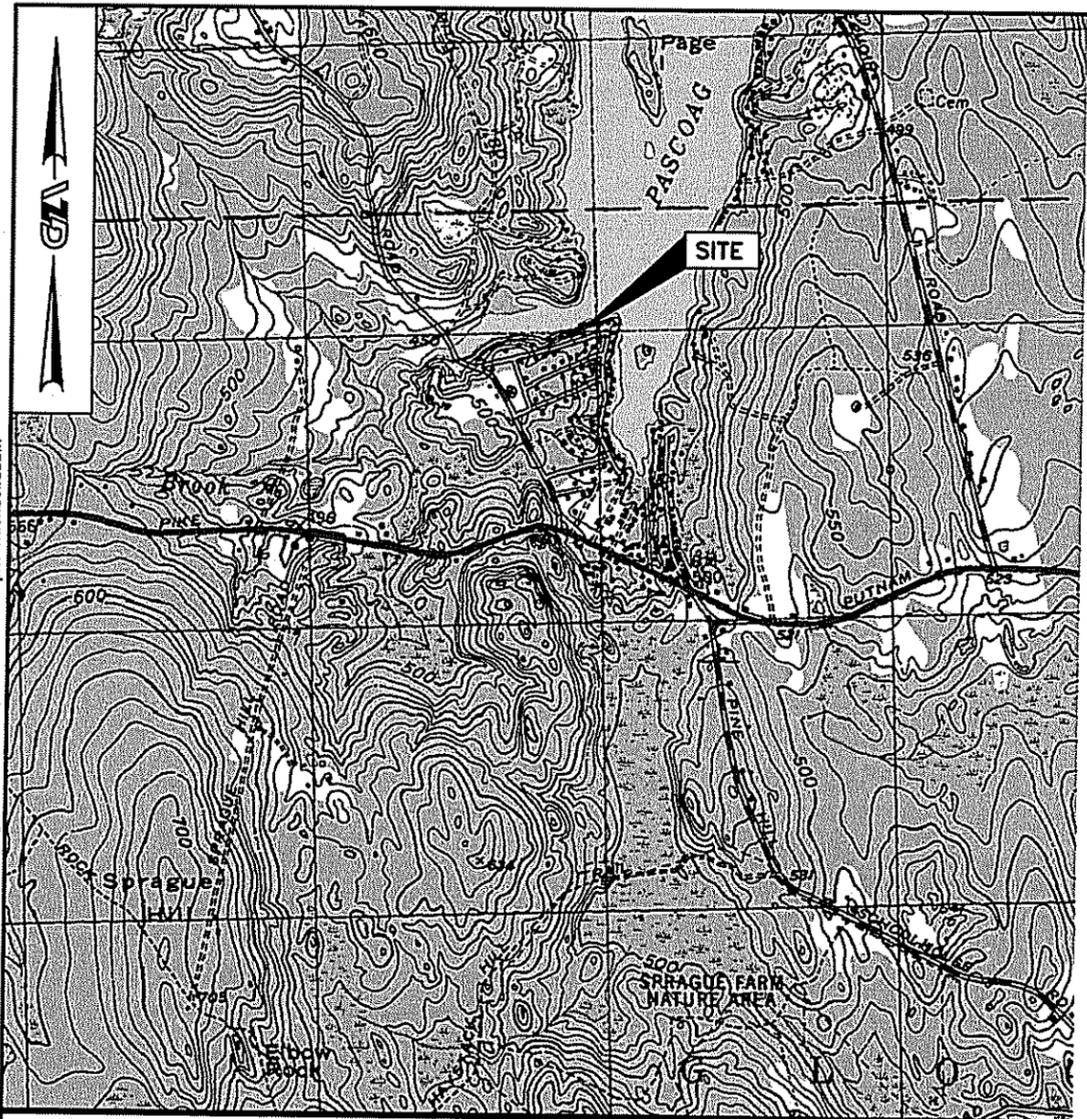


©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00.mjb\Figures\33745.00_F1-9_RO.dwg [COVER] November 28, 2011 - 3:19pm michael.dubin



BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
CHEPATCHET, RI (1999)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY MAPTECH, INC.

CONTOUR ELEVATIONS REFERENCE NGVD 29,
CONTOURS ARE SHOWN IN FEET AT 10 INTERVALS

APPROXIMATE SCALE IN FEET



TITLE SHEET

- FIG. 1 - TITLE SHEET/LOCUS PLAN
- FIG. 2 - EXISTING CONDITIONS PLAN
- FIG. 3 - EXISTING CONDITIONS - SECTION A
- FIG. 4 - EXISTING CONDITIONS - SECTION B
- FIG. 5 - EXISTING CONDITIONS - SECTION C
- FIG. 6 - PROPOSED WALL LAYOUT PLAN
- FIG. 7 - PROPOSED WALL SECTION - SECTION D
- FIG. 8 - PROPOSED WALL DETAILED SECTIONS
- FIG. 9 - CONCRETE/GENERAL NOTES

Environmental Management
DEC - 1 2011
Office of Water Resources

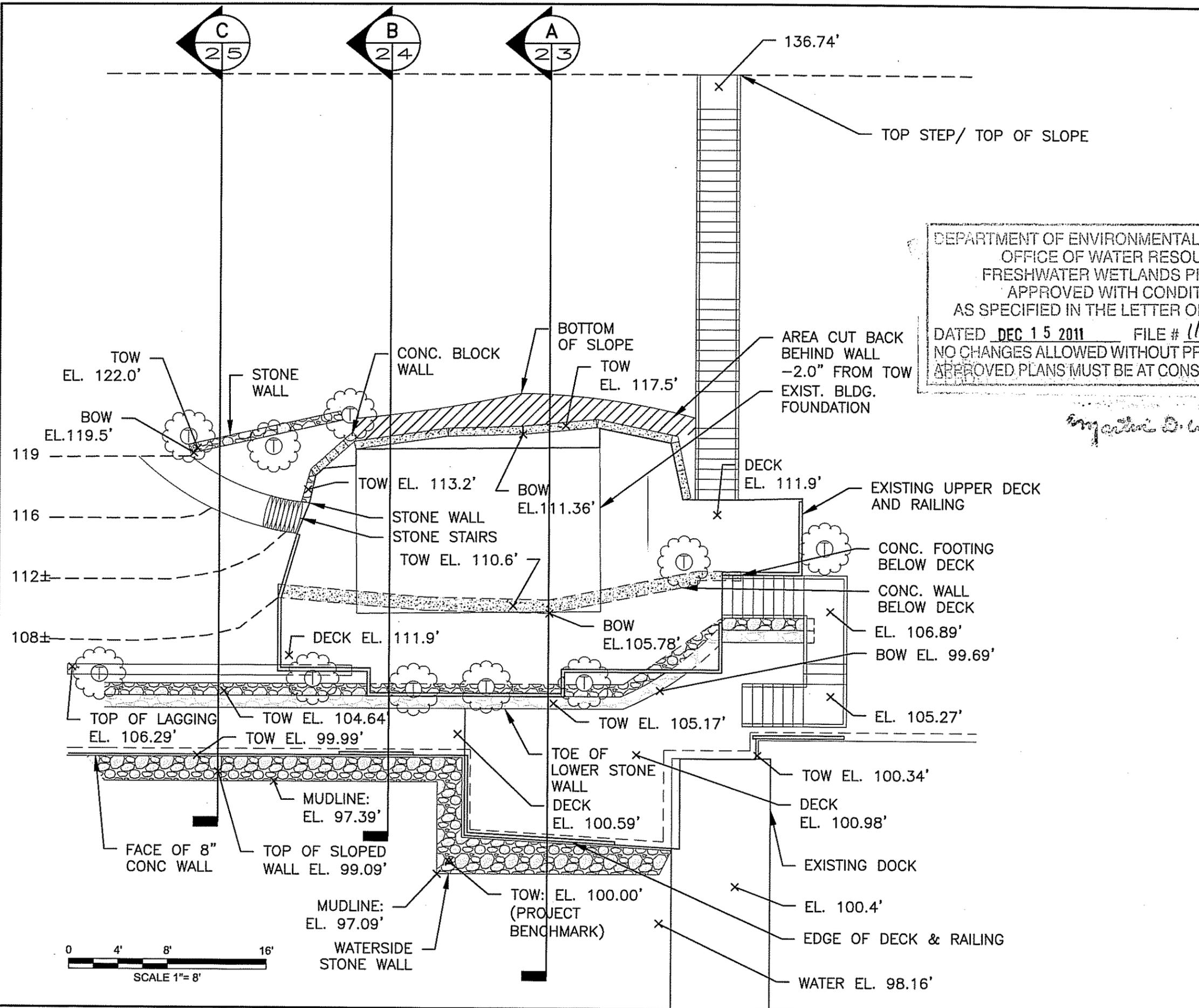


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED **DEC 15 2011** FILE # **11-0727**
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Signature: D. Wenzel

NO.	ISSUE/DESCRIPTION	BY	DATE
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.			
RETAINING WALL REPAIR 281 LAKE DRIVE GLOCESTER, RHODE ISLAND			
TITLE SHEET/ LOCUS PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:	
PROJ MGR: MJB	REVIEWED BY: DRC	CHECKED BY: DRC	FIGURE
DESIGNED BY: MJB	DRAWN BY: CRB	SCALE: AS NOTED	1
DATE: NOV. 28, 2011	PROJECT NO. 33745.00	REVISION NO. 0	SHEET NO. 1 OF 9

©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00\33745.00_F1-9_R0.dwg [EX. COND. PLAN] November 18, 2011 - 9:30am michael.cubbin



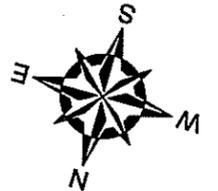
NOTES:

1. THE LOCATION OF THE SITE FEATURES, WERE APPROXIMATELY DETERMINED BY LINE OF SIGHT AND/OR TAPE MEASUREMENTS FROM EXISTING TOPOGRAPHIC FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
2. ELEVATIONS SHOWN ARE RELATIVE TO THE PROJECT BENCHMARK, SET AT 100.0 FEET, ON THE NORTHEASTERN CORNER OF THE STONE WALL.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 15 2011 FILE # 11-0227
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

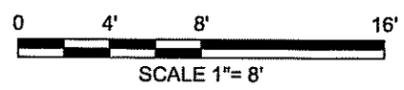
Environmental Management
 NOV 28 2011
 Office of Water Resources

Signature



**DRAFT COPY
 NOT FOR CONSTRUCTION**

NO.	ISSUE/DESCRIPTION	BY	DATE
<small>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</small>			
RETAINING WALL REPAIR 281 LAKE DRIVE GLOCESTER, RHODE ISLAND			
EXISTING CONDITIONS PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:	
PROJ MGR: MJB DESIGNED BY: MJB DATE: NOV. 10, 2011	REVIEWED BY: DRC DRAWN BY: CRB PROJECT NO. 33745.00	CHECKED BY: DRC SCALE: 1"=30' REVISION NO.	FIGURE 2 SHEET NO. 2 OF 9

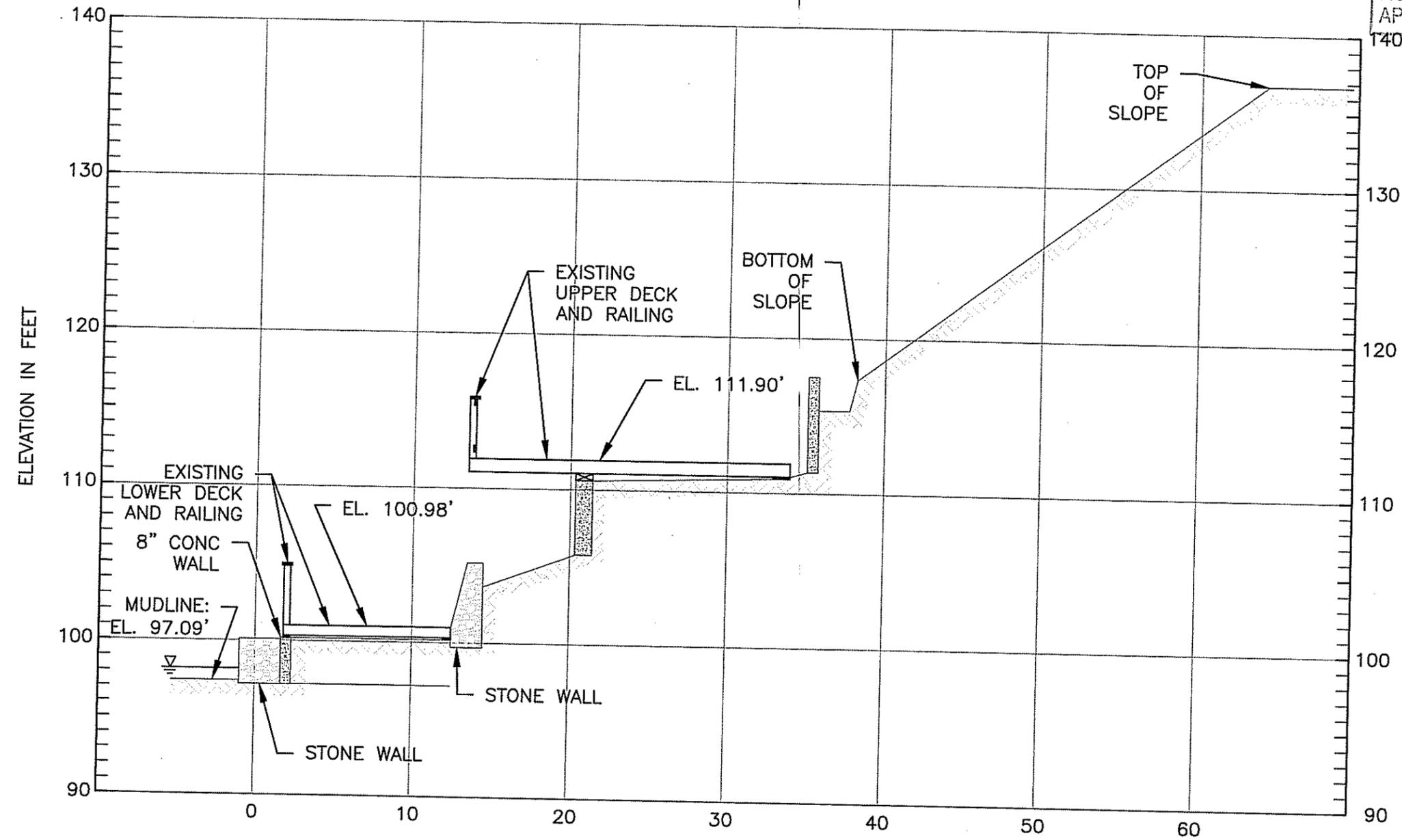


© 2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00\Figures 33745.00\F1-9_RO.dwg [EX. COND. SEC. 1] November 18, 2011 - 9:30am michael.aubin

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 15 2011 FILE # 11-0227
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Michael D. Wenzel

Environmental Management
 NOV 28 2011
 Office of Water Resources



DRAFT COPY
 NOT FOR CONSTRUCTION

NO.	ISSUE/DESCRIPTION	BY	DATE

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE, WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

RETAINING WALL REPAIR
 281 LAKE DRIVE
 GLOCESTER, RHODE ISLAND

EXISTING CONDITIONS
 SECTION A

PREPARED BY: GZA GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:
PROJ MGR: MJB	REVIEWED BY: DRC
DESIGNED BY: MJB	CHECKED BY: DRC
DATE: NOV. 10, 2011	SCALE: 1"=30'
PROJECT NO. 33745.00	REVISION NO.

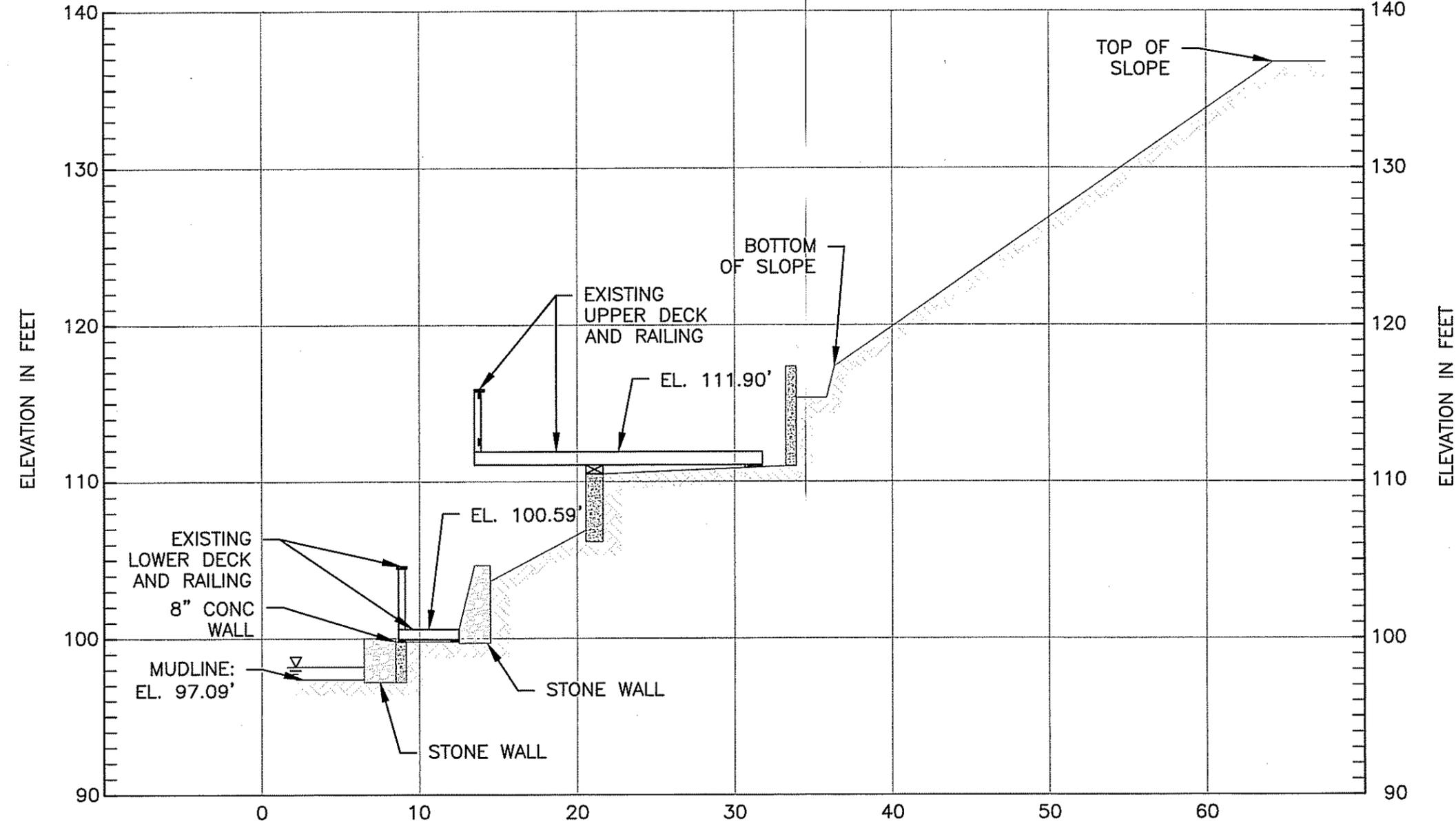
FIGURE 3
 SHEET NO. 3 OF 9

©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00\mjb\Figures\33745.00_F1-9_RO.dwg [EX. COND. SEC. 2] November 18, 2011 - 9:29am michael.rubin

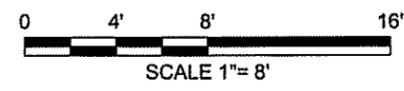
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 15 2011 FILE # 11-0227
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Signature

Environmental Management
 NOV 28 2011
 Office of Water Resources

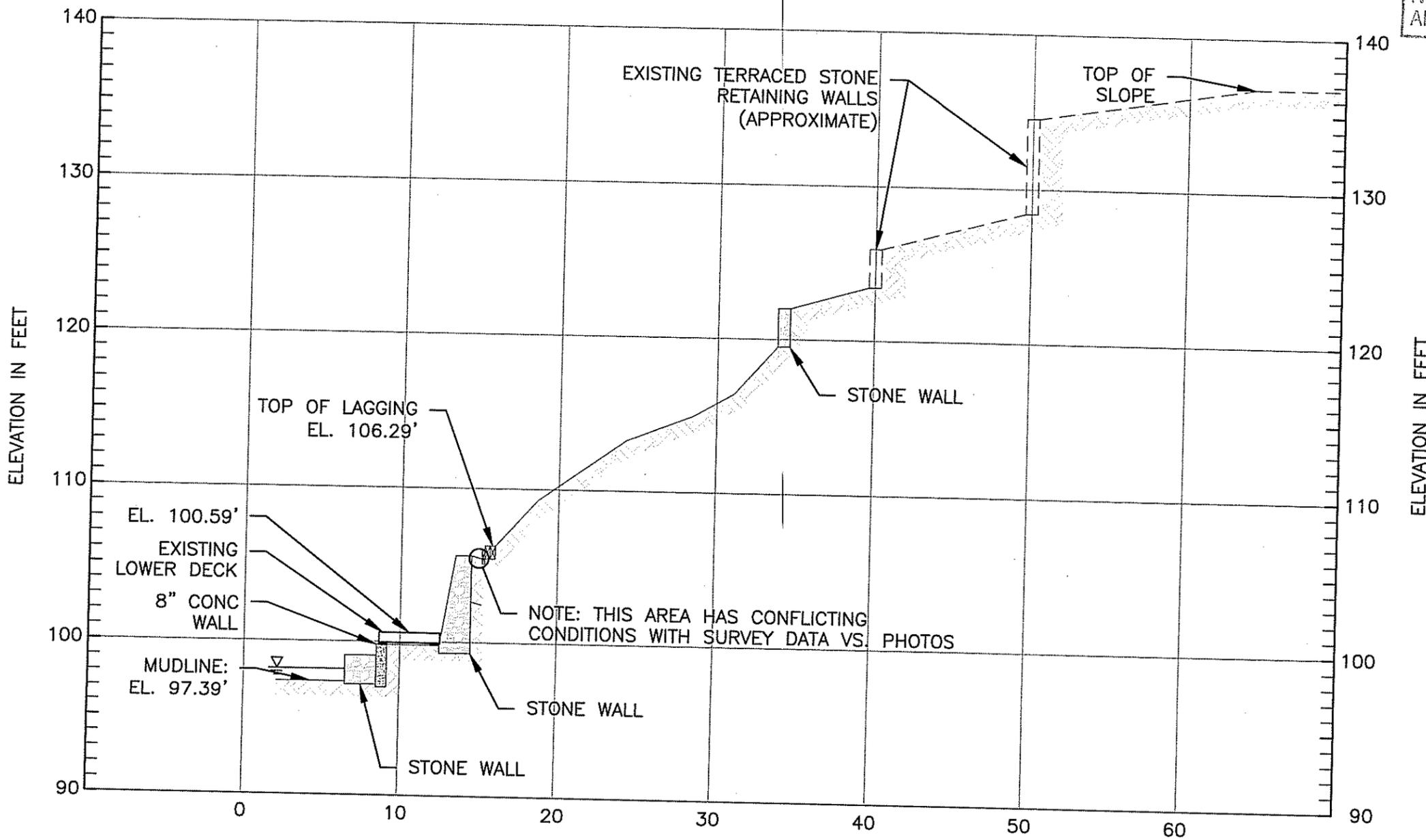


DRAFT COPY
NOT FOR CONSTRUCTION



NO.	ISSUE/DESCRIPTION	BY	DATE
<small>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOTECHNICAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</small>			
RETAINING WALL REPAIR 281 LAKE DRIVE GLOCESTER, RHODE ISLAND			
EXISTING CONDITIONS SECTION B			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:	
PROJ MGR: MJB DESIGNED BY: MJB DATE: NOV. 10, 2011	REVIEWED BY: DRC DRAWN BY: CRB PROJECT NO. 33745.00	CHECKED BY: DRC SCALE: 1"=30' REVISION NO.	FIGURE 4 SHEET NO. 4 OF 9

©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00\Figures\33745.00_F1-9_RO.dwg [EX. COND. SEC. 3] November 18, 2011 - 9:29am michael.laubin



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 15 2011 FILE # 11-0227
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Myra D. Wenzel

Environmental Management
 NOV 28 2011
 Office of Water Resources

DRAFT COPY
 NOT FOR CONSTRUCTION

NO.	ISSUE/DESCRIPTION	BY	DATE

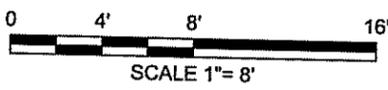
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

RETAINING WALL REPAIR
 281 LAKE DRIVE
 GLOCESTER, RHODE ISLAND

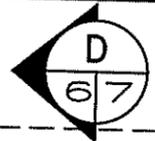
EXISTING CONDITIONS
SECTION C

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:
PROJ MGR: MJB	REVIEWED BY: DRC
DESIGNED BY: MJB	CHECKED BY: DRC
DATE: NOV. 10, 2011	SCALE: 1"=30'
PROJECT NO. 33745.00	REVISION NO.

FIGURE 5
 SHEET NO. 5 OF 9

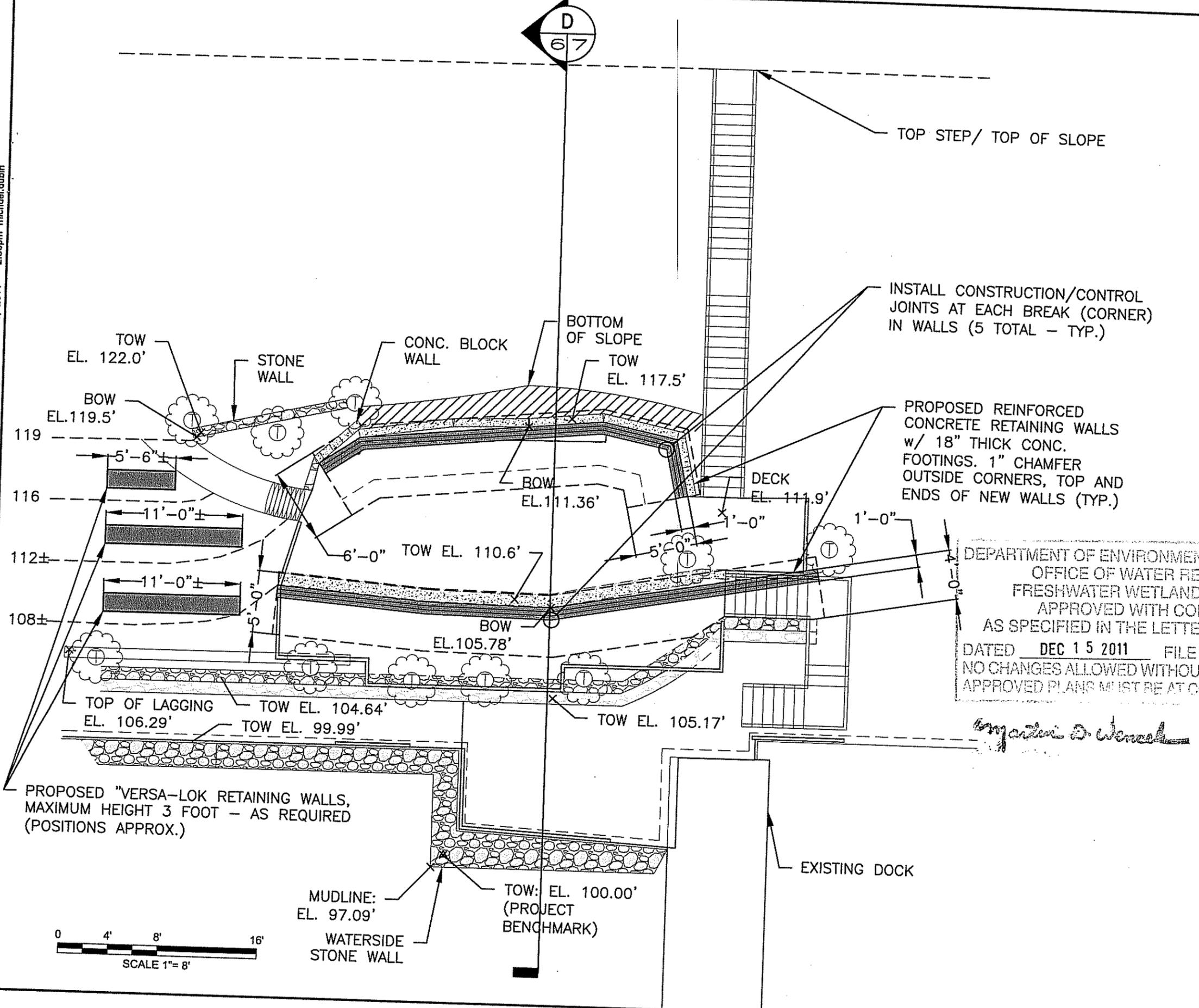
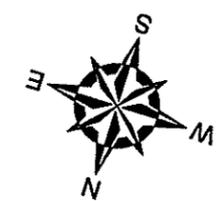


©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00\Figures 33745.00\F1-9_R0.dwg [PRP. LAYOUT PLAN] November 18, 2011 - 2:56pm michael.lubin



- NOTES:**
1. THE LOCATION OF THE SITE FEATURES, WERE APPROXIMATELY DETERMINED BY LINE OF SIGHT AND/OR TAPE MEASUREMENTS FROM EXISTING TOPOGRAPHIC FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
 2. ELEVATIONS SHOWN ARE RELATIVE TO THE PROJECT BENCHMARK, SET AT 100.0 FEET, ON THE NORTHEASTERN CORNER OF THE STONE WALL.

Environmental Management
NOV 28 2011
Office of Water Resources



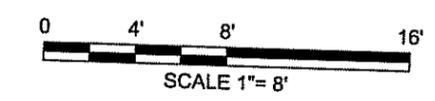
TOP STEP/ TOP OF SLOPE

INSTALL CONSTRUCTION/CONTROL JOINTS AT EACH BREAK (CORNER) IN WALLS (5 TOTAL - TYP.)

PROPOSED REINFORCED CONCRETE RETAINING WALLS w/ 18" THICK CONC. FOOTINGS. 1" CHAMFER OUTSIDE CORNERS, TOP AND ENDS OF NEW WALLS (TYP.)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 15 2011 FILE # 11-022
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION

DRAFT COPY
NOT FOR CONSTRUCTION

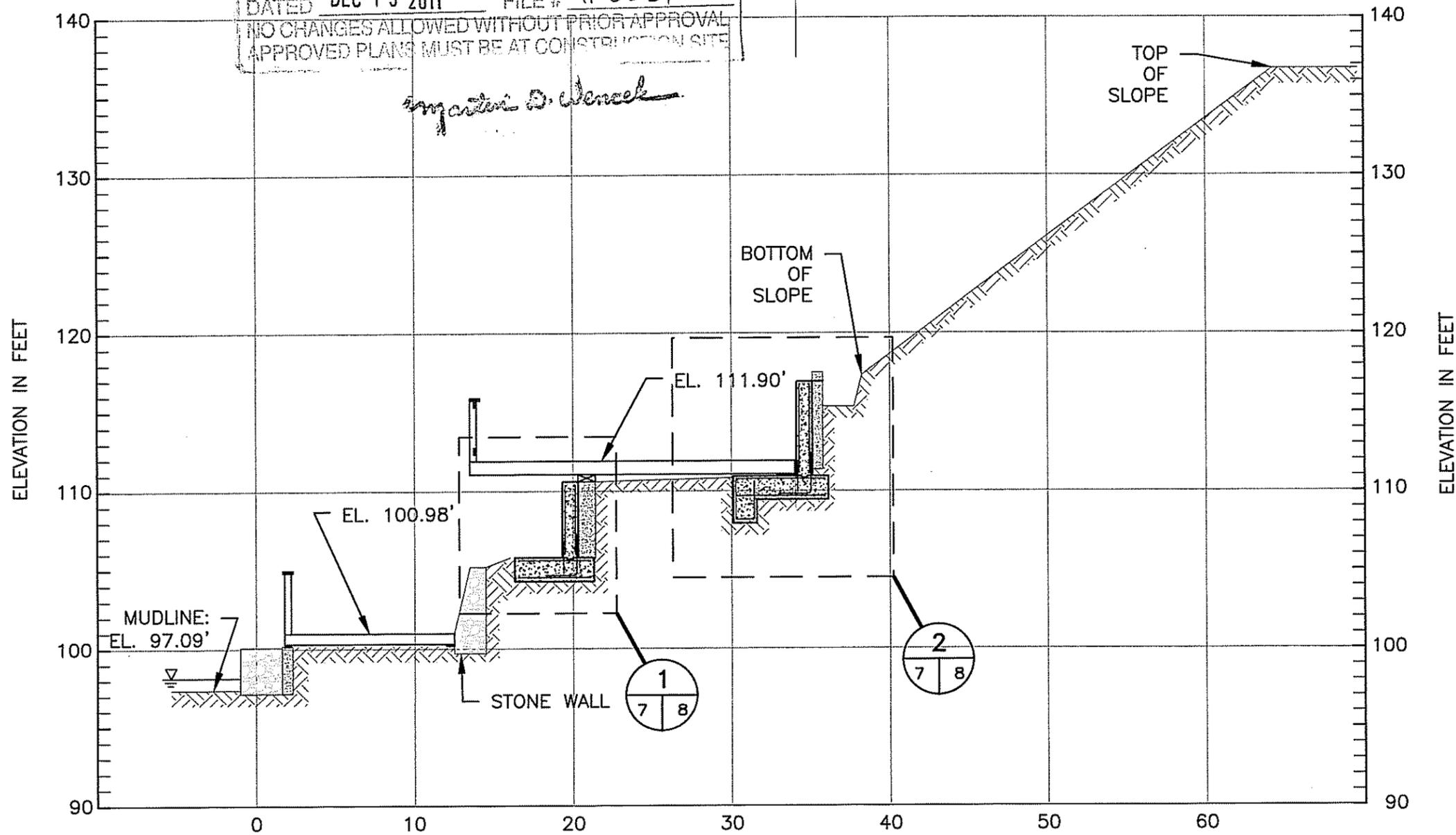


NO.	ISSUE/DESCRIPTION	BY	DATE
<small>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</small>			
RETAINING WALL REPAIR 281 LAKE DRIVE GLOCESTER, RHODE ISLAND			
PROPOSED WALL LAYOUT PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:	
PROJ MGR: MJB DESIGNED BY: MJB DATE: NOV. 10, 2011	REVIEWED BY: DRC DRAWN BY: CRB PROJECT NO. 33745.00	CHECKED BY: DRC SCALE: 1"=30' REVISION NO.	FIGURE 6 SHEET NO. 6 OF 9

©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00.mjb\Figures 33745.00\F1-9_RO.dwg [PRP, SEC. 1] November 18, 2011 - 9:27am michael.cubin

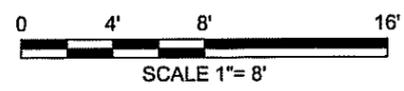
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 15 2011 FILE # 11-0227
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Angela D. Wenzel



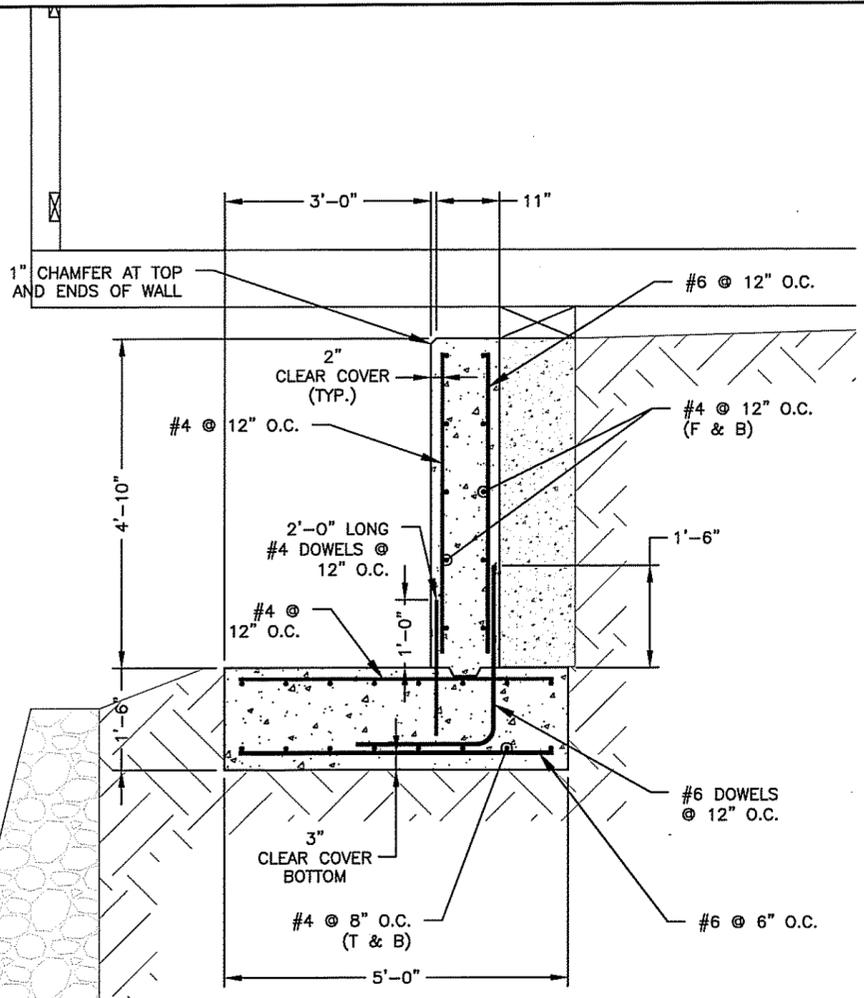
Environmental Management
 NOV 28 2011
 Office of Water Resources

DRAFT COPY
 NOT FOR CONSTRUCTION

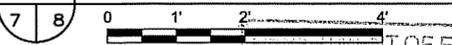


NO.	ISSUE/DESCRIPTION	BY	DATE
<small>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</small>			
RETAINING WALL REPAIR 281 LAKE DRIVE GLOCESTER, RHODE ISLAND			
PROPOSED WALL SECTION D			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:	
PROJ MGR: MJB DESIGNED BY: MJB DATE: NOV. 10, 2011	REVIEWED BY: DRC DRAWN BY: CRB PROJECT NO. 33745.00	CHECKED BY: DRC SCALE: 1"=30' REVISION NO.	FIGURE 7 SHEET NO. 7 OF 9

©2011 - GZA GeoEnvironmental, Inc. GZA-10-Geo-33745-00.mpd\Figures 33745.00\33745.00_F1-9_R0.dwg [PRP-SEC-DTL] November 18, 2011 - 2:55pm michael.laubin

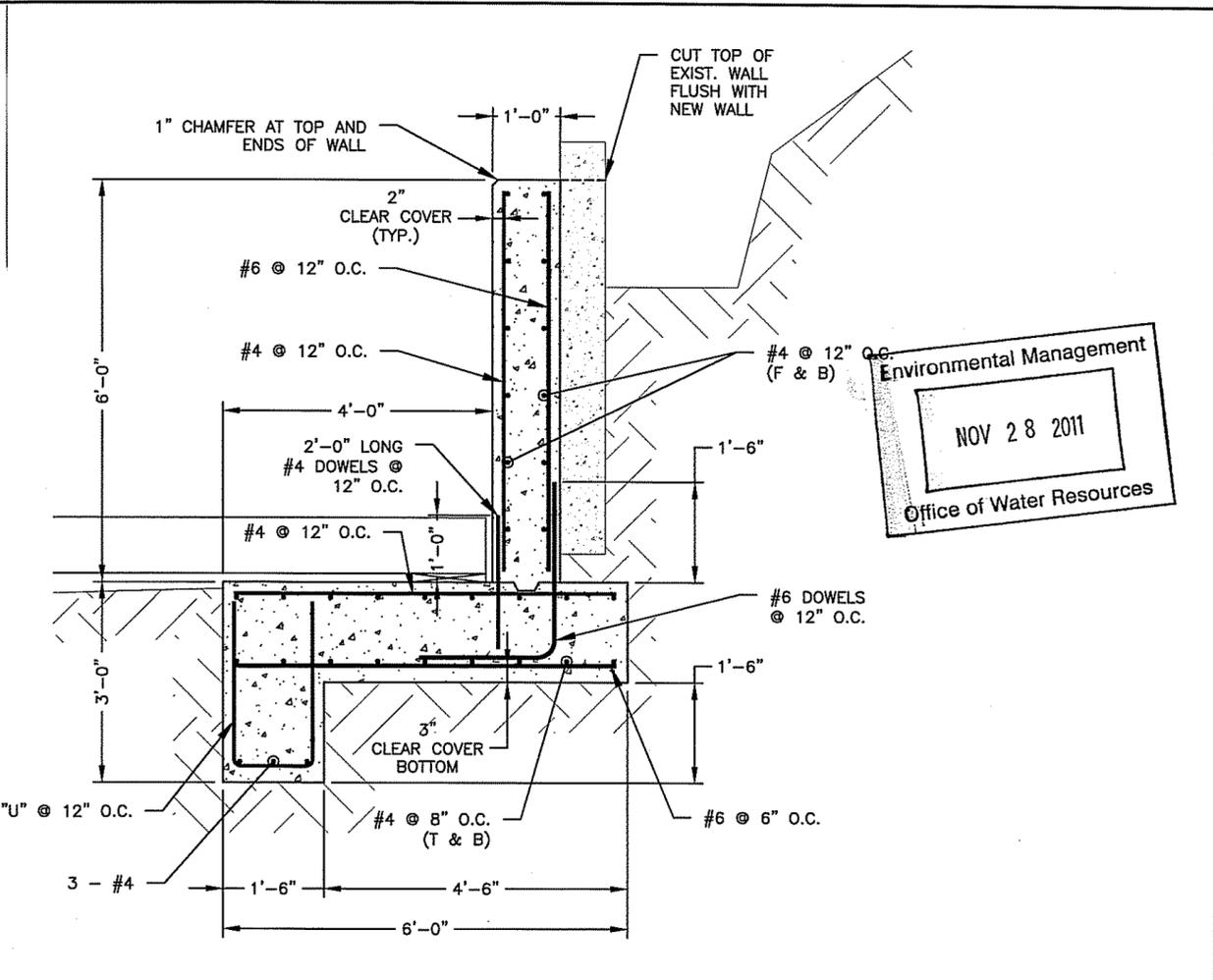


1 LOWER WALL DETAIL



OFFICE OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED DEC 15 2011 FILE # 11-0227
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Signature



2 UPPER WALL DETAIL



**DRAFT COPY
 NOT FOR CONSTRUCTION**

Environmental Management
 NOV 28 2011
 Office of Water Resources

NO.	ISSUE/DESCRIPTION	BY	DATE

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

RETAINING WALL REPAIR
 281 LAKE DRIVE
 GLOCESTER, RHODE ISLAND

**PROPOSED WALL
 DETAILED SECTIONS**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR:
PROJ MGR: MJB DESIGNED BY: MJB DATE: NOV. 10, 2011	REVIEWED BY: DRC DRAWN BY: CRB PROJECT NO. 33745.00
CHECKED BY: DRC SCALE: 1"=30'	FIGURE 8 SHEET NO. 8 OF 9

©2011 - GZA GeoEnvironmental, Inc. GZA-J:\Geo\33745.00.mjb\Figures 33745.00\F1-9_R0.dwg [NOTES] November 18, 2011 - 2:55pm michael.cubin

CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)," AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301)." GENERAL CONTRACTOR, CONSTRUCTION MANAGER AND/OR OWNER'S CLERK OF THE WORKS SHALL HAVE AVAILABLE ON SITE AT ALL TIMES A COPY OF ACI "FIELD REFERENCE MANUAL SP-15".
2. CONCRETE SHALL PLACED IN THE PRESENCE OF A REPRESENTATIVE FROM GZA GEOENVIRONMENTAL, INC (GZA).
3. PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR II. AGGREGATES SHALL CONFORM TO ASTM C33 CLASS 3M.
4. READY-MIX CONCRETE MUST COMPLY WITH THE REQUIREMENTS OF ASTM C94, AND AS SPECIFIED HEREIN. PROVIDE BATCH TICKET FOR EACH BATCH DISCHARGED AND USED IN WORK, INDICATING PROJECT NAME, MIX TYPE, MIX TIME, BATCH QUANTITY, AND PROPORTIONS OF INGREDIENTS. JOB-SITE MIXING MAY BE PERMITTED PER THE DISCRETION OF GZA.
5. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
6. CONCRETE MIX DESIGN:
 - A. STRENGTH: 4,000 PSI @ 28 DAYS
 - B. AGGREGATE: 3/4" NOMINAL MAXIMUM
 - C. W/C RATIO: 0.45 MAXIMUM
 - D. ENTRAPPED AIR: 6% ±1½% FOR CONCRETE EXPOSED TO WEATHER OR SOIL, 3% OTHERWISE
 - E. SLUMP: 4"(±1") BEFORE ADDITION OF HIGH RANGE WATER REDUCER OR PLASTICIZER.
 - F. ADD AIR ENTRAINING ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATIO TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING THE ABOVE NOTED AIR CONTENTS.
 - G. ADDITIONAL SLUMP MAY BE ACHIEVED BY THE ADDITION OF A MIDRANGE OR HIGH RANGE WATER REDUCING ADMIXTURE. MAXIMUM SLUMP AFTER ADDITION OF ADMIXTURE SHALL BE 8 INCHES.
 - H. MIX ADJUSTMENTS MAY BE REQUESTED BY THE CONTRACTOR, WHEN CHARACTERISTICS OF THE MATERIALS, JOB CONDITIONS, WEATHER OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO THE OWNER AND AS ACCEPTED BY GZA. LABORATORY TEST DATA FOR THE REVISED MIX DESIGN AND STRENGTH DATA MUST BE SUBMITTED AND ACCEPTED BY GZA BEFORE USING IN WORK.
 - I. WATER MAY BE ADDED AT THE PROJECT SITE ONLY IF THE MAXIMUM SPECIFIED WATER-CEMENT RATIO AND SLUMP ARE NOT EXCEEDED. CONTRACTOR SHALL HAVE BATCH TICKET INDICATING WATER AND CEMENT MIXED IN THE PLANT, AND SHALL RECORD THE WATER ADDED AS EVIDENCE THAT THE WATER-CEMENT RATION HAS NOT BEEN EXCEEDED.
 - J. ADDITIONAL DOSES OF SUPER PLASTICIZER SHOULD BE USED WHEN DELAYS OCCUR AND REQUIRED SLUMP HAS NOT BEEN MAINTAINED. A MAXIMUM OF TWO ADDITIONAL DOSAGES ARE PERMITTED PER ACI 212.3R RECOMMENDATIONS.
 - K. CONTRACTOR SHALL SUBMIT MIX DESIGN AT LEAST 1 WEEK PRIOR TO PLACEMENT OF CONCRETE.
7. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED. VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE WORK SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR.
8. COMPLETE SHOP DRAWINGS AND SCHEDULES OF ALL REINFORCING STEEL SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. PROVIDE NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION.
9. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
 - A) SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH: 3"
 - B) FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO WEATHER: 2"

10. CONSTRUCTION JOINTS SHOWN ON DRAWINGS ARE MANDATORY. OMISSIONS, ADDITIONS, OR CHANGES SHALL NOT BE MADE EXCEPT WITH THE SUBMITTAL OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL OF THE ENGINEER. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN, OR WHEN ALTERNATE LOCATIONS ARE PROPOSED, DRAWINGS SHOWING LOCATION OF CONSTRUCTION AND CONTROL JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS.
11. CONCRETE WALL FOOTINGS TO BE CONSTRUCTED USING "ALTERNATE PIT" METHOD TO UNDERPIN EXISTING CONCRETE. MAXIMUM WIDTH OF FOOTING SECTIONS SHALL BE 4 FEET, WITH MINIMUM OF 8 FEET BETWEEN ADJACENT POURS. THE INITIAL FOOTING SECTIONS FOR THE UPPER WALL SHALL TAKE PLACE AT THE JOINTS BETWEEN THE EXISTING CONCRETE PANELS. LONGITUDINAL REINFORCING SHALL BE SPLICED BY DRIVING RODS INTO THE SOIL ADJACENT TO CONSTRUCTED SECTION.
11. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT. NOTIFY GZA AT LEAST 24 HOURS PRIOR TO THE COMPLETION OF THE INSTALLATION OF REINFORCEMENT.

GEOENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 15 2011 FILE # 11-0227
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

GENERAL NOTES

1. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
2. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE ONLY AFTER THE STRUCTURAL WORK CONTAINED IN THE DRAWINGS IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE WALLS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
3. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS.
4. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF SHORING, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE. NO PERFORMANCE OF THE WORK, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER.
5. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

GEOENVIRONMENTAL MANAGEMENT
NOV 28 2011
Office of Water Resources

DRAFT COPY
NOT FOR CONSTRUCTION

NO.	ISSUE/DESCRIPTION	BY	DATE
UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.			
RETAINING WALL REPAIR 281 LAKE DRIVE GLOCESTER, RHODE ISLAND			
CONCRETE NOTES			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR:	
PROJ MGR: MJB	REVIEWED BY: DRC	CHECKED BY: DRC	FIGURE 9
DESIGNED BY: MJB	DRAWN BY: CRB	SCALE: AS NOTED	
DATE: NOV. 10, 2011	PROJECT NO. 33745.00	REVISION NO.	SHEET NO. 9 OF 9