE ENVIRONMENTAL PERTINENT SITE FEATURES GPS LOCATED. INFORMATION IS PROVIDED FOR REFERENCE PURPOSES ONLY AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY OR TOPOGRAPHIC SURVEY.
  - TOPOGRAPHY SUPPLEMENTED WITH DATA DERIVED FROM THE DIGITAL ELEVATION MODEL ORIGINALLY PRODUCED AS PART OF THE 2022 RHODE ISLAND STATEWIDE LIDAR DATA PROJECT - DISTRIBUTED BY USGS IN NAVD88. FIELD OBSERVED CORRECTIONS MADE BASED ON GPS (TRIMBLE SUBCENTIMETER) POINTS COLLECTED BY RMA, AND TOPOBATHYMETRIC DATA FROM DAWOOD ENGINEERING INC (PROVIDED BY WOONASQUATUCKET RIVER STAKEHOLDERS), TO MORE ACCURATELY DEPICT SITE FEATURES AND BELOW WATER CONDITIONS.
  - EXISTING AND PROPOSED SITE FEATURES SHOWN ON THESE DRAWINGS HAVE BEEN DEVELOPED FOR REFERENCE FOR THE SIGNIFICANT ALTERATION PERMIT APPLICATION. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE INCOMPLETE UNLESS ACCOMPANIED BY SURVEY PLANS PERFORMED BY A RI REGISTERED LAND SURVEYOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE ABOVE REFERENCED PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED CONDITION. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY RMA ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
  - ALL CONSTRUCTION INDICATED ON THESE DRAWINGS SHALL BE PERFORMED IN ACCORDANCE WITH REGULATORY PERMITS ISSUED FOR THIS PROJECT. ANY PERMITS ISSUED SUBSEQUENT TO BID SHALL BE REVIEWED AND THE CONTRACTOR SHALL NOTIFY THE OWNER OR RMA OF A POTENTIAL INCREASE IN THE BASE BID PRICE.
  - ANY DISCREPANCIES ON THESE PLANS WITH REGARD TO DIMENSIONS OR CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF RMA, THE OWNER, AND THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PORTION OF WORK.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.
  - GEOTECHNICAL RELATED CONSTRUCTION SHALL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED RI PROFESSIONAL ENGINEER PROCURED BY THE OWNER OR THEIR REPRESENTATIVE.
  - HORIZONTAL COORDINATE SYSTEM: NAD 1983 STATE PLANE RHODE ISLAND FIPS 3800 FEET | VERTICAL COORDINATE SYSTEM: NAVD88
  - THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.
  - WHERE REFERENCE IS MADE TO ANY STANDARD SPECIFICATION, IT SHALL MEAN THE MOST RECENT SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN. THESE CODES INCLUDE, BUT ARE NOT LIMITED TO: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
  - THE CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS AND MAINTAIN A SAFE AND SECURE SITE FOR OWNER STAFF AND VISITORS AT ALL TIMES. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.
  - DRAWING AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF RMA ENVIRONMENTAL, LLC. DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR IN PART, FOR OTHER PROJECTS OR PURPOSES OR BY ANY OTHER PARTIES THAN THOSE AUTHORIZED BY CONTRACT. USE OF THIS PLAN FOR ANY OTHER WORK IS AT THE SOLE RISK OF THE END USER.

**GENERAL CONSTRUCTION NOTES**

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE RHODE ISLAND STATE BUILDING CODE, AS SHOWN IN THESE PLANS AND TECHNICAL SPECIFICATIONS OF REGULATORY DOCUMENTS THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGES CONSTRUCTION AS AMENDED (LATEST REVISION), RHODE ISLAND STANDARD DETAILS AND THE CITY OF PROVIDENCE STANDARD DETAILS AND CONSTRUCTION STANDARDS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGES CONSTRUCTION MAY BE OBTAINED AT THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AND/OR BARRIERS AROUND ALL OPEN EXCAVATED AREAS, AND CONDUCT ALL WORK IN ACCORDANCE WITH OSHA STANDARDS AND THE CITY OF PROVIDENCE REQUIREMENTS.
  - ALL SAFETY REGULATIONS ARE TO BE STRICTLY FOLLOWED. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.
  - ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE OSHA CODE, THE RHODE ISLAND STATE BUILDING CODE, AND THE REFERENCED STANDARDS INCLUDED HEREIN THAT ARE APPLICABLE TO THIS PROJECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE CONDITIONS SHOWN HEREIN AND NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES IN DIMENSIONS AND/OR SITE CONDITIONS PRIOR TO THE FABRICATION AND/OR ORDERING OF ANY CONSTRUCTION MATERIALS. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION IN ANY SUCH AFFECTED AREA UNTIL THE DISCREPANCY HAS BEEN RESOLVED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- PLACEMENT OF SLOPE SHALL REQUIRE SUPERVISION FROM A PROFESSIONAL GEOTECHNICAL ENGINEER. A PROFESSIONAL GEOTECHNICAL ENGINEER SHALL RE-EVALUATE MATERIAL PLACEMENT AND SLOPE STABILITY ONCE SCHEDULED HEIGHT IS ACHIEVED ALONG THE BANK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR BRINGING ALL ELEMENTS OF THE PROJECT IN CONFORMANCE WITH THESE PLANS AND SPECIFICATIONS. IF ANY MODIFICATIONS ARE REQUIRED IN ANY ELEMENT, THE CONTRACTOR SHALL SUBMIT PROPOSED CHANGES IN WRITING TO THE ENGINEER FOR REVIEW.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE SURVEY SUPPORT NEEDED TO COMPLETE THE WORK, INCLUDING STAKEOUT, TO ENSURE THE WORK IS COMPLETED CONSISTENT WITH PROJECT PLANS AND ASSOCIATED REGULATORY APPROVALS. CONTRACTOR TO PRESERVE SURVEY BENCHMARKS.
- THE CONTRACTOR SHALL PROTECT ALL WETLANDS AND ASSOCIATED RESOURCES FROM INTRUSION BY TURBID WATERS, CONSTRUCTION DEBRIS, CONSTRUCTION EQUIPMENT, OR PERSONNEL DURING ALL WORK ACTIVITIES.
- DAMAGE TO ANY PROPERTY, PRIVATE OR OF PUBLIC TRUST, OCCURRING DURING THE CONSTRUCTION BY THE CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
- DISTURBED AREAS OF THE COMMUNITY COURTYARD ARE TO BE REPLACED POST CONSTRUCTION AND SHALL TIE IN TO THE EXISTING UNDISTURBED COURTYARD STRUCTURE AT THE LIMIT OF DISTURBANCE.
- ALL COMPONENTS SHALL BE INSTALLED PER EACH MANUFACTURER'S SPECIFICATIONS AND/OR STANDARD INDUSTRY PRACTICE AS APPLICABLE.

**EROSION AND SEDIMENT CONTROL NOTES**

- SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK", AND TO THE SATISFACTION OF THE ENGINEER.
- THE LIMITS OF WETLAND/RESOURCE AREA DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA. ALL WETLAND/RESOURCE AREAS OUTSIDE THE RIDEM APPROVED LIMITS SHALL NOT BE DISTURBED.
- DUST SHALL BE CONTROLLED BY APPROVED METHODS PER REGULATORY APPROVALS.
- THE CONTRACTOR SHALL PREVENT ANY UNSUITABLE MATERIALS ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
- EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED AT THE SITE PRIOR TO THE START OF CONSTRUCTION AND RECLAMATION ACTIVITIES AND BE PROPERLY MAINTAINED UNTIL ALL DISTURBED AREAS STABILIZED, INCLUDING:
  - INSTALLATION OF A CONTINUOUS LINE OF TURBIDITY BARRIERS ALONG EDGES OF EXISTING WATER FEATURES AS NOTED IN THE PLANS.
  - CONTINUOUS LINE OF STAKED WATTLES ALONG THE NORTHERN PROPERTY LINE AND LIMITS OF DISTURBED AREA REQUIRED FOR CONSTRUCTION.
  - HIGH DENSITY WATTLES WITHIN LOD ON IMPERVIOUS SURFACES DOWNGRADIENT FROM POTENTIAL RUNOFF.
- SOIL STOCKPILES AND DEPOSITION AREAS FOR CONSTRUCTION MATERIALS SHALL BE HANDLED IN ACCORDANCE WITH THE CONSTRUCTION SOIL MANAGEMENT PLAN (SMP) AND LOCATED OUTSIDE WETLAND AREAS AND ASSOCIATED BUFFERS AND SHALL BE AS REQUIRED FOR USE. THE CONSTRUCTION SMP WILL BE PROCURED BY THE OWNER OR THEIR REPRESENTATIVE.
- SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED AT MINIMUM AFTER EACH STORM EVENT OF 1 INCH OR GREATER RAINFALL DURING CONSTRUCTION TO INSURE THAT CHANNELS, DITCHES AND PIPES ARE CLEAR OF DEBRIS AND THAT THE EROSION CONTROL BARRIERS ARE INTACT. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY.
- EROSION CONTROL BARRIERS SHALL BE MODIFIED OR EXPANDED AS FIELD CONDITIONS WARRANT.
- THE CONTRACTOR SHALL MAINTAIN A SUFFICIENT RESERVE OF VARIOUS EROSION CONTROL MATERIALS ONSITE AT ALL TIMES FOR EMERGENCY PURPOSES.
- ANY DEWATERING WASTE WATERS PUMPED FROM EXCAVATIONS SHALL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO STRAW BALE ENCLOSURES OR SEDIMENTATION BAGS OUTSIDE ALL WETLAND AND WETLAND BUFFER AREAS AS REQUIRED.
- CONSTRUCTION SITE WASTE MATERIALS SHALL BE PROPERLY CONTAINED ONSITE AND DISPOSED OFF SITE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, LOCAL AND STATE REGULATIONS.
- THE CONTRACTOR SHALL MAINTAIN SURFACE DRAINAGE DURING CONSTRUCTION. STORMWATER SHALL BE MAINTAINED AWAY FROM WORK SITES WHILE PREVENTING AREAS OF EROSION.
- ANTI-TRACKING PADS SHALL BE PROVIDED AT ALL POINTS OF EGRESS OR INGRESS AND SHALL BE MAINTAINED TO LIMIT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS.
- THE CONTRACTOR SHALL CLEAN AND MAINTAIN EROSION CONTROL BARRIER WHEN SEDIMENT ACCUMULATES TO ONE HALF THE HEIGHT OF THE WATTLES OR ONE THIRD THE HEIGHT OF SILT FENCE. MATERIAL COLLECTED FROM THE SILTATION BARRIERS SHALL BE REMOVED AS NECESSARY AND DISPOSED IN AN UPLAND AREA OR OFF SITE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, LOCAL AND STATE REGULATIONS.
- RIP-RAP OR OTHER ENERGY DISSIPATORS SHALL BE USED WHERE NECESSARY TO PREVENT SCOUR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL EROSION AND SEDIMENT CONTROL MEASURES WHEN AUTHORIZED BY RIDEM.

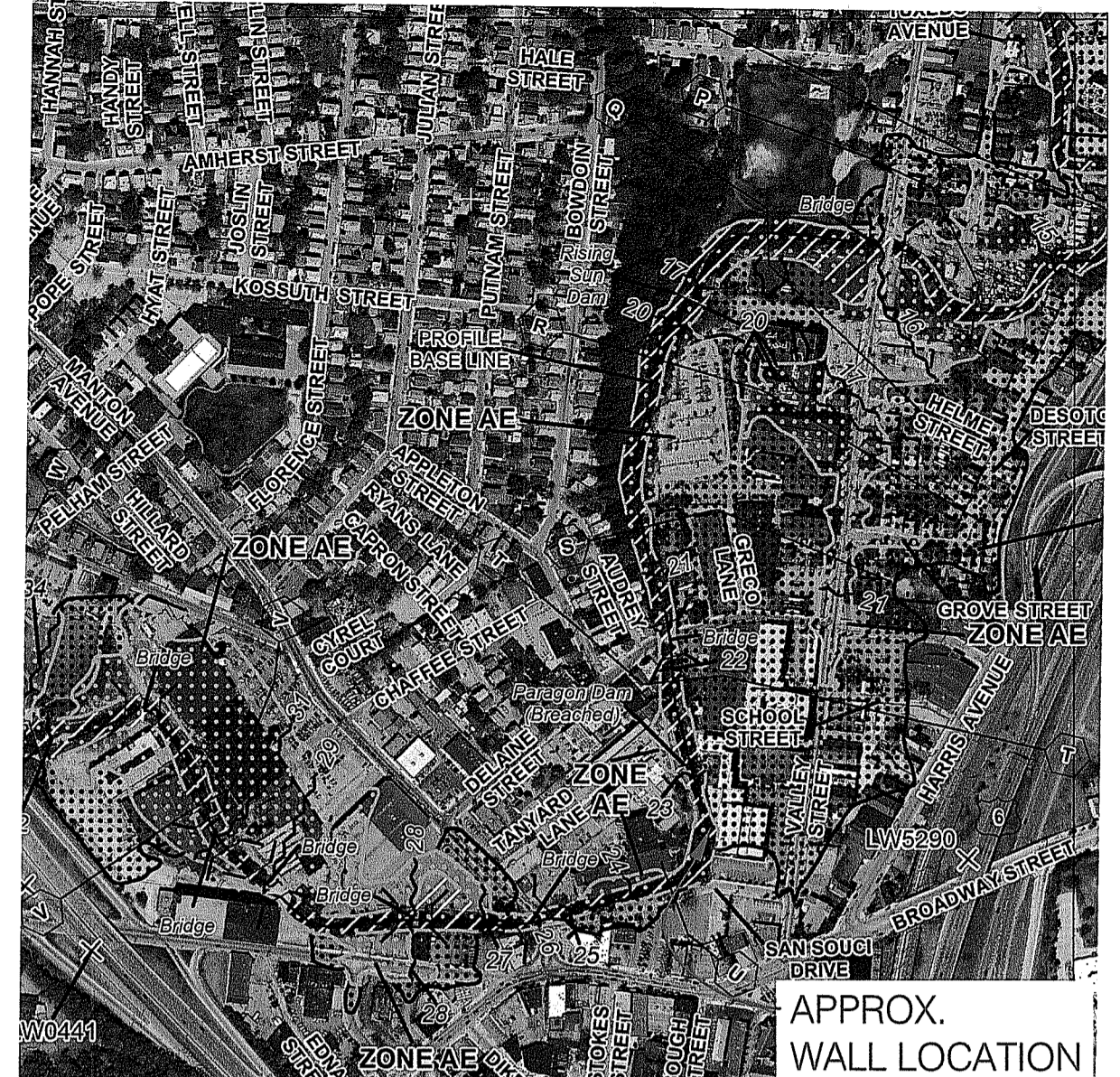
**DIVERSION NOTES:**

- THE CONTRACTOR SHALL MAINTAIN RIDEM AQUATIC BASEFLOW FLOW TO THE DOWNSTREAM AREA THROUGHOUT CONSTRUCTION.
- ANY NECESSARY DIVERSIONS SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY SOIL, CEMENTITIOUS GROUT, CHEMICAL GROUT OR OTHER MATERIAL FROM ENTERING THE RIVER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY COFFERDAMS OR DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK FOR ALL STORMS LESS THAN 25 YEAR.
- THE CONTRACTOR SHALL PHASE CONSTRUCTION SO AS TO LIMIT RISK ASSOCIATED WITH DAMAGE TO INCOMPLETE WORK, OR LOSS OF EXPOSED SOIL, AND SO THAT CONSTRUCTION EQUIPMENT DOES NOT PASS THROUGH FLOWING WATERS.
- ANY NECESSARY COFFERDAMS AND DIVERSIONS SHALL BE DESIGNED BY THE CONTRACTOR AND BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF RHODE ISLAND OR COORDINATED WITH THE OWNER'S ENGINEER. APPROVAL BY THE OWNER, ENGINEER, AND RIDEM PROGRAM IS REQUIRED PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.

RIDEM COPY

**LEGEND**

- PARCEL BOUNDARY LINE CONDOMINIUM UNIT 1
- PARCEL BOUNDARY LINE CONDOMINIUM PROPERTY (TOTAL)
- ABUTTER PARCEL BOUNDARY LINE
- - - 100.00 - - - TOPOGRAPHIC CONTOUR - EXISTING (EX)
- - - 100.00 - - - TOPOGRAPHIC CONTOUR - EX Major
- SITE FEATURE - EXISTING
- STRUCTURE - EXISTING
- STRUCTURE - PROPOSED
- PROPOSED STOCKPILE AREA
- WIRE FENCE
- EDGE OF PAVEMENT
- WATER LINE
- FEMA FLOOD ZONE BOUNDARY
- TREE LINE (APPROXIMATE)
- RIP RAP
- EXISTING MASONRY WALL
- LOD - LIMIT OF DISTURBANCE/ SEDIMENTATION BARRIER - FILTER SOCK OF TURBIDITY BARRIER
- W - UTILITY - WATERLINE
- GAS - UTILITY - GAS LINE
- ETC - UTILITY - ELECTRIC TELE. CABLE
- UGE - ELECTRIC - UNDERGROUND
- OHE - ELECTRIC - OVERHEAD (OHE)
- SAN - UTILITY - SANITATION / SEWER
- SD - UTILITY - STORM DRAIN (SD)
- TREE
- TREE TRUNK LOCATION
- FW#3 - # BORING - RMA
- TP - TEST PIT - RMA
- MH - MANHOLE (MH-TYPE)
- GAS VALVE
- FIRE HYDRANT
- WATER VALVE
- CATCHBASIN
- WETLAND FLAG LOCATION
- UTILITY POLE
- X 5.10 SPOT GRADE - EXISTING
- X 6.6 SPOT GRADE - PROPOSED
- X 5.10 SPOT ELEVATION - WATER SURFACE



**FEMA FLOOD INSURANCE RATE MAP**

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP PANEL 700304A, REVISED OCTOBER 02, 2015, THE SITE IS LOCATED ALONG THE INTERFACE OF THE ZONE AE FLOODWAY, WITH A BASE FLOOD ELEVATION BETWEEN 24 AND 23 FEET NAVD88. THIS AREA IS DEFINED AS THE "CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCRoACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS." LANDWARD PORTIONS OF THE SITE ARE IN ZONE X, DEFINED AS AN AREA WITH A 0.2% ANNUAL CHANCE OF FLOODING OR AREAS WITH A 1% ANNUAL FLOOD CHANCE AND AN AVERAGE DEPTH LESS THAN 1 FOOT OR WITH A DRAINAGE AREA LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED FROM THE 1% ANNUAL CHANCE FLOOD BY A LEVEE.

**HYDRAULIC DATA NOTES**

**MODELED FLOWS SUMMARY**

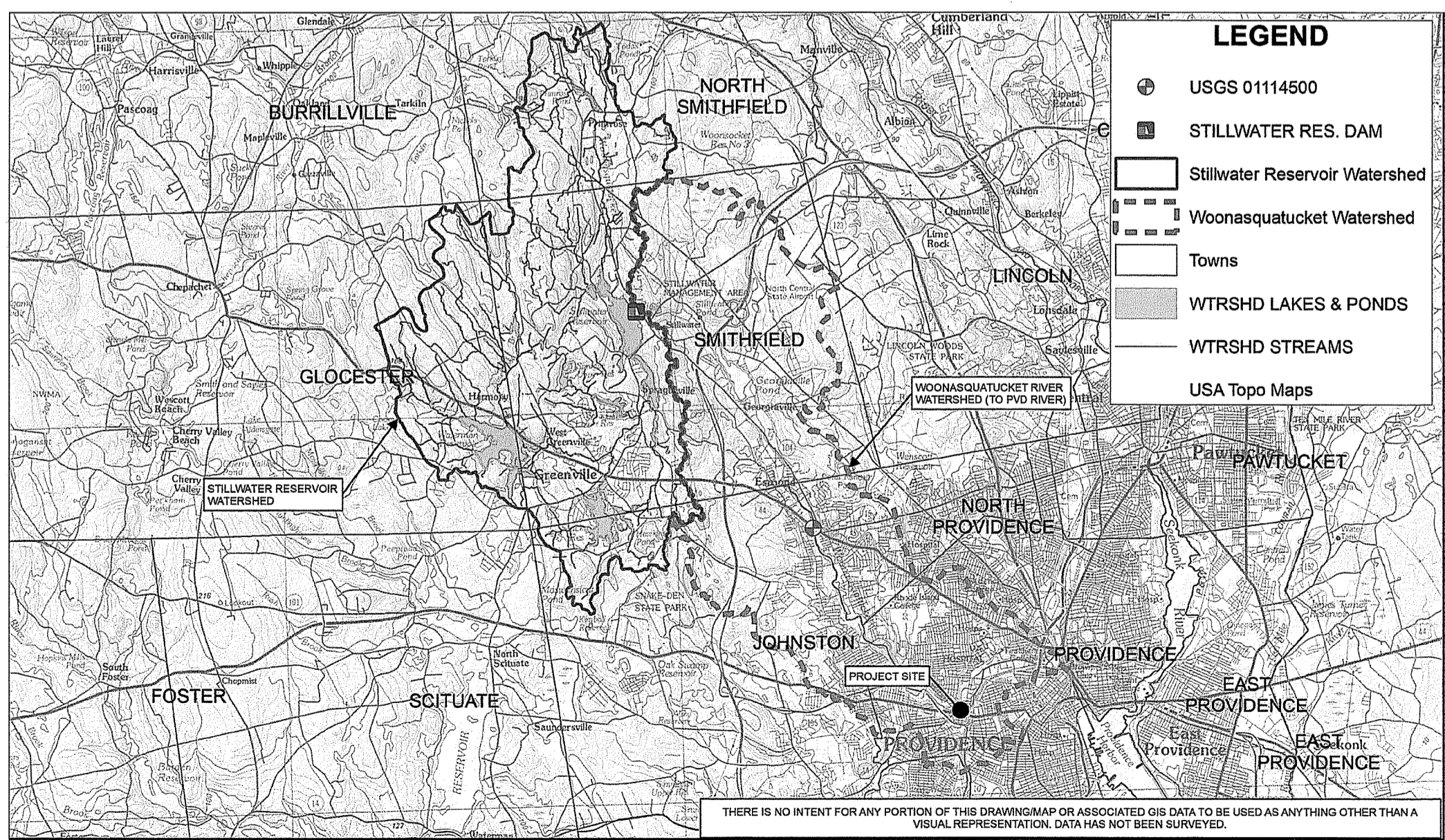
STORM EVENT	FLOW (cfs)
Q BASE MARCH	144
USGS 2-YEAR STORM	557
USGS 5-YEAR STORM	1098
FEMA 10-YEAR STORM	1385
FEMA 50-YEAR STORM	2093
FEMA 100-YEAR STORM	2422

**HYDROLOGIC DATA NOTES**

**PROJECT DRAINAGE AREA**

Parameter Code	Value	Unit	Definition:
DRNAREA	48	square miles	Area that drains to a point on a stream
STORNHD	12.8	percent	Percent storage (wetlands and waterbodies)
STRDENED	2.21	mi per square	Stream Density
CRSDFT	26.8	percent	Percentage of area coarse-grained stratified drift
ELEV	321	feet	Mean Basin Elevation
FOREST	38.3	percent	Percentage of area covered by forest
LC1DEV	40.5	percent	Percentage of developed (urban) land
LC1IMP	19.4	percent	Average percentage of impervious area
LFLENGTH	20.8	miles	Length of longest flow path
STRMOTED	95.9	miles	Stream length in miles
WATER	3.99	percent	Percent of area covered by water
WETLAND	11.6	percent	Percent of area covered by wetlands

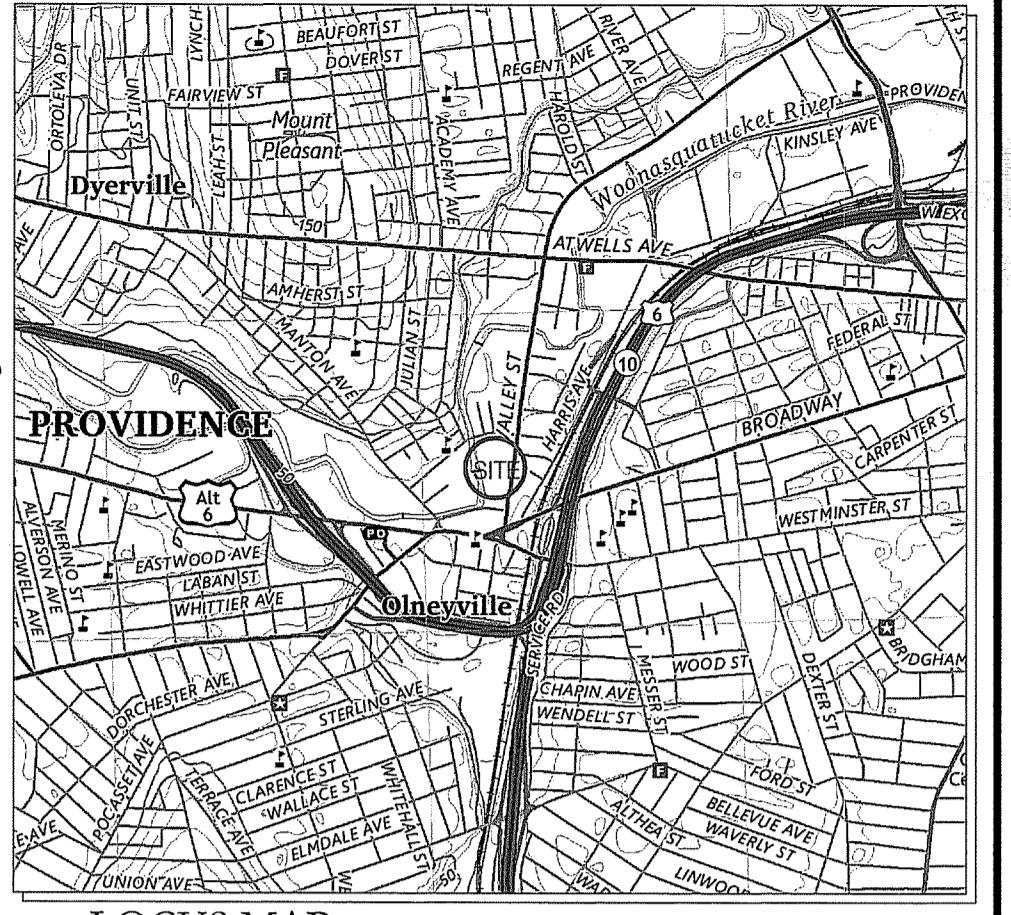
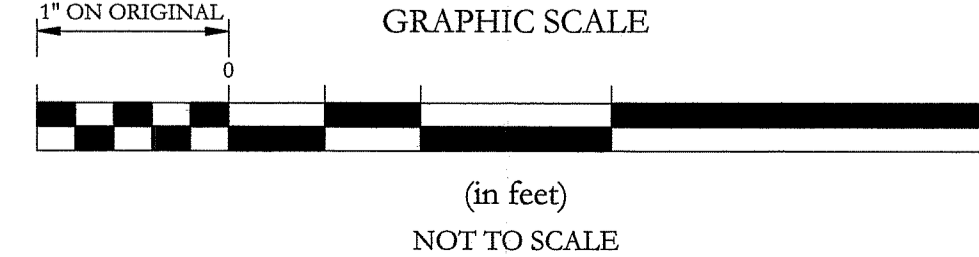
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
REGULATORY REVIEW AND PERMITTING PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP 23 2024 FILE #: 24-0186  
NO CHANGES WITHOUT PRIOR APPROVAL  
APPROVED PLAN MUST BE AT CONSTRUCTION SITE  
*Nancy L. Freeman*



**WOONASQUATUCKET RIVER WATERSHED**

NOT TO SCALE

**90% CONSTRUCTION DRAWINGS**



**United Way of Rhode Island**  
**Cap Ex Advisory Group** Build with Confidence

**MCCUE ENVIRONMENTAL**  
**RMA GeoEnvironmental**  
20 Main Street  
Wickford, Rhode Island 02852  
WWW.RMAHYDRO.COM

No.	Revision	Date	App.

Designed By: \_\_\_\_\_ Drawn by: ETS Checked by: JER  
Scale: NOT TO SCALE Date: 9.16.2024  
Project Title: \_\_\_\_\_

**UNITED WAY RIVER WALL**  
UNITED WAY OF RHODE ISLAND  
50 VALLEY STREET  
PROVIDENCE, RI 02909

Client/Owner: UNITED WAY OF RHODE ISLAND  
50 VALLEY STREET  
PROVIDENCE, RI 02909

Issued for: REGULATORY REVIEW AND PERMITTING

Drawing Title: \_\_\_\_\_

NOTES  
50 VALLEY STREET  
PROVIDENCE, RI 02909

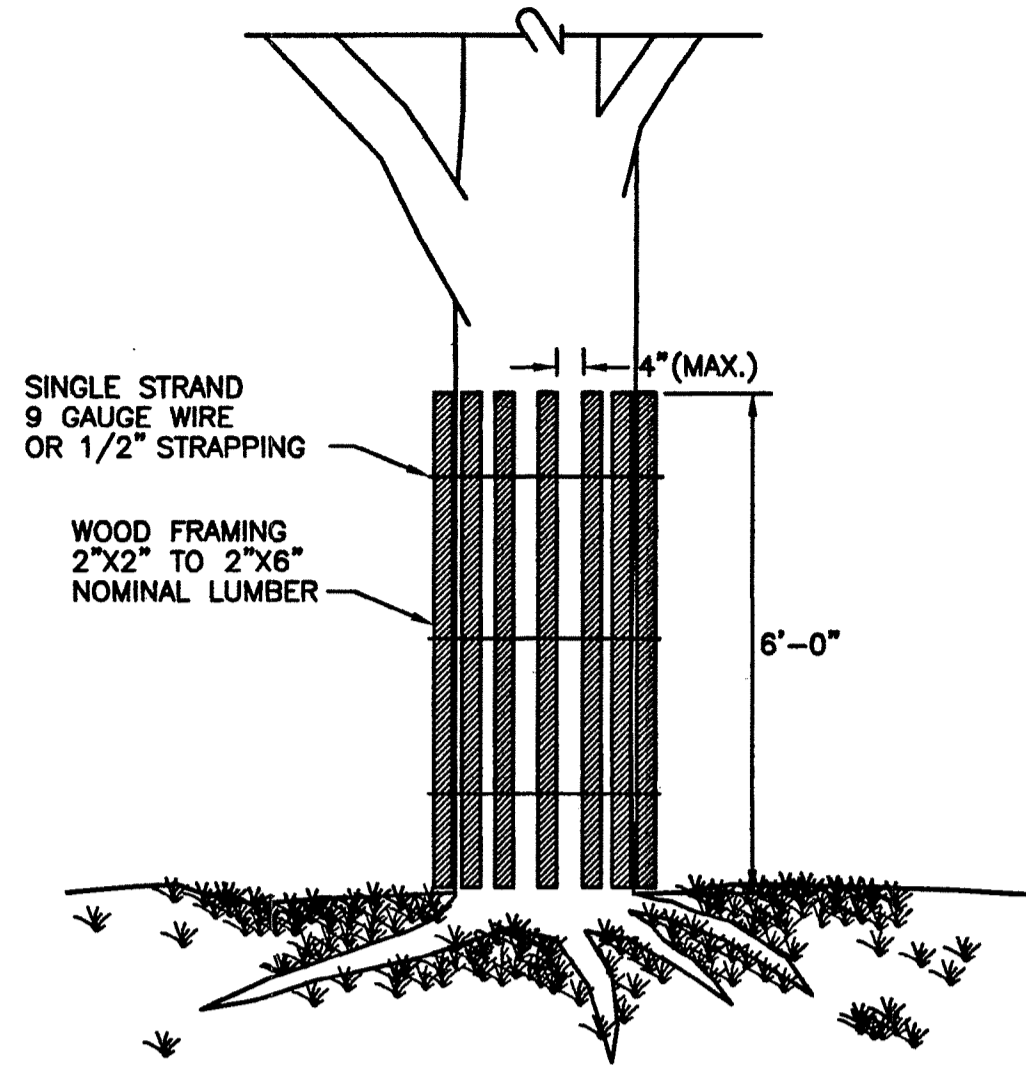
**JOSHUA E. ROSENBERG**  
REGISTERED PROFESSIONAL ENGINEER CIVIL  
Drawing Number: **N-1**  
Sheet **1** of **10**  
Project Number: **24140.00**  
Survey Index: **- 35 - 586**











NOTE: SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE STANDARD SPECIFICATIONS.

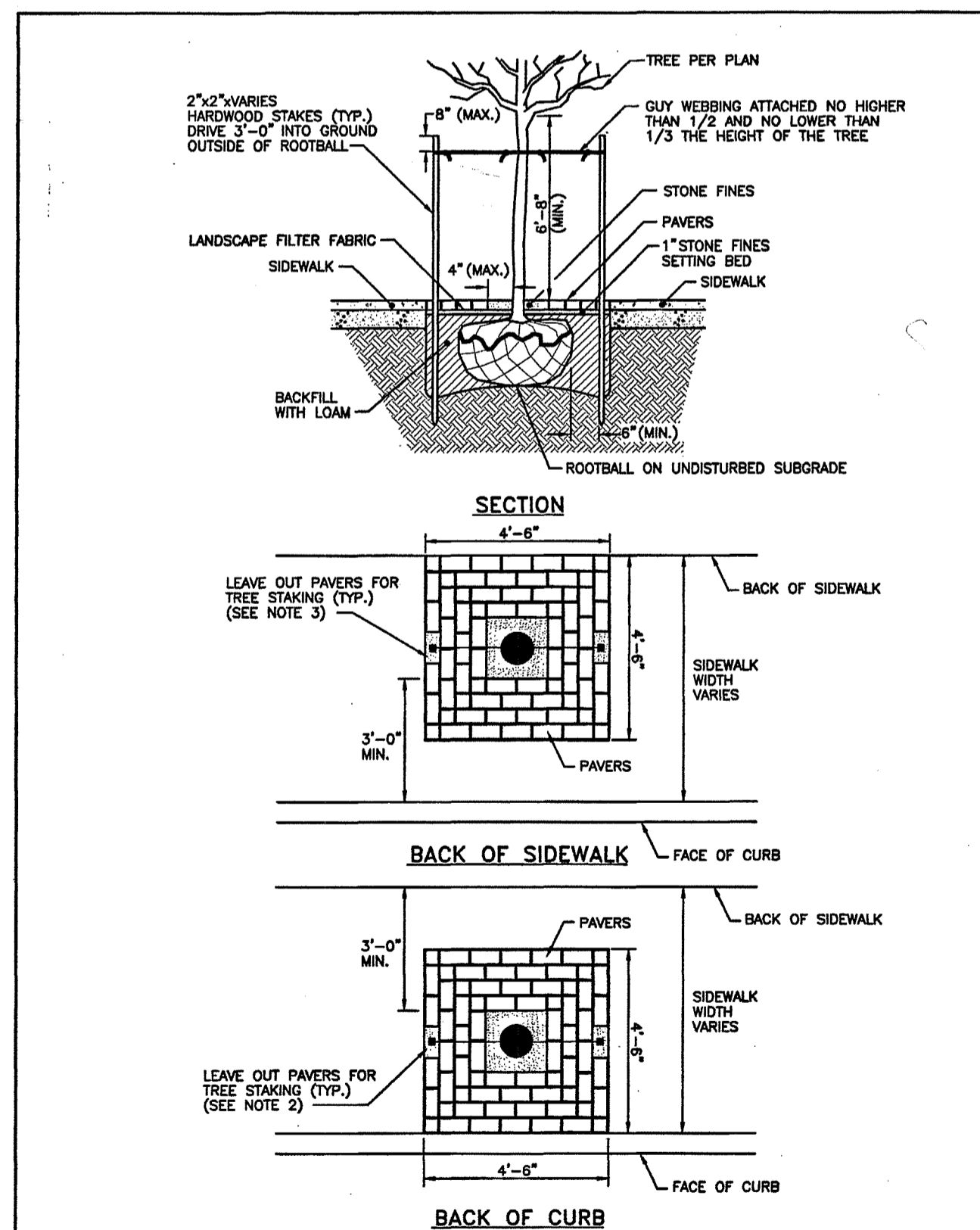
REVISIONS		
NO.	BY	DATE

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**TREE PROTECTION DEVICE**

R.I. STANDARD 51.1.0

June 15, 1998  
 Chief Engineer  
 Chief Design Engineer  
 Transportation



NOTES:  
 1. SHALL BE IN ACCORDANCE WITH SECTIONS L.06 AND L.12 OF THE R.I. STANDARD SPECIFICATIONS.  
 2. STAKES SHOULD BE LOCATED PARALLEL TO ROAD AND SIDEWALK.  
 3. AFTER THE GUARANTEE PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF STAKES AND GUY WEBBING, AND FOR THE INSTALLATION OF PAVERS PREVIOUSLY LEFT OUT FOR STAKING.

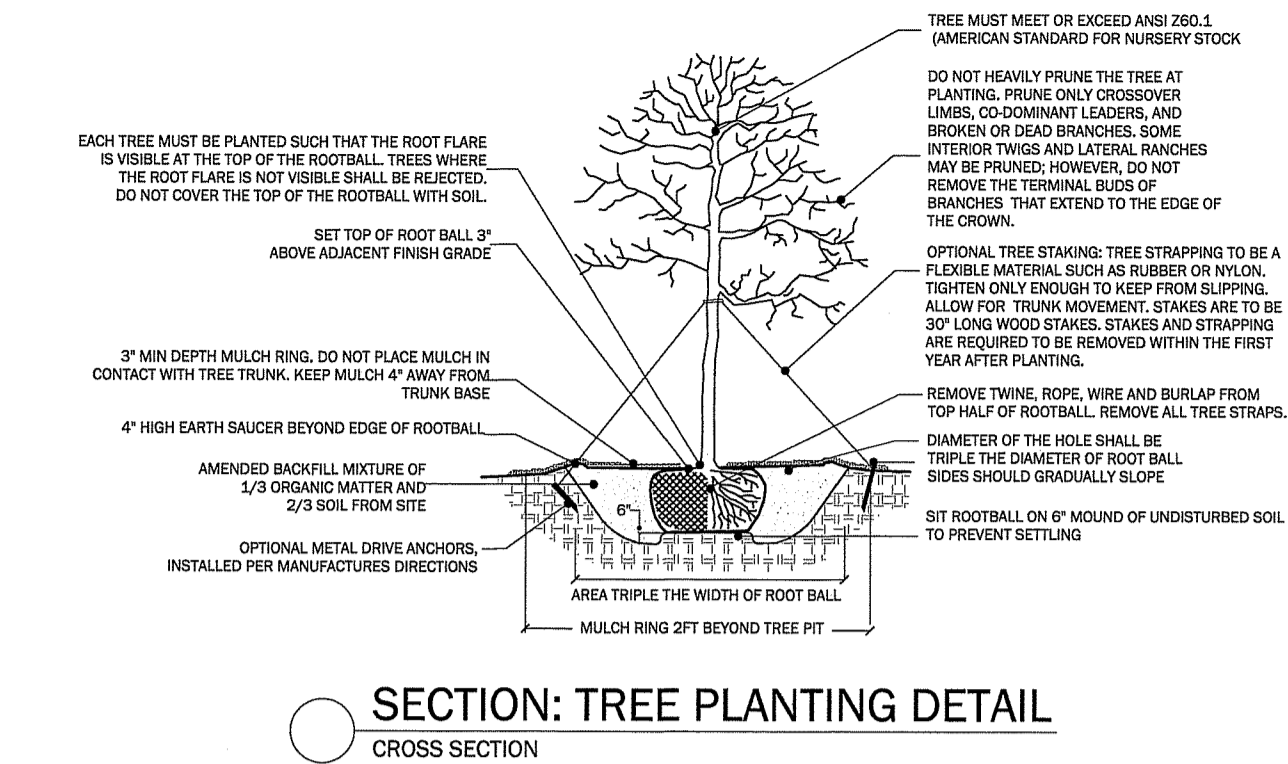
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**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PAVER DETAIL AROUND NEW TREES**

R.I. STANDARD 50.1.2

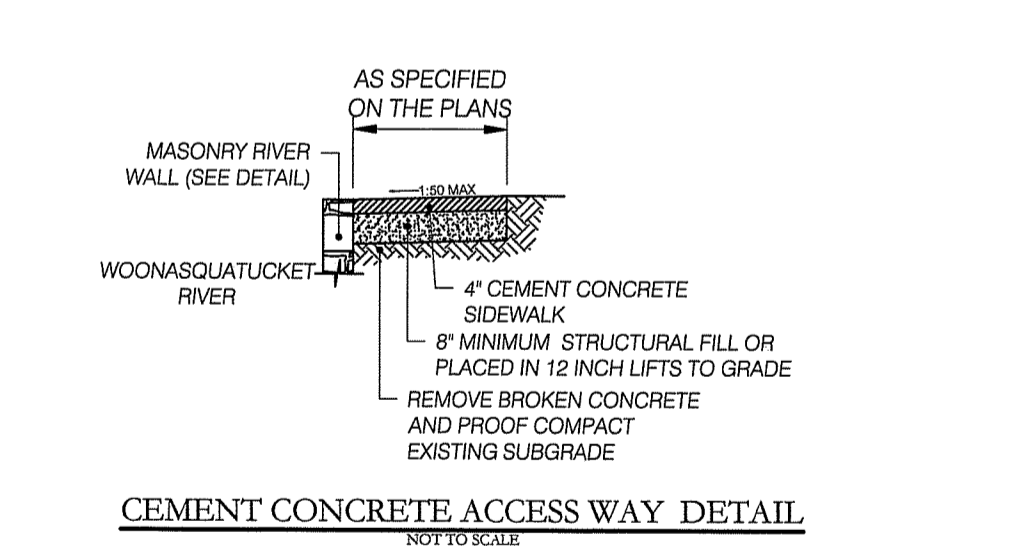
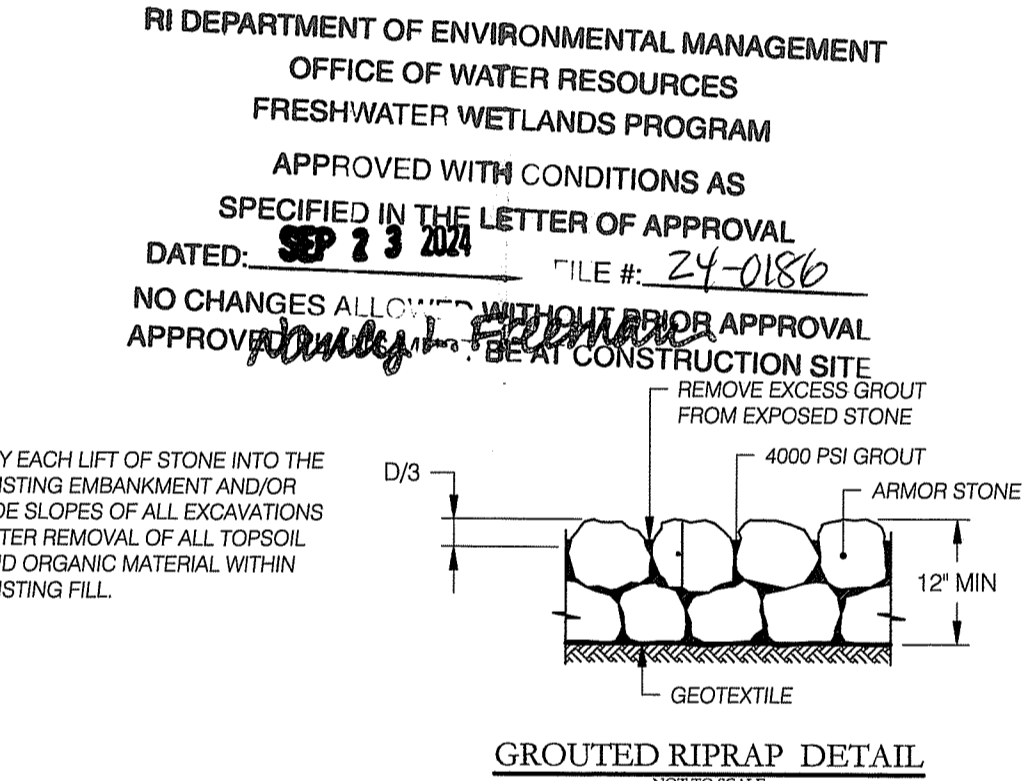
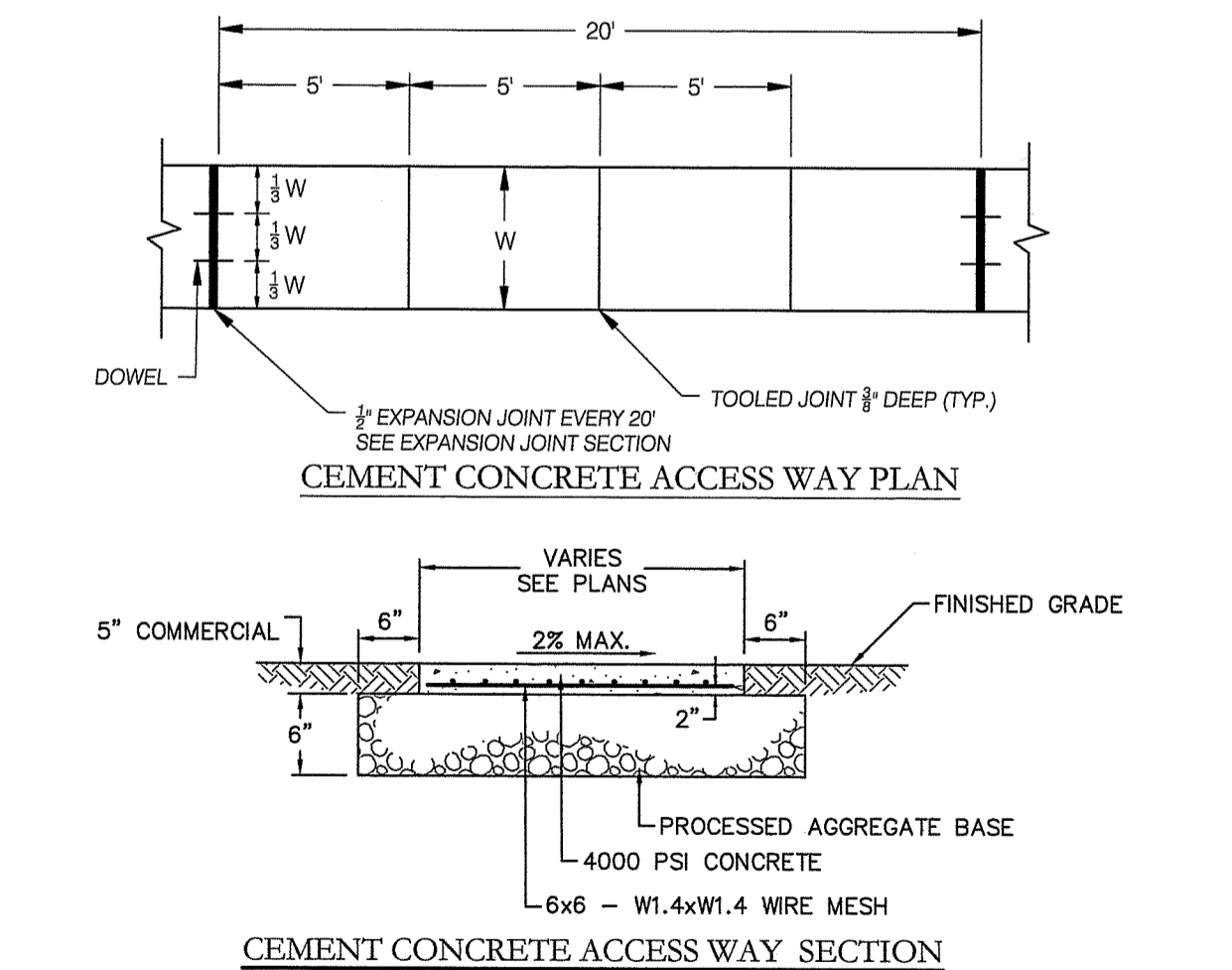
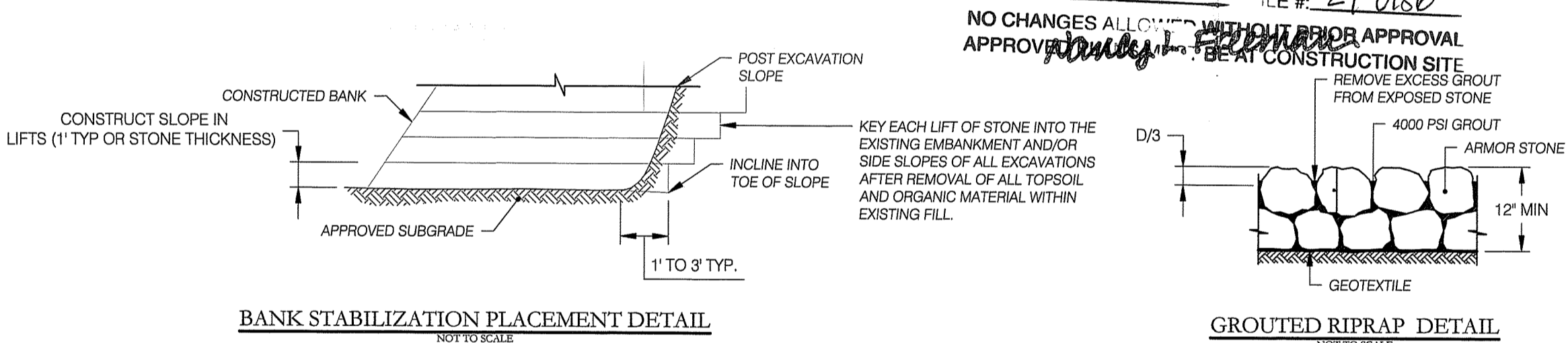
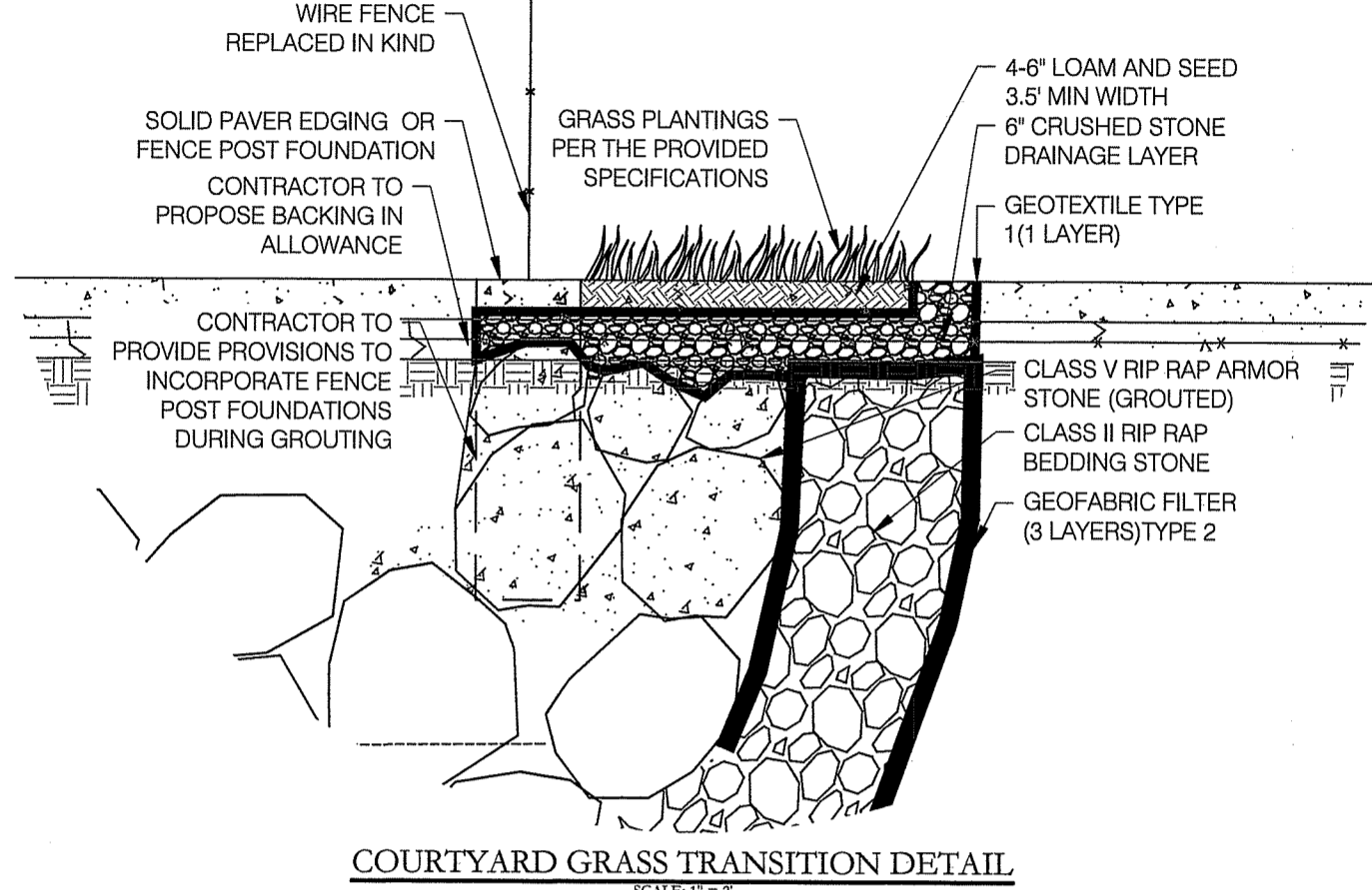
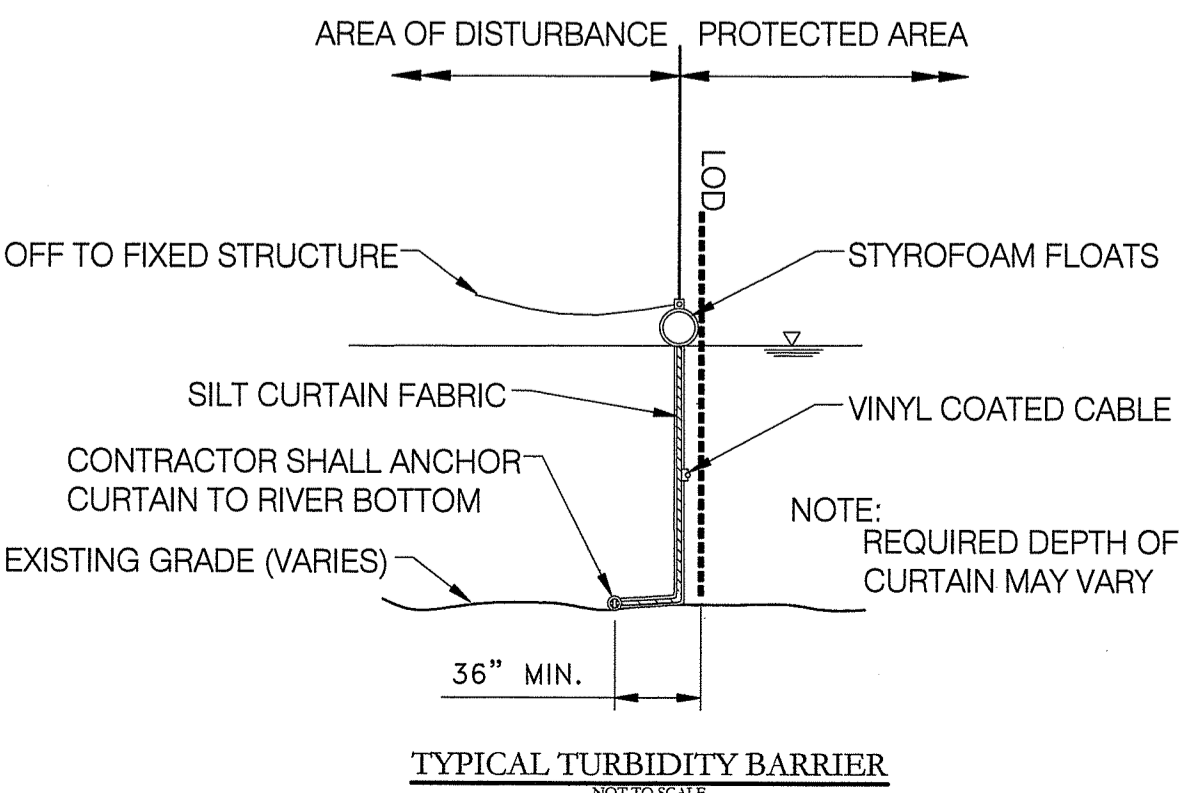
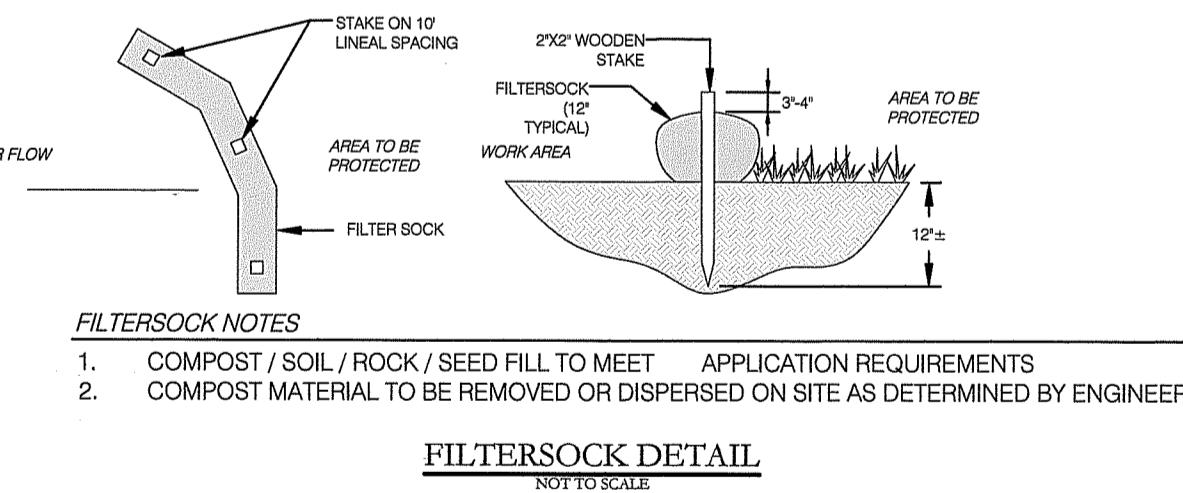
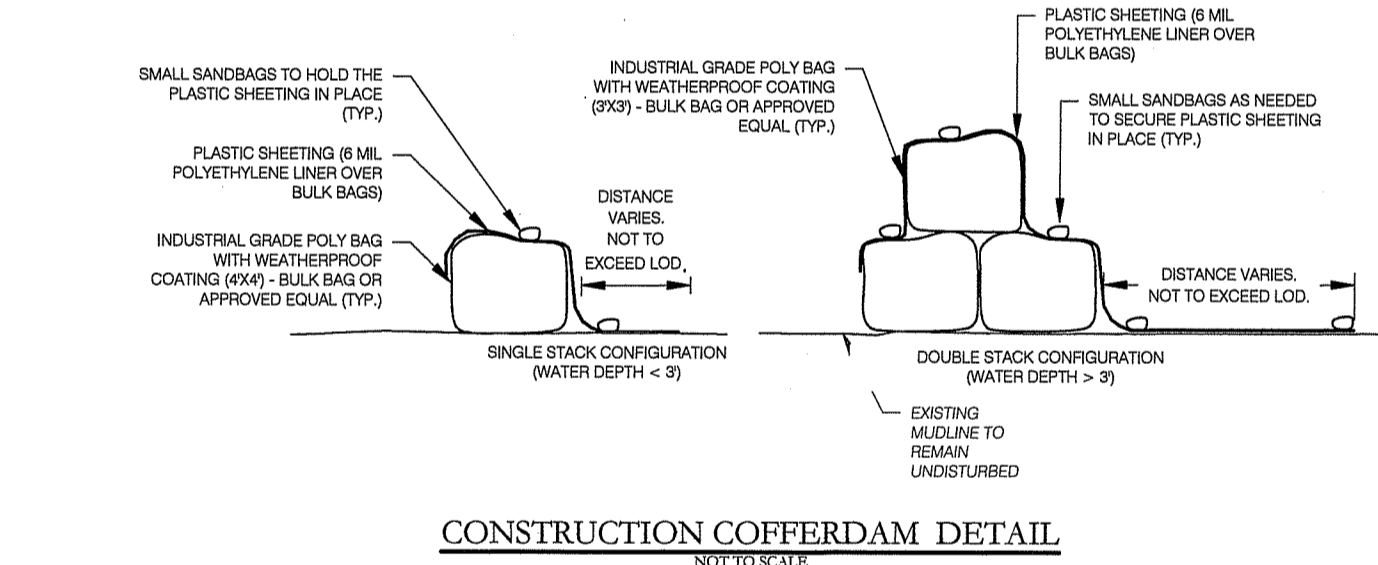
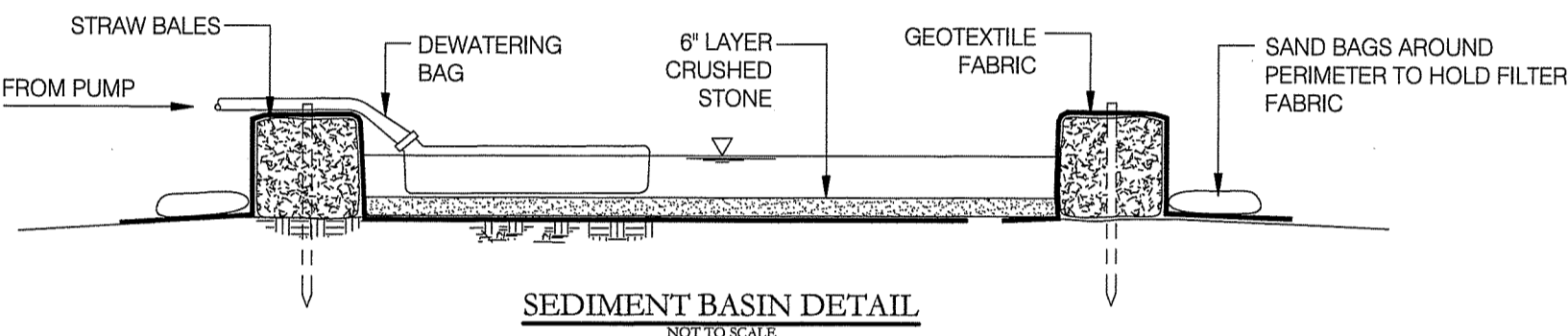
June 15, 1998  
 Chief Engineer  
 Chief Design Engineer  
 Transportation



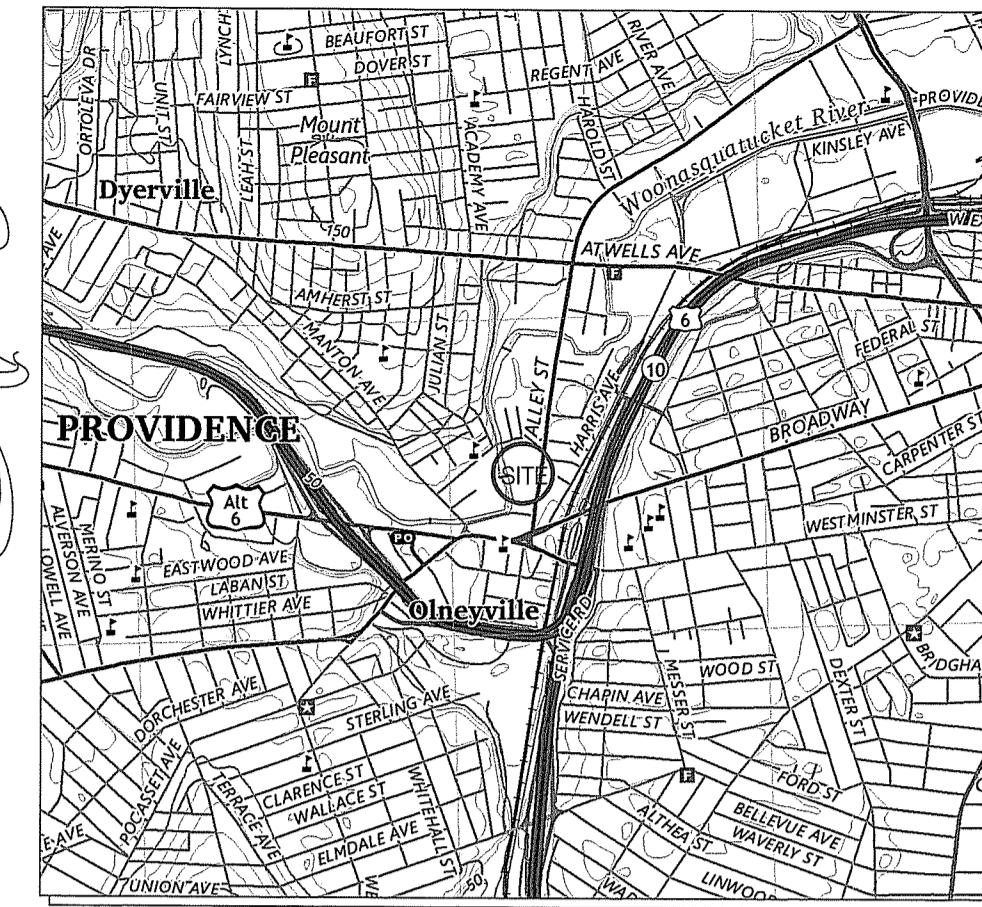
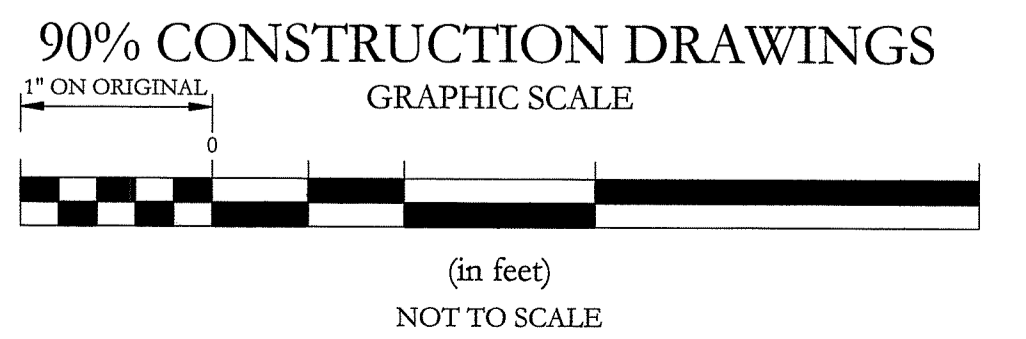
**Proposed Tree Removal Mitigation Schedule**

Common Name	Number of specimens	Approximate Location
Red Oak <i>Quercus rubra</i>	4	Downstream end of proposed top of bank
Grey Birch <i>Betula populifolia</i>	5	bank at interface of community courtyard and masonry wall

- TREE MITIGATION NOTES**
- A TOTAL OF 9 SPECIMENS ARE PROPOSED
  - ALL PROPOSED SPECIMENS SHALL BE 5-8 FEET HIGH AFTER PLANTING
  - IF ANY PLANTINGS FAIL TO SURVIVE AT LEAST ONE (1) YEAR FROM THE TIME THEY WERE PLANTED, THOSE PLANTS WILL BE REPLACED. THE PROPOSED TREE SPECIMENS WILL BE PLANTED ACCORDING TO THE PROVIDED SPECIFICATIONS AND AS DEPICTED IN FIGURES PR-2 AND RI STANDARD SPECIFICATION 50.1.2.
  - TREE PLANTINGS PROVIDED HERE ARE SUBJECT TO CHANGE BASED ON THE EXPECTED MATURE HEIGHT, ROOTBALL SIZE, AND ROOTING DEPTH. ALL FINAL PLANTINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND PROJECT PWS.



- ACCESS WAY NOTES**
- ACCESS WAY DETAIL AND NOTES FROM THE CITY OF PROVIDENCE STANDARD DETAIL 43.1.0 AND ADAPTED TO MEET THE SITE CONDITIONS. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
  - RUNNING SLOPE OF THE ACCESS WAY SHALL NOT EXCEED 8.3% (1:12).
  - CROSS SLOPE OF ACCESS WAY SHALL NOT EXCEED 2% (1:50).
  - STRUCTURAL FILL BASE SHALL BE COMPACTED TO ACHIEVE SOIL DENSITY VALUES OF 95% MODIFIED PROCTOR DENSITY (AASHTO T180).
  - ACCESS WAY REPAIRS TWENTY FEET OR LONGER ARE SUBJECT TO REQUIREMENTS HEREIN. ACCESS WAY REPAIRS SHORTER THAN TWENTY FEET SHALL MAKE EVERY EFFORT TO MEET REQUIRED SLOPES.
  - CONTROL JOINTS SHALL BE INSTALLED EVERY 5 FEET IN EACH DIRECTION.
  - EXPANSION JOINTS SHALL BE INSTALLED EVERY 20 FEET IN EACH DIRECTION AND AT FOUNDATIONS AND WALLS. THE EXPANSION JOINTS SHALL BE THE FULL DEPTH OF THE SIDEWALK AND FILLED WITH AN APPROVED TYPE OF REMOLDED EXPANSION JOINT FILLER.



LOCUS MAP  
NOT TO SCALE

United Way of Rhode Island  
**CapEx Advisory Group** Build with Confidence

**McCUE ENVIRONMENTAL**

**RMA GeoEnvironmental**

20 Main Street  
 Wickford, Rhode Island 02852  
 WWW.RMAHYDRO.COM

No.	Revision	Date	App.

Designed By: \_\_\_\_\_ Drawn by: ETS Checked by: JER  
 Scale: AS NOTED Date: 9.16.2024  
 Project Title:

**UNITED WAY RIVER WALL**

UNITED WAY OF RHODE ISLAND  
 50 VALLEY STREET  
 PROVIDENCE, RI 02909

Client/Owner: UNITED WAY OF RHODE ISLAND  
 50 VALLEY STREET  
 PROVIDENCE, RI 02909

Issued for: REGULATORY REVIEW AND PERMITTING  
 Drawing Title: MISCELLANEOUS PROJECT NOTES AND DETAILS  
 50 VALLEY STREET  
 PROVIDENCE, RI 02909

Drawing Number: **N - 2**

Sheet **6** of **10**

Project Number: **24140.00**

Survey Index: **- 35 - 586**

JOSHUA E. ROSENBERG  
 No. 12640  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL

**TECHNICAL SPECIFICATION NOTES**

**QUALITY OF STONE**

- ALL STONE SHALL CONSIST OF SOUND, HARD, DENSE, DURABLE ROCK WHICH HAS BEEN SEPARATED FROM BEDROCK IN PLACE BY QUARRYING. UNIT WEIGHT OF STONE SHALL NOT BE LESS THAN 165 POUNDS PER CUBIC FOOT, DRY IN AIR. THE STONE SHALL BE FREE FROM OPEN OR INCIPENT CRACKS, SEAMS AND FISSURES, AND FROM POROUS STRUCTURE, SOLUTION CAVITIES, PLANES OF WEAKNESS, AND FROM COMPONENT MINERALS AND CEMENTING OR BONDING MATERIALS THAT MAY CONTRIBUTE TO SPALLING OR BREAKDOWN DURING HANDLING AND PLACING AND FROM EROSION FLOW VELOCITIES AND CHEMICAL ACTION FROM AIR AND WATER. NO STONE SHALL BE USED IN WHICH THE LEAST PRINCIPAL DIMENSION IS LESS THAN ONE THIRD OF THE GREATEST DIMENSION. SLABS, BOULDERS AND ROUND STONES WILL BE REJECTED. STONE SHALL, IN GENERAL, BE OF IRREGULAR AND ANGULAR SHAPE; HOWEVER, NOT MORE THAN 25% MAY BE ROUGHLY RECTANGULAR, PROVIDED SUCH STONE IS PLACED WITH ITS LONG AXIS PERPENDICULAR TO THE LENGTH OF THE STRUCTURE.
- GRADATION OF IMPORTED STONE SHALL MEET THE REQUIREMENTS AS SPECIFIED IN THE THE TABLE ON THIS SHEET. THE CONTRACTOR SHALL COORDINATE WITH HIS SUPPLIER AS NECESSARY TO PROVIDE MATERIAL IN ACCORDANCE WITH THESE SPECIFICATIONS.
- STONE USED FOR ARMOR SHALL BE HARD, DURABLE, ANGULAR IN SHAPE, RESISTANT TO WEATHERING AND SHALL MEET THE GRADATION REQUIREMENT SPECIFIED. NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHOULD BE LESS THAN ONE-THIRD ITS LENGTH. ROUND STONE OR BOULDERS WILL NOT BE ACCEPTED UNLESS AUTHORIZED BY SPECIAL PROVISIONS. STONE SHALL BE FREE FROM OVERBURDEN, SPOIL, SHALE, AND ORGANIC MATERIAL.
- CONTROL OF GRADATION WILL BE BY VISUAL INSPECTION. THE CONTRACTOR SHALL PROVIDE AT THE LOCATIONS SPECIFIED A MASS OF ROCK OF AT LEAST FIVE TONS MEETING THE GRADATION FOR THE CLASS SPECIFIED. THE SAMPLE AT THE CONSTRUCTION SITE MAY BE A PART OF THE FINISHED RIPRAP COVERING. THESE SAMPLES SHALL BE USED AS A FREQUENT REFERENCE FOR JUDGING THE GRADATION OF THE RIPRAP SUPPLIED. ANY DIFFERENCE OF OPINION BETWEEN THE ENGINEER AND THE CONTRACTOR SHALL BE RESOLVED BY DUMPING AND CHECKING THE GRADATION OF TWO RANDOM TRUCKLOADS OF STONE. MECHANICAL EQUIPMENT, A SORTING SITE AND LABOR NEEDED TO ASSIST IN CHECKING GRADATION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

**ARMOR STONE**

- ARMOR STONE SHALL BE UTILIZED TO CONSTRUCT THE STABILIZED BANK SLOPE PROTECTION. ARMOR STONE SHALL BE IMPORTED MATERIAL CONFORMING TO CLASS V IN THE TABLE BELOW.
- ARMOR STONE APPEARANCE: THE ARMOR STONE SHALL BE CLEAN AND HAVE A UNIFORM APPEARANCE. THE VISUAL APPEARANCE OF THE PROPOSED STONE MUST BE APPROVED BY THE ENGINEER.
- ARMOR STONE SHALL BE PLACED ON PLACED BEDDING STONE OR ONTO THE GEOTEXTILE FABRIC WITHIN THE LIMITS SHOWN ON THE DRAWINGS. EACH STONE SHALL BE INDIVIDUALLY PLACED BY SUITABLY SIZED EQUIPMENT. STONE SHALL BE CAREFULLY SELECTED AS TO SIZE AND SHAPE AND PLACED TO OBTAIN FIRM CONTACT WITH THE MAXIMUM NUMBER OF ADJACENT STONES IN ORDER TO OBTAIN THE BEST POSSIBLE INTERLOCKING. THE FACE OF THE SLOPE COVER STONE IS TO BE LEFT ROUGH WITH PLACING EFFORTS CONCENTRATED ON INSURING THAT EACH STONE IS FIRMLY SET AND WELL SUPPORTED BY UNDERLYING AND ADJACENT STONES. ARMOR STONE SHALL BE PLACED WITH METHODS THAT PREVENT DAMAGE TO THE ADJACENT STRUCTURES AS NECESSARY. HAND PLACING OR REARRANGING OF INDIVIDUAL STONES BY MECHANICAL EQUIPMENT MAY BE REQUIRED TO THE EXTENT NECESSARY TO SECURE THE RESULTS SPECIFIED.
- STONE FOR RIPRAP SHALL BE PLACED ON THE PREPARED SUBGRADE IN A MANNER WHICH WILL PRODUCE A REASONABLY WELL-GRADED MASS OF STONE WITH THE MINIMUM PRACTICABLE PERCENTAGE OF VOIDS. THE LARGER STONES SHALL BE WELL DISTRIBUTED AND THE ENTIRE MASS OF STONE SHALL CONFORM TO THE GRADATION SPECIFIED.
- IT IS THE INTENT OF THESE SPECIFICATIONS TO PRODUCE A FAIRLY COMPACT RIPRAP PROTECTION IN WHICH ALL SIZES OF MATERIAL ARE PLACED IN THEIR PROPER PROPORTIONS.

**BEDDING STONE**

- BEDDING STONE SHALL BE IMPORTED MATERIAL CONFORMING TO CLASS II IN THE TABLE BELOW.

Table 4.1. Minimum and Maximum Allowable Particle Size in Inches.

Nominal Riprap Class by Median Particle Diameter	Class	Size	d <sub>15</sub>		d <sub>50</sub>		d <sub>85</sub>		d <sub>100</sub>
			Min	Max	Min	Max	Min	Max	Max
I	6 in	3.7	5.2	5.7	6.9	7.8	9.2	12.0	
II	9 in	5.5	7.8	8.5	10.5	11.5	14.0	18.0	
III	12 in	7.3	10.5	11.5	14.0	15.5	18.5	24.0	
IV	15 in	9.2	13.0	14.5	17.5	19.5	23.0	30.0	
V	18 in	11.0	15.5	17.0	20.5	23.5	27.5	36.0	
VI	21 in	13.0	18.5	20.0	24.0	27.5	32.5	42.0	
VII	24 in	14.5	21.0	23.0	27.5	31.0	37.0	48.0	
VIII	30 in	18.5	26.0	28.5	34.5	39.0	46.0	60.0	
IX	36 in	22.0	31.5	34.0	41.5	47.0	55.5	72.0	
X	42 in	25.5	36.5	40.0	48.5	54.5	64.5	84.0	

Note: Particle size d corresponds to the intermediate ("B") axis of the particle.

**FILL MATERIAL**

- FILL MATERIALS SHOULD BE FREE DRAINING FRIABLE SOIL, FREE FROM TRASH, ICE, SNOW, FROZEN SOILS, TREE STUMPS, ROOTS, AND OTHER ORGANIC MATTER AND DELETERIOUS MATERIALS. ALL SOIL FILL MATERIALS WILL REQUIRE TESTING PER THE ELUR & SMP.
- ALL FILLS PLACED ADJACENT TO EXISTING SOILS WITHIN TRENCHES OR ALONG SLOPES SHALL BE 'BENCHED' INTO THE EXISTING MATERIAL AS SHOWN ON N-2.
- CRUSHED STONE:
  - DURABLE CRUSHED ROCK CONSISTING OF THE ANGULAR FRAGMENTS OBTAINED BY BREAKING AND CRUSHING SOLID OR SHATTERED NATURAL ROCK, AND FREE FROM DETRIMENTAL QUANTITY OF THIN, FLAT, ELONGATED\* OR OTHER OBJECTIONABLE PIECES. A DETRIMENTAL QUANTITY WILL BE CONSIDERED AS ANY AMOUNT IN EXCESS OF 1% OF THE TOTAL WEIGHT.
  - CRUSHED STONE GRADATION SHALL COMPLY WITH THE GRADATIONS FOR CRUSHED STONE AS PROVIDED IN BELOW
- STRUCTURAL FILL
  - STRUCTURAL FILL GRADATION SHALL COMPLY WITH THE GRADATIONS FOR STRUCTURAL FILL AS PROVIDED IN THE TABLE BELOW

Structural Fill		Crushed Stone	
Sieve Size	% Passing	Sieve Size	% Passing
3"	60 - 100	2"	100
1/2"	50 - 85	1 1/2"	90-100
3/8"	45 - 80	1"	30-55
# 4	40 - 75	3/4"	0-25
# 40	0 - 45	1/2"	0-10
# 200	0 - 10	# 4	0 - 5

**GRADED SAND FILTER**

- SAND FILTER GRADATION SHALL COMPLY WITH THE GRADATIONS FOR GRADED FILTER AS PROVIDED IN THE TABLE BELOW

**Graded Filter**

Sieve Size	% Passing
2"	100
3/8"	45 - 80
# 4	40 - 75
# 16	35 - 80
# 50	10 - 55
# 100	2 - 10
# 200	0 - 5

NOTE: DEPENDING ON MEANS AND METHODS OF THE CONTRACTOR, ASTM C33 FILTER SAND COULD BE USED AS AN ALTERNATIVE.

**COMPACTION**

- ANY DISTURBED SOIL AT THE BOTTOM OF AN EXCAVATION MUST BE COMPACTED WITH VIBRATORY COMPACTION EQUIPMENT PRIOR TO COMMENCEMENT OF CONSTRUCTION. PROOF COMPACTION OF THE BOTTOM OF THE EXCAVATION SHOULD BE COMPLETED WITH VIBRATORY EQUIPMENT APPROVED FOR THE ARM OF THE EXCAVATOR ON SLOPED AREAS, OR A 1-TON VIBRATORY ROLLER OR LARGE PLATE COMPACTOR IN BOTTOM TRENCHES. WHERE SUBGRADE CONSISTS OF ORGANICS, SILTS/CLAY OR OTHER DISTURBANCE PRONE MATERIALS TYPICAL OF MUDLINE, EXCAVATION SHALL BE PERFORMED WITH A SMOOTH EDGE BUCKET FOLLOWED BY THE IMMEDIATE PLACEMENT OF APPLICABLE MATERIAL.
- COMPACTION OF STRUCTURAL FILL WITHIN ANY BUILDING INFLUENCE AREA AND BELOW/BEHIND RETAINING WALLS IS REQUIRED TO BE A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557. MOISTURE CONTENT AND COMPACTION TESTING WILL BE REQUIRED BASED ON CONTRACTORS MEANS AND METHODS. IF IN-PLACE DENSITY TEST RESULTS INDICATE THE SPECIFIED MOISTURE OR COMPACTION LIMITS HAVE NOT BEEN MET, THE AREA REPRESENTED BY THE TEST SHOULD BE REWORKED AND RETESTED AS REQUIRED, UNTIL THE SPECIFIED MOISTURE AND COMPACTION REQUIREMENTS ARE ACHIEVED.

**EARTH EXCAVATION**

- EARTH EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE THE EXCAVATION, REMOVAL AND SATISFACTORY DISPOSAL OR AS DIRECTED IN WRITING. IT SHALL INCLUDE, BUT NOT BE LIMITED TO, EARTH MATERIALS SUCH AS CONTAMINATED SOILS, MASONRY, CONCRETE, STEEL REINFORCING, PEATS, ORGANIC OR INORGANIC SILTS, CLAY, SAND AND GRAVEL, COBBLES AND BOULDERS LESS THAN 2 CUBIC YARDS IN VOLUME, SOFT OR DISINTEGRATED ROCK WHICH, IN THE OPINION OF THE ENGINEER, CAN BE REMOVED WITHOUT BLASTING OR DRILLING, PAVEMENT, AND ALL OBSTRUCTIONS.
- IF UNSTABLE CONDITIONS DEVELOP AS A RESULT OF PROOF COMPACTION OF THE BOTTOM OF THE EXCAVATION, AND DEWATERING IS NOT PRACTICAL DUE TO DISCHARGE RESTRICTIONS ESTABLISHED IN THE SMP, REPLACEMENT WITH COMPACTED CRUSHED STONE WRAPPED WITH TYPE I GEOTEXTILE FILTER FABRIC SHOULD BE ANTICIPATED.
- CONTRACTOR SHALL SAW CUT THE COMMUNITY COURTYARD AT THE FIRST CONTROL JOINT NEAREST THE BUILDING PRIOR TO MOBILIZATION OF LARGE EQUIPMENT. THE MAJORITY OF THE TOP COURTYARD SLAB (EXISTING) SHALL REMAIN DURING CONSTRUCTION AS A SACRIFICIAL COVER OVER EXISTING SUBGRADE. EXCAVATION SHALL BE KEPT TO MINIMUM AND SAW CUTS TO PERFORM THE WORK SHALL BE WITHIN 2 FEET OF EXCAVATION. REMOVE AND REPLACE COURTYARD SLAB UPON COMPLETION OF THE WORK.

**GEOTEXTILE**

- TYPE 1 AND TYPE 2 GEOTEXTILES SHALL BE NONWOVEN, NEEDLE PUNCHED PERVIOUS SHEETS OF POLYESTER, POLYETHYLENE, NYLON, OR POLYPROPYLENE FILAMENTS FORMED INTO A UNIFORM PATTERN. THE GEOTEXTILES SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES WHEN MEASURED IN ACCORDANCE WITH THE REFERENCED STANDARDS:

Test	Method	Type 1	Type 2
Grab Tensile Strength (lbs)	ASTM D4632	160	380
Elongation at Required Strength (%)	ASTM D4632	50	50
Trapezoidal Tear Strength (lbs)	ASTM D4533	60	145
CBR Puncture Strength (lbs)	ASTM D6241	410	1080
UV Resistance (after 500hrs)	ASTM D4355	70%	70%
Apparent Opening Size (US Standard Sieve)	ASTM D4751	70 - 80	100
Permittivity (sec-1)	ASTM D4491	1.5	0.7
Flow Rate (2) (gal/min/sf)	ASTM D4491	110	50

- TYPE I SHALL BE USED AROUND ALL CRUSHED STONE
- TYPE II SHALL BE USED BENEATH ALL STONE AND AGAINST EXISTING MASONRY OR CONCRETE
- GEOTEXTILE FABRIC SHALL BE LAPPED 2'-0" AT ALL SEAMS. THREE (3) LAYERS ARE SPECIFIED BENEATH ALL ARMOR STONE SECTIONS.
- THE AREA SHALL BE GRADED OR BENCHED AND ALL STONES, ROOTS, STICKS, OR OTHER FOREIGN MATERIAL WHICH WOULD INTERFERE WITH THE FABRIC BEING COMPLETELY IN CONTACT WITH THE SOIL SHALL BE REMOVED PRIOR TO PLACING THE FABRIC. THE FABRIC SHALL BE PLACED LOOSELY AND THE MACHINE DIRECTION OF THE FABRIC LAID PERPENDICULAR TO THE ALIGNMENT OF THE BANK. PINNING OR STAPLING MAY BE REQUIRED TO HOLD THE GEOTEXTILE IN PLACE. SEPARATE PIECES OF FABRIC SHALL BE JOINED BY OVERLAPPING OR SEWING. THE FABRIC IN THE OVERLAPPED JOINTS SHALL BE PLACED WITH A MINIMUM OVERLAP OF 24 INCHES. AFTER PLACEMENT, THE FABRIC SHALL BE EXPOSED NO LONGER THAN 48 HOURS PRIOR TO COVERING.
- ALL STONE SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE FABRIC

**GROUT FOR GROUTED RIPRAP**

- GROUT FOR GROUTED RIPRAP WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI, SHALL CONSIST OF ONE PART PORTLAND CEMENT AND THREE PARTS OF SAND, THOROUGHLY MIXED WITH WATER TO PRODUCE GROUT HAVING A THICK, CREAMY CONSISTENCY. THE MINIMUM AMOUNT OF WATER SHOULD BE USED TO PREVENT EXCESS SHRINKAGE OF THE GROUT AFTER PLACEMENT. THE CEMENT, SAND, AND MIXING SHALL CONFORM TO THIS SECTION AND AS APPROVED BY THE ENGINEER.
- PORTLAND CEMENT: ASTM C 150, TYPE II FOR ALL WORK UNLESS OTHERWISE SPECIFIED. USE ONE BRAND OF CEMENT THROUGHOUT PROJECT.
- NORMAL WEIGHT AGGREGATES: ASTM C 33, AND AS HEREIN SPECIFIED. USE 3/4" MAXIMUM SIZE FOR ALL CONCRETE, UNLESS OTHERWISE DIRECTED OR SPECIFIED. PROVIDE AGGREGATES FROM A SINGLE SOURCE FOR EXPOSED CONCRETE.
- WATER: CLEAN, POTABLE AND FREE FROM FOREIGN MATERIALS IN AMOUNTS HARMFUL TO CONCRETE AND EMBEDDED STEEL. PROVIDE WATER WHICH MEETS ACI/ASTM REQUIREMENTS FOR CONCRETE MIX WATER.
- THE STONES SHALL BE PLACED ON THE PREPARED SUBGRADE TO THE DIMENSIONS SHOWN ON THE PLANS. THE STONES SHALL BE THOROUGHLY MOISTENED AND ANY EXCESS OF FINES SHALL BE SLICED TO THE UNDERSIDE OF THE STONE BLANKET BEFORE GROUTING.
- THE GROUT MAY BE DELIVERED TO THE PLACE OF FINAL DEPOSIT BY ANY MEANS THAT WILL ENSURE UNIFORMITY AND PREVENT SEGREGATION OF THE GROUT. IF PENETRATION OF GROUT IS OBTAINED BY GRAVITY FLOW INTO THE INTERSTICES, THE GROUT WILL BE SPADED OR RODDED INTO THE INTERSTICES TO COMPLETELY FILL THE VOIDS IN THE STONE BLANKET. PRESSURE GROUTING SHALL NOT UNSEAT THE STONES, AND AFTER PLACING BY THIS METHOD, THE GROUT SHALL BE SPADED OR RODDED INTO THE VOIDS. PENETRATION OF THE GROUT SHALL BE TO THE DEPTH SPECIFIED ON THE PLANS. GROUT SHALL BE PLACED AND STONE SHALL BE BRUSHED UNTIL ONE-THIRD OF THE DEPTH OF SURFACE STONE IS EXPOSED.
- WHERE THE DEPTH SPECIFIED FOR GROUTING IS IN EXCESS OF 24 INCHES, THE RIPRAP SHALL BE PLACED IN LIFTS OF 18 INCHES OR LESS AND EACH LIFT SHALL BE GROUTED PRIOR TO PLACING THE NEXT LIFT. THE SUCCEEDING LIFTS SHALL BE CONSTRUCTED AND GROUTED BEFORE THE GROUT IN THE PREVIOUS LIFT HAS HARDENED. GROUT SHALL BE PLACED ONLY WHEN THE TEMPERATURE IS ABOVE 35°F AND RISING. IT SHALL BE PROTECTED FROM FREEZING AND CURED AS SPECIFIED.

**TREE REMOVAL NOTES**

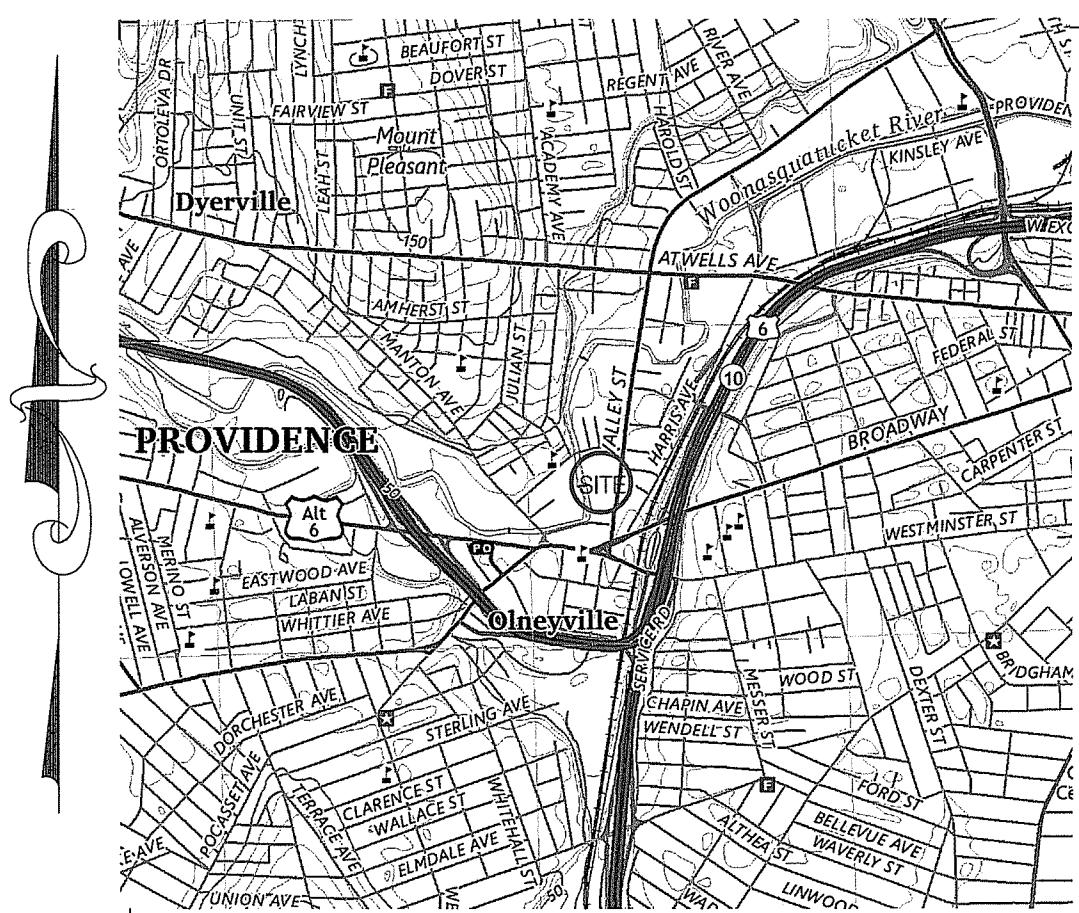
- CONTRACTOR SHALL CUT, REMOVE AND DISPOSE ALL TREES IDENTIFIED FOR REMOVAL AND OTHER STUMPS, SHRUBS, AND/OR VEGETATION AND ASSOCIATED ROOT SYSTEM WITHIN THE PROPOSED SLOPE STABILIZATION WORK AREA.
- CONTRACTOR SHALL LOCATE THE ENTIRE STUMP AND ROOT SYSTEM AND REMOVE.
- ALL DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

**LOAM AND SEED**

- CONTRACTOR SHALL APPLY FERTILIZER AND LOAM TO PREPARE TOPSOIL SURFACE AT THE RATES INDICATED BY SUPPLIER.
- CONTRACTOR SHALL SEED ENTIRE GRASSWAY AND DISTURBED AREAS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEEDED AREA THROUGH ONE GROWING SEASON.
- SEED MIX SHALL CONFORM TO APPROVED CONSERVATION MIX OR RI STATE WILDFLOWER MIX

**SUPER SACK NOTES**

- THE SUPER SACKS WILL CONSIST OF 3 FOOT BY 3 FOOT BY 3 FOOT, WOVEN POLYPROPYLENE, BAGS FILLED WITH A WELL-GRADED GRAVELY SAND WITH A FINES CONTENT BETWEEN 8 AND 20% AND A MINIMUM UNIT WEIGHT OF 115 POUNDS PER CUBIC FOOT.
- WHEN PLACING THE SUPER SACKS ON AN IRREGULAR CHANNEL BOTTOM, CONTRACTOR SHALL PLACE SANDBAGS ALONG THE RIVER BOTTOM AS REQUIRED TO ENSURE EACH SUPER SACK HAS FULL CONTACT WITH THE CHANNEL BOTTOM. LOOSE COBBLES AND BOULDERS SHOULD BE REMOVED PRIOR TO PLACING THE SACKS.
- THE SUPER SACKS MUST BE STACKED IN CONFIGURATIONS SHOWN UNLESS OTHERWISE SUBMITTED AND APPROVED BY THE ENGINEER.
- SUPER SACKS SHALL BE PLACED ABUTTING ONE ANOTHER SUCH THAT THERE ARE NO GAPS BETWEEN THE BAGS.
- ALL CONTROL OF WATER COMPONENTS MUST BE REMOVED IN THEIR ENTIRETY UPON COMPLETION.



LOCUS MAP  
NOT TO SCALE

United Way of Rhode Island

**Cap Ex Advisory Group** Build with Confidence

**MCCUE ENVIRONMENTAL**

**RMA GeoEnvironmental 1**

20 Main Street  
Wickford, Rhode Island 02852  
WWW.RMAHYDRO.COM

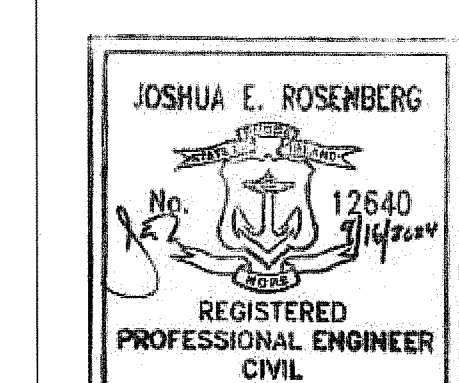
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM

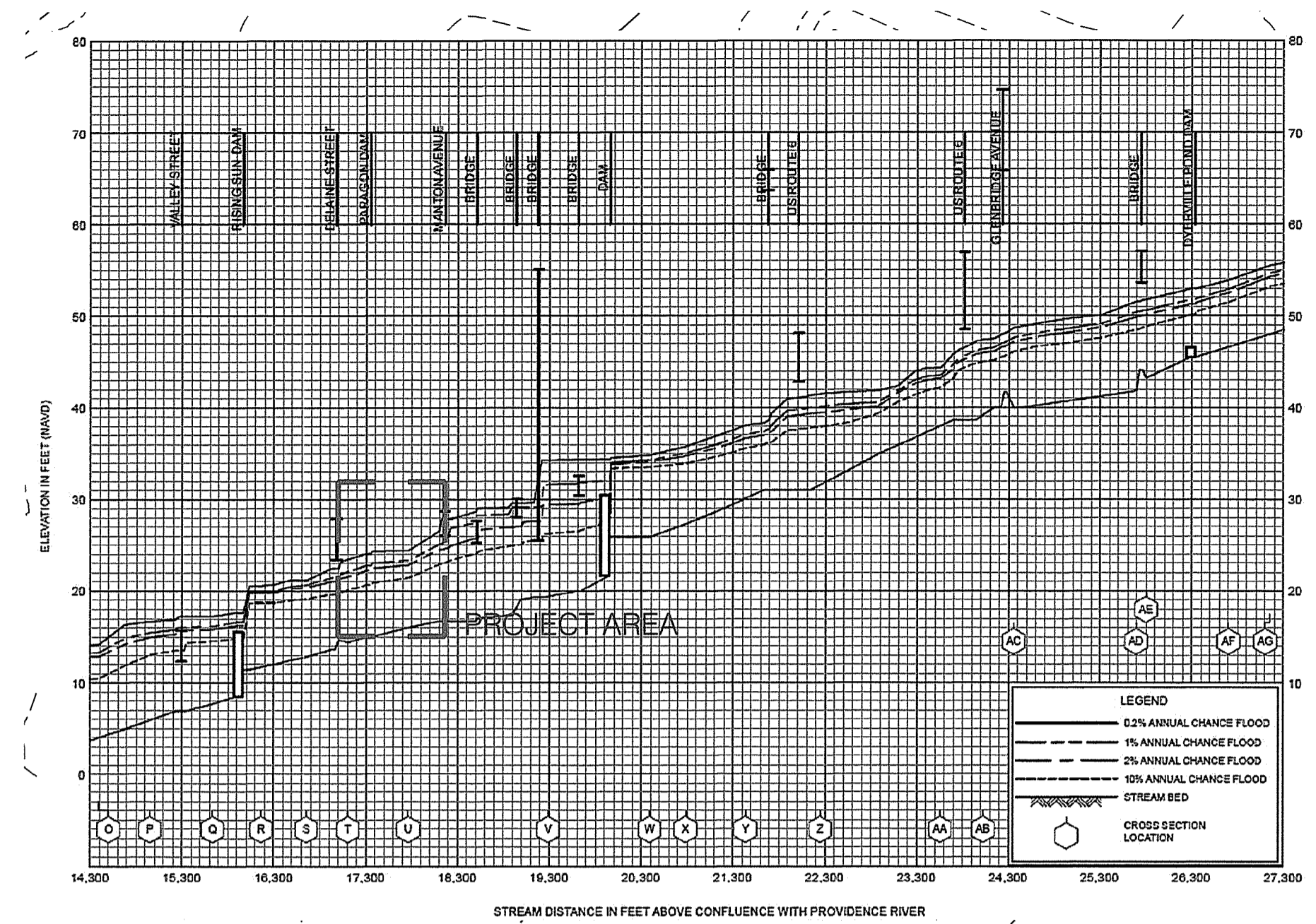
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED: SEP 13 2024 FILE #: 24-0186  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Nancy L. Freeman*

90% CONSTRUCTION DRAWINGS  
GRAPHIC SCALE

(in feet)  
NOT TO SCALE

No.	Revision	Date	App.
Designed By:	Drawn by:	ETS	Checked by: JER
Scale:	NOT TO SCALE	Date:	9.16.2024
Project Title:			
<b>UNITED WAY RIVER WALL</b>			
UNITED WAY OF RHODE ISLAND 50 VALLEY STREET PROVIDENCE, RI 02909			
Client/Owner:		UNITED WAY OF RHODE ISLAND 50 VALLEY STREET PROVIDENCE, RI 02909	
Issued for:		REGULATORY REVIEW AND PERMITTING	
Drawing Title:		MISCELLANEOUS PROJECT NOTES AND DETAILS 50 VALLEY STREET PROVIDENCE, RI 02909	
Drawing Number:		N-3	
Sheet:		7 of 10	
Project Number:		24140.00	
Survey Index:		- 35 - 586	





**FEMA FLOOD PROFILE: WOONASQUATUCKET RIVER**  
NOT TO SCALE

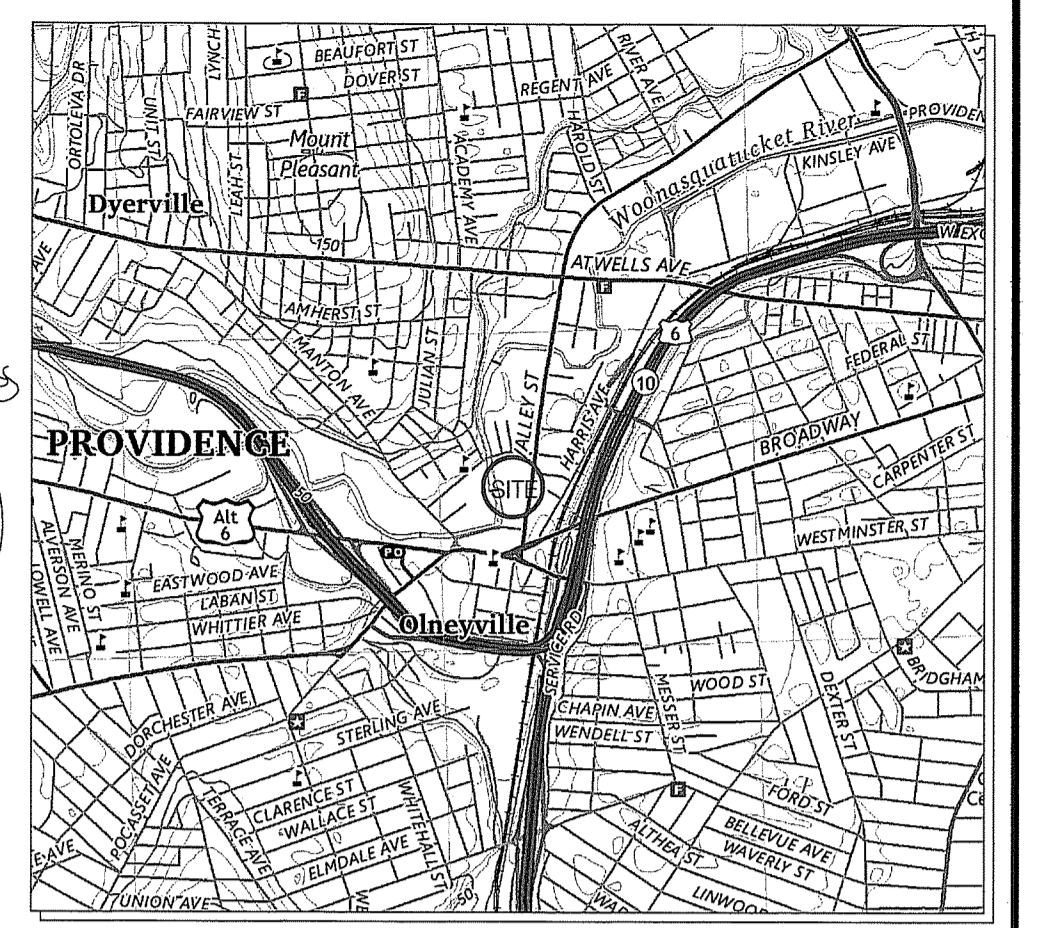
**Existing Comparison to Mapped Fema Flood Elevations**

Station (ft)	Study Section Location	Storm Recurrence Interval (years)	FEMA Flood Elevation (NAVD 88)	Study HEC RAS Flood Elevation (NAVD 88)
17,761	A	10	21.5	22.8
		100	23.3	25.0
17,609	B	10	21.2	22.6
		100	23.1	24.6
17,577	C	10	21.1	22.4
		100	23.0	24.4
17,528	D	10	21.0	21.4
		100	23.0	23.4
17,466	E	10	21.0	21.0
		100	22.8	22.8

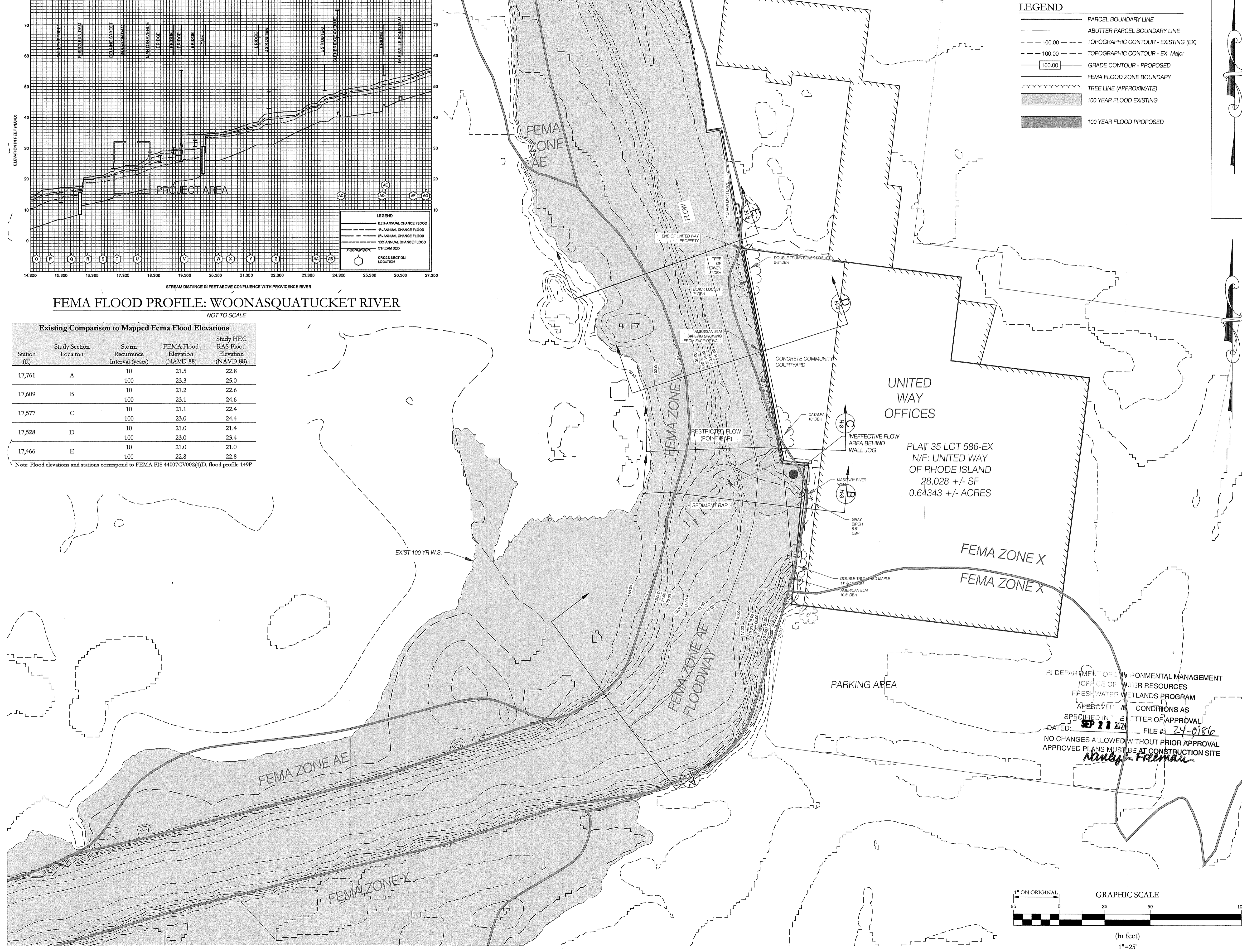
Note: Flood elevations and stations correspond to FEMA FIS 44007CV002(4)D, flood profile 149P

**LEGEND**

- PARCEL BOUNDARY LINE
- ABUTTER PARCEL BOUNDARY LINE
- 100.00 TOPOGRAPHIC CONTOUR - EXISTING (EX)
- 100.00 TOPOGRAPHIC CONTOUR - EX Major
- 100.00 GRADE CONTOUR - PROPOSED
- FEMA FLOOD ZONE BOUNDARY
- TREE LINE (APPROXIMATE)
- 100 YEAR FLOOD EXISTING
- 100 YEAR FLOOD PROPOSED



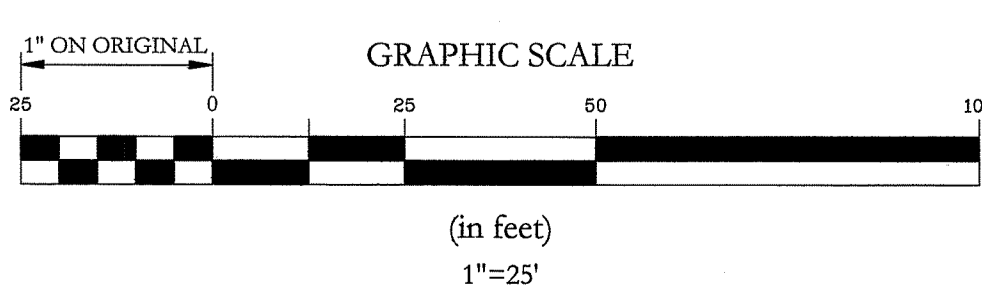
**LOCUS MAP**  
NOT TO SCALE



**UNITED WAY OFFICES**

PLAT 35 LOT 586-EX  
N/F: UNITED WAY OF RHODE ISLAND  
28,028 +/- SF  
0.64343 +/- ACRES

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN LETTER OF APPROVAL  
DATED: **SEP 23 2024** FILE # **24-0186**  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Nancy J. Freeman*



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Wickford, Rhode Island 02852  
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No.	Revision	Date	App.

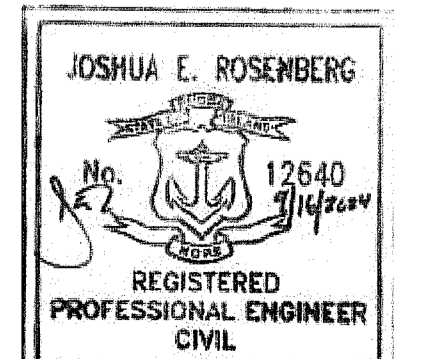
Designed By: **RMA** Drawn by: **JER** Checked by: **JER**  
Scale: **1" = 25'** Date: **9/16/2024**

Project Title:  
**UNITED WAY RIVER WALL**  
UNITED WAY OF RHODE ISLAND  
50 VALLEY STREET  
PROVIDENCE, RI 02909

Client/Owner:  
UNITED WAY OF RHODE ISLAND  
50 VALLEY STREET  
PROVIDENCE, RI 02909

Issued for:  
REGULATORY REVIEW AND PERMITTING

Drawing Title:  
EXISTING HYDRAULIC CONDITIONS PLAN  
50 VALLEY STREET  
PROVIDENCE, RI 02909  
SEP 17 2024  
Office of Water Resources

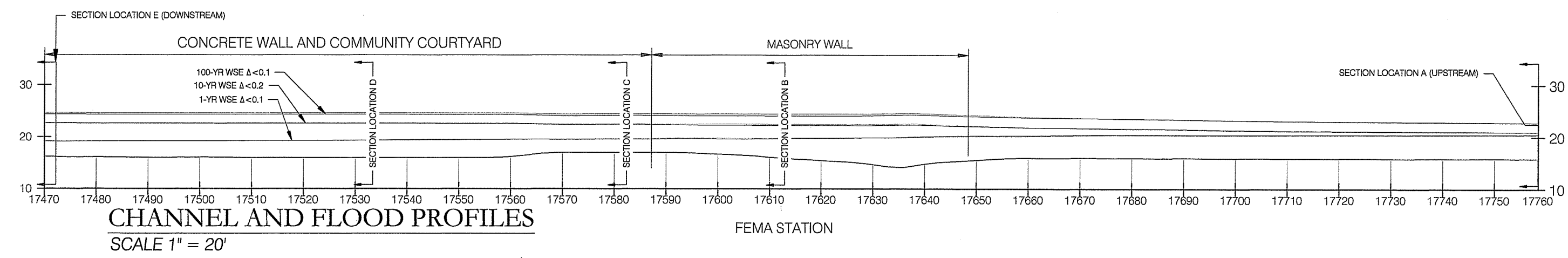


Drawing Number:  
**H - 1**

Sheet **8** of **10**

Project Number:  
**24140.00**

Survey Index:  
**- 35 - 586**



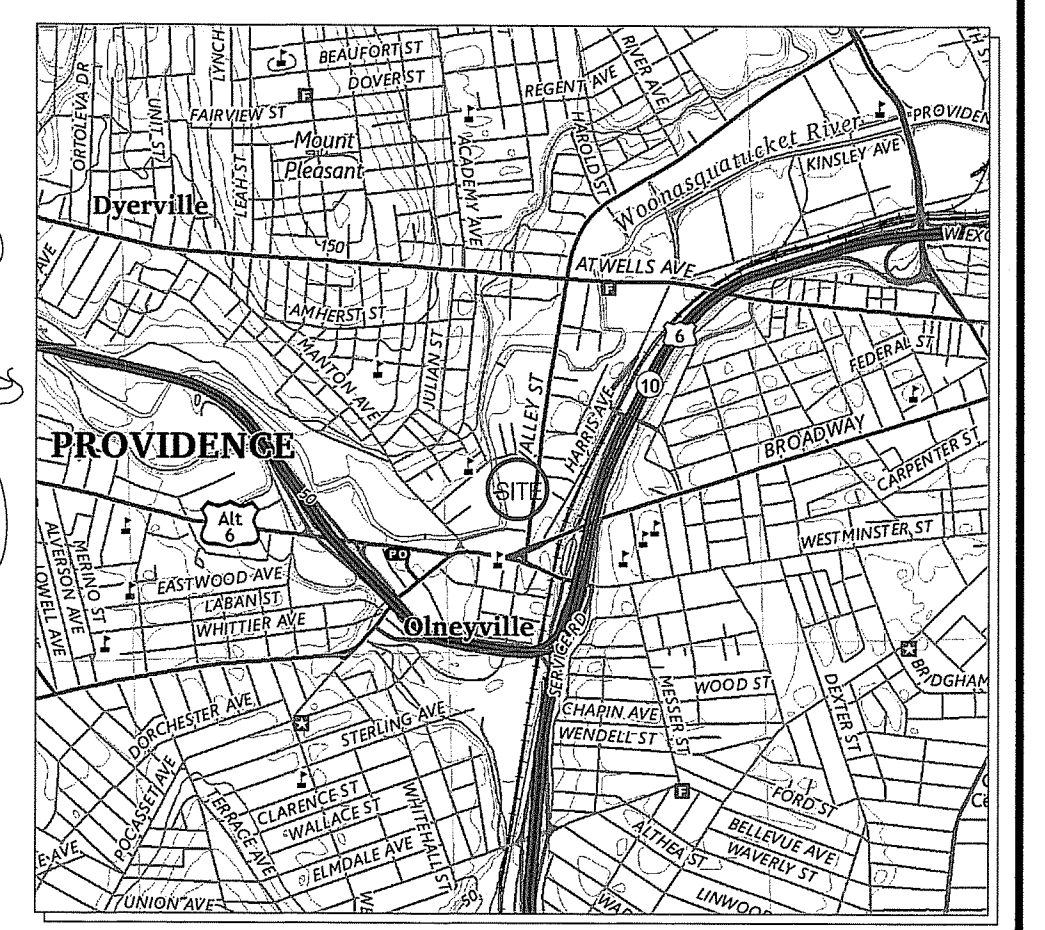
**Delta Hydraulic Conditions Comparison**

Station (ft)	Study Section	Storm Recurrence Interval (years)	Change in Hydraulic Condition	
			WSE (NAVD88)	Velocity (ft/s)
17,761	A	2	0.1	-0.20
		10	-0.1	0.10
		100	-0.5	0.40
17,609	B	1	0.1	1.20
		10	-0.2	0.40
		100	-0.4	0.50
17,577	C	2	0.0	0.75
		10	-0.1	0.00
		100	-0.2	0.05
17,528	D	2	0.1	0.10
		10	0.1	-0.70
		100	0.0	-0.60
17,466	E	2	0.0	0.40
		10	0.1	-0.05
		100	0.1	-0.40

Note: Negative value indicates a lower value for proposed condition  
NOTE: STATIONS CORRESPOND TO THE FIS FLOOD PROFILE

**LEGEND**

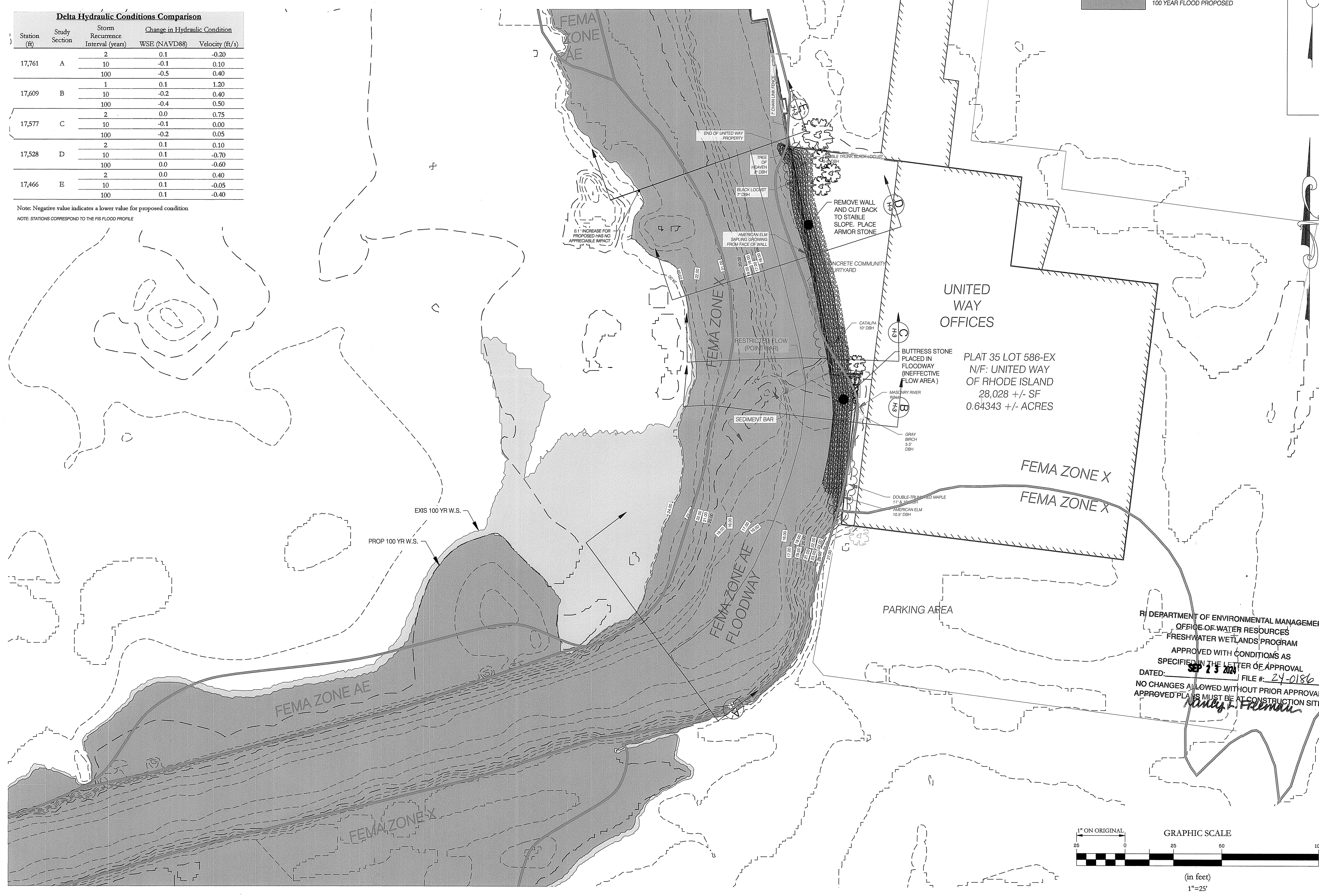
- PARCEL BOUNDARY LINE
- ABUTTER PARCEL BOUNDARY LINE
- 100.00 TOPOGRAPHIC CONTOUR - EXISTING (EX)
- 100.00 TOPOGRAPHIC CONTOUR - EX Major
- GRADE CONTOUR - PROPOSED
- FEMA FLOOD ZONE BOUNDARY
- TREE LINE (APPROXIMATE)
- 100 YEAR FLOOD EXISTING
- 100 YEAR FLOOD PROPOSED



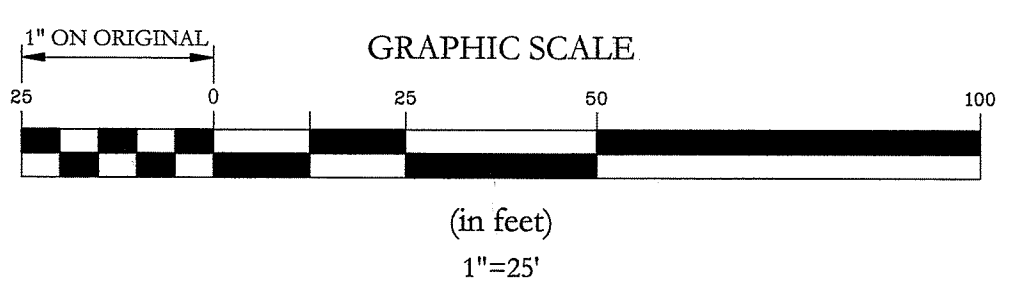
**United Way of Rhode Island**  
**CapEx Advisory Group** | Build with Confidence



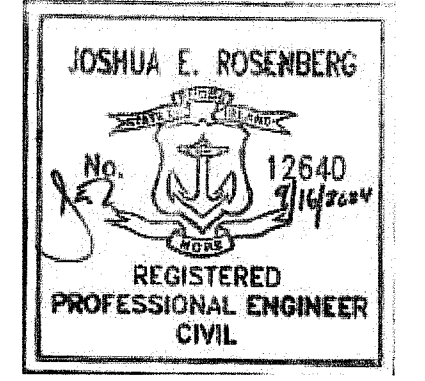
**RMA GeoEnvironmental**  
20 Main Street  
Wickford, Rhode Island 02852  
WWW.RMAHYDRO.COM

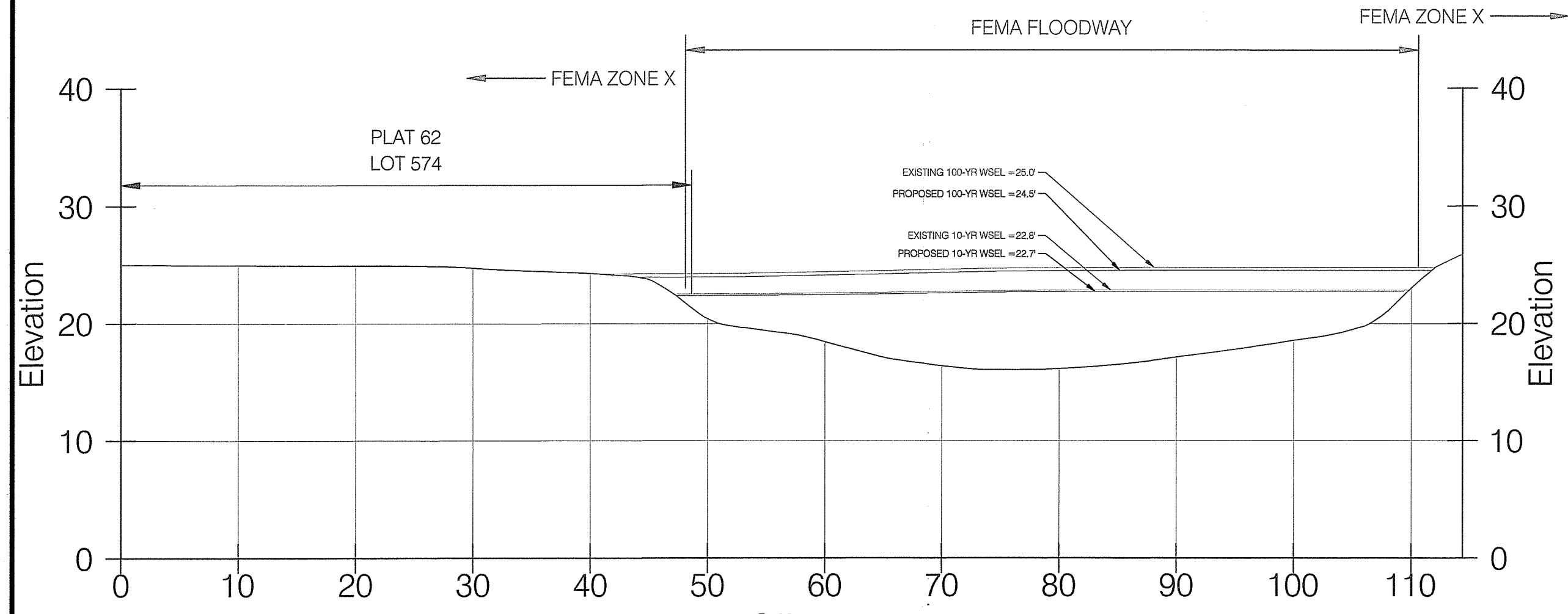


RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED: **SEP 13 2024** FILE #: **24-0186**  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE  
*Nancy J. Feldman*



No.	Revision	Date	App.
Designed By:	RMA	Drawn by:	JER
Scale:	1" = 25'	Date:	9/16/2024
Project Title:	UNITED WAY RIVER WALL		
	UNITED WAY OF RHODE ISLAND 50 VALLEY STREET PROVIDENCE, RI 02909		
Client/Owner:	UNITED WAY OF RHODE ISLAND 50 VALLEY STREET PROVIDENCE, RI 02909		
Issued for:	REGULATORY REVIEW AND PERMITTING		
Drawing Title:	PROPOSED HYDRAULIC CONDITIONS PLAN 50 VALLEY STREET PROVIDENCE, RI 02909 SEP 17 2024 Office of Water Resources		
Drawing Number:	H-2		
Sheet:	9 of 10		
Project Number:	24140.00		
Survey Index:	- 35 - 586		



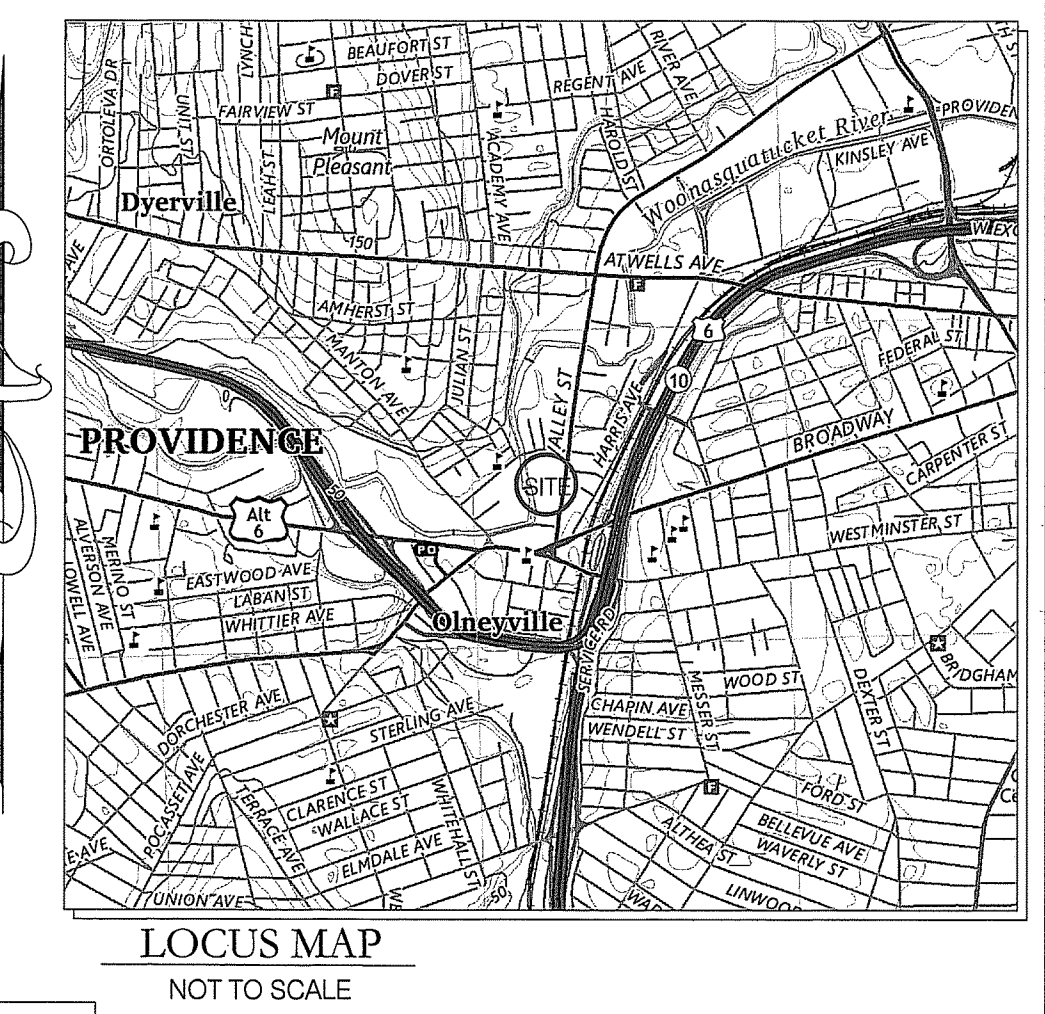


**Delta Hydraulic Conditions Comparison**

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			WSE (NAVD88)	Velocity (ft/s)
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17,466	E	2	0.0	0.40
		10	0.1	-0.05
		100	0.1	-0.40

**Incremental Flood Storage Volume Summary**

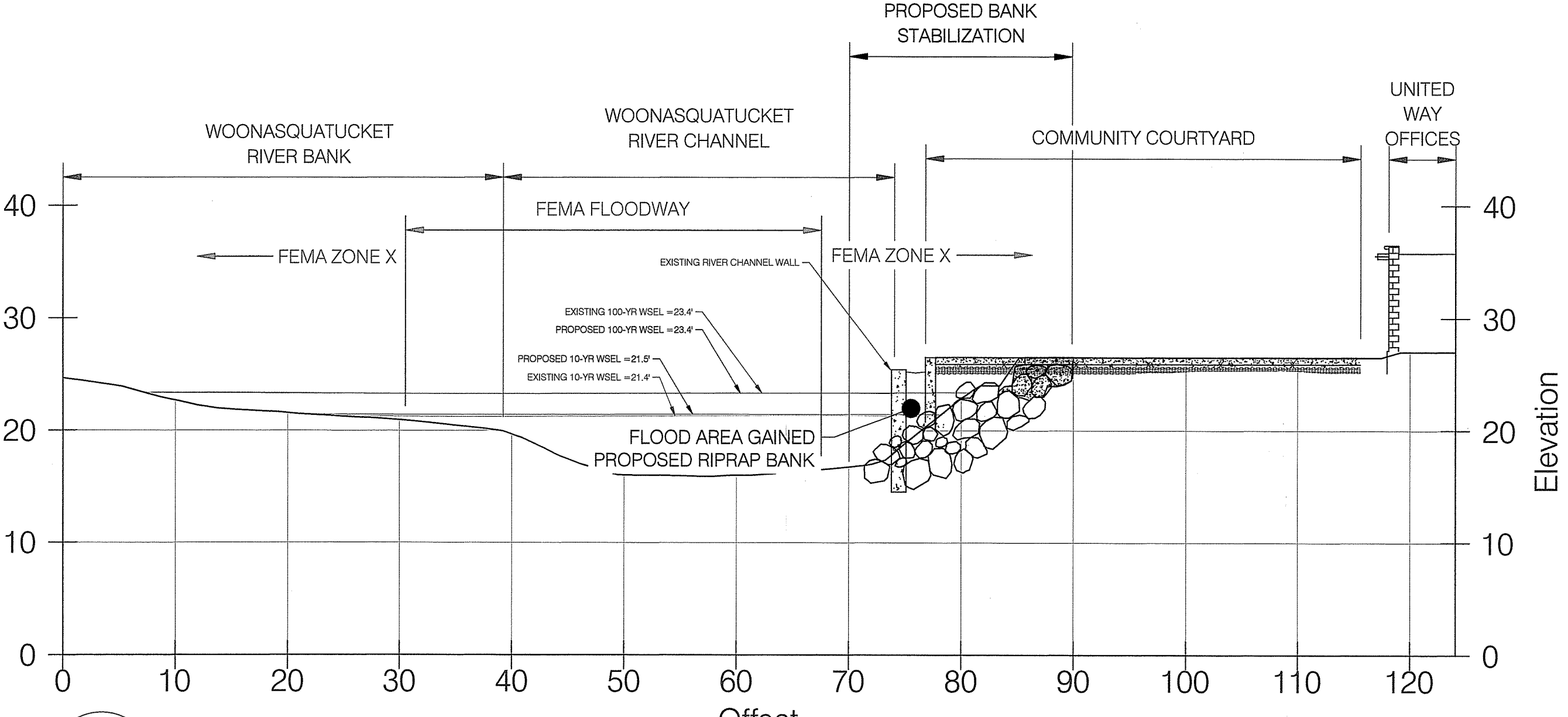
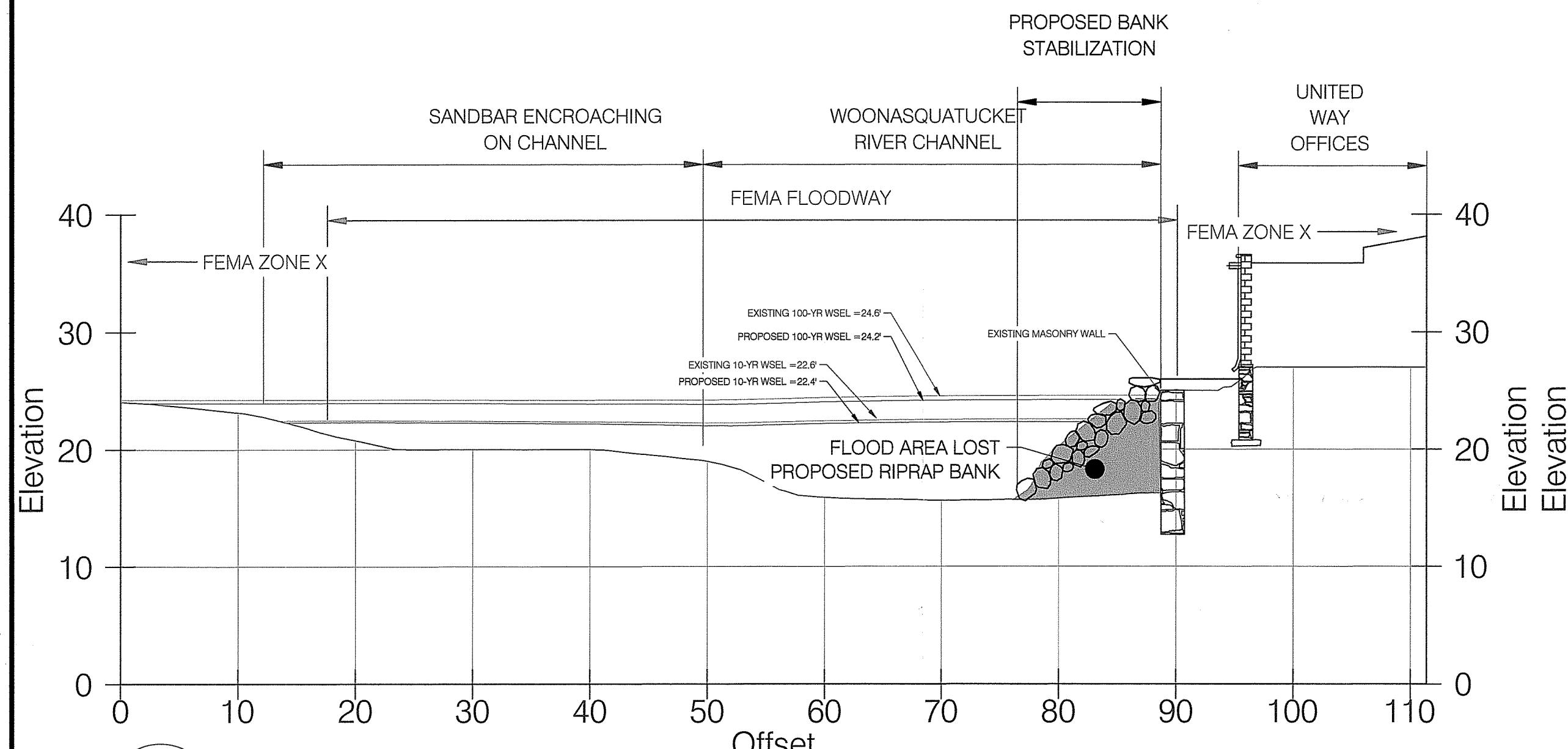
Elevation (ft)	Ex. Incremental Volume (cy)	Pr. Incremental Volume (cy)	Net Incremental Volume (cy)
16			
17	143.33	117.79	-25.54
18	197.79	173.59	-24.2
19	209.29	191.04	-18.25
20	219.21	208.11	-11.1
21	225.93	222.56	-3.37
22	231.46	236.2	4.74
23	236.45	249.25	12.8
24	242.29	262.91	20.62
25	248.92	291.49	42.57
26	266.53	296.9	30.37
<b>Total</b>	<b>2221.2</b>	<b>2249.84</b>	<b>28.64</b>



**LEGEND**

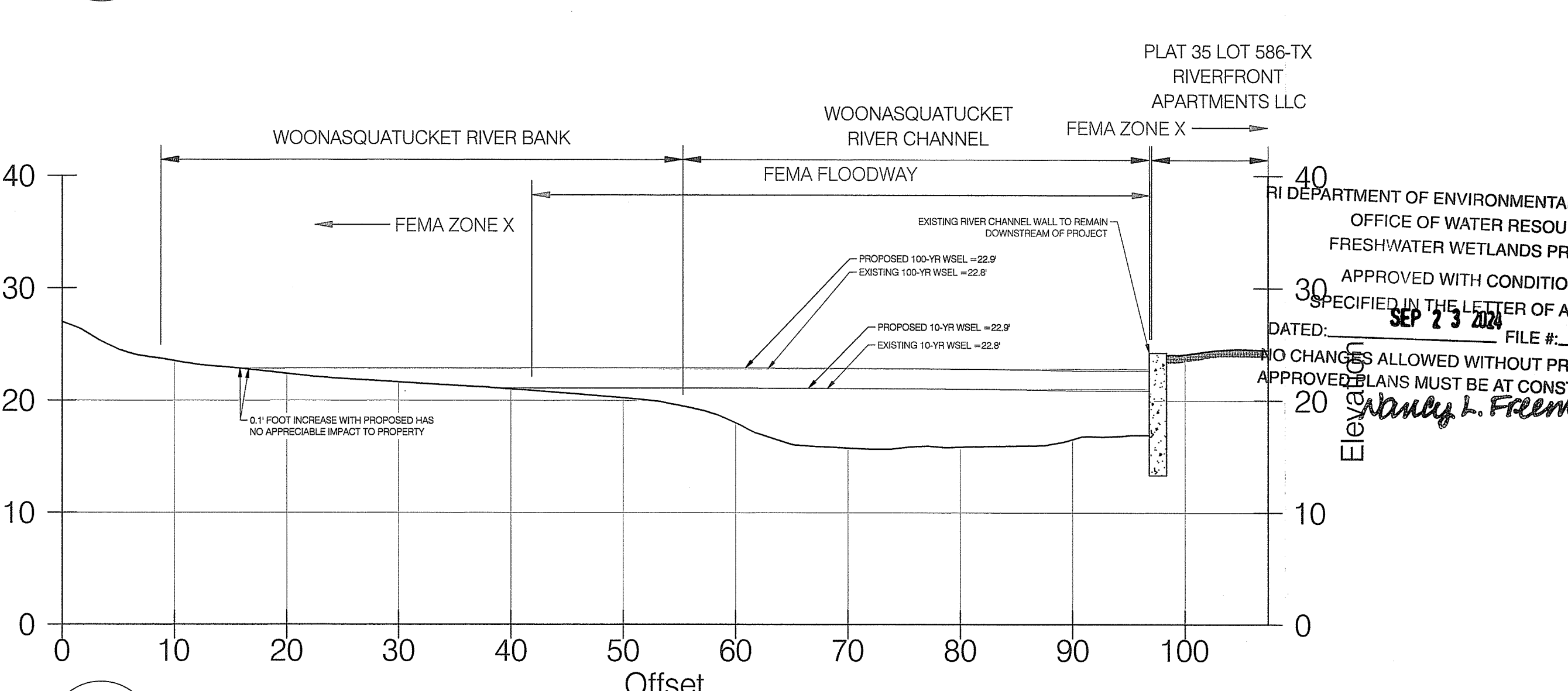
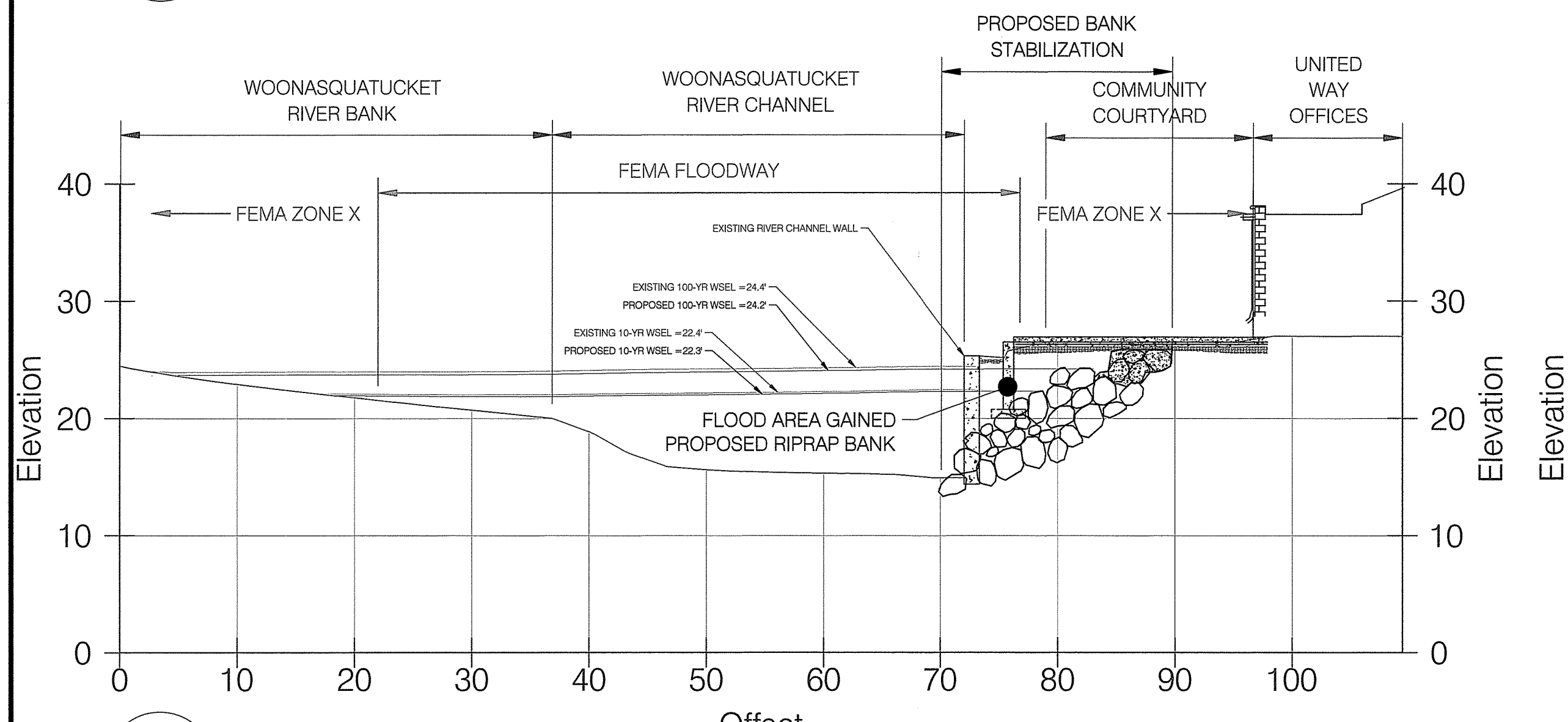
- EXISTING WATER PROFILE
- PROPOSED WATER PROFILE
- FLOODPLAIN AREA GAINED
- FLOODPLAIN AREA LOST

**A SECTION A: UPSTREAM OF UNITED WAY RIVER WALL**  
H-1 STA 177+61; SCALE 1" = 10'



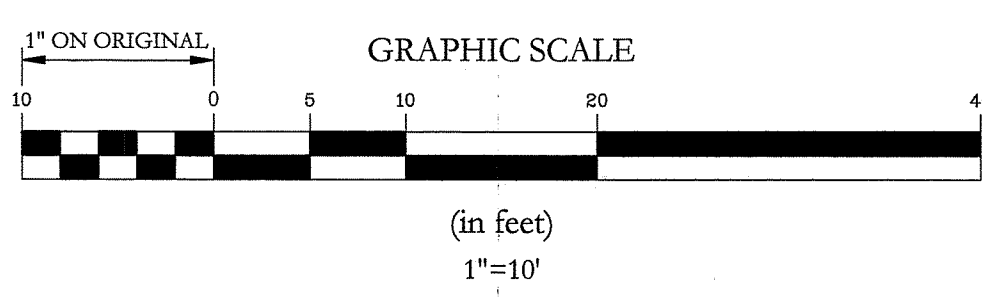
**B SECTION B: MASONRY WALL SECTION**  
H-1 STA 176+09; SCALE 1" = 10'

**D SECTION D: CONCRETE WALL AND COMMUNITY COURTYARD DOWNSTREAM**  
H-1 STA 175+28; SCALE 1" = 10'



**C SECTION C: CONCRETE WALL AND COMMUNITY COURTYARD UPSTREAM**  
H-1 STA 175+77; SCALE 1" = 10'

**E SECTION E: DOWNSTREAM OF UNITED WAY RIVER WALL**  
H-1 STA 174+66; SCALE 1" = 10'



**United Way of Rhode Island**

**CapEx Advisory Group** Build with Confidence

**McCUE ENVIRONMENTAL**

**RMA GeoEnvironmental**  
20 Main Street  
Wickford, Rhode Island 02852  
WWW.RMAHYDRO.COM

No.	Revision	Date	App.
Designed By:	RMA	Drawn by:	JER
Scale:	1" = 10'	Checked by:	JER
		Date:	9/16/2024
Project Title:			
<b>UNITED WAY RIVER WALL</b>			
UNITED WAY OF RHODE ISLAND 50 VALLEY STREET PROVIDENCE, RI 02909			
Client/Owner:			
UNITED WAY OF RHODE ISLAND 50 VALLEY STREET PROVIDENCE, RI 02909			
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM			
Issued for:			
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL			
DATED: <b>SEP 17 2024</b> FILE #: <b>24-0186</b>			
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE			
<i>Joshua E. Rosenberg</i>			
WATER SURFACE CROSS SECTIONS 50 VALLEY STREET PROVIDENCE, RI 02909			
SEP 17 2024 Office of Water Resources			
Drawing Number:			
<b>H-3</b>			
Sheet <b>10</b> of <b>10</b>			
Project Number:			
<b>24140.00</b>			
Survey Index:			
- 35 - 586			

