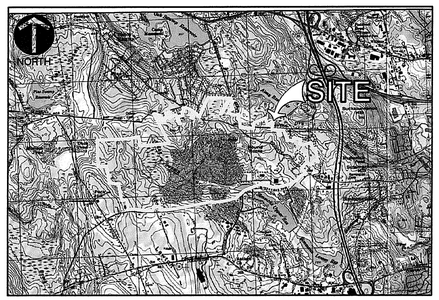
RHODE ISLAND RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT

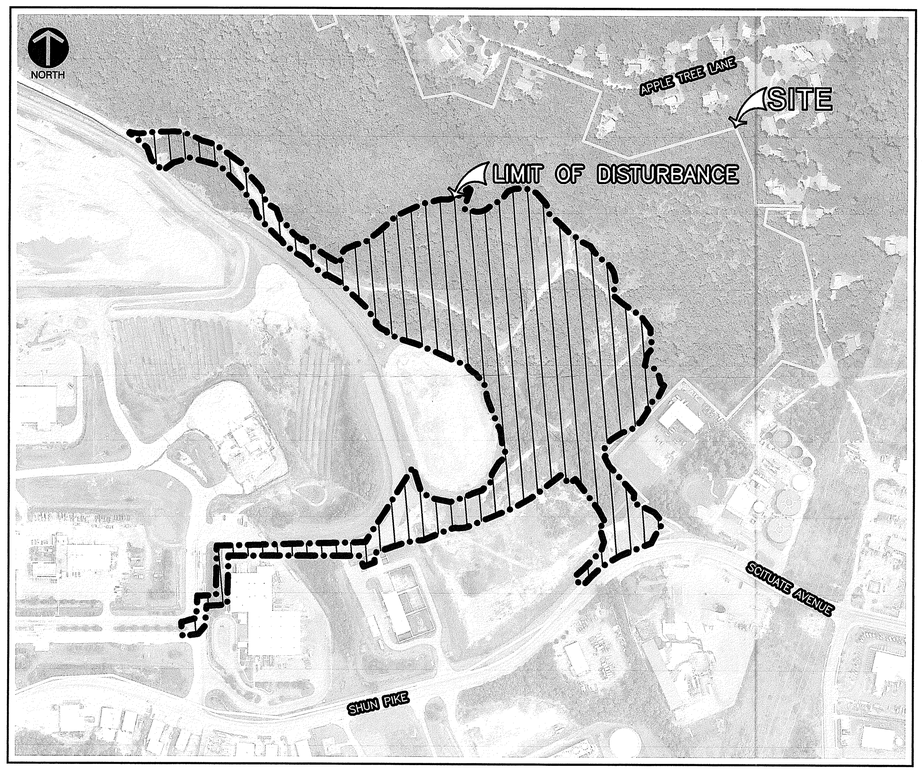
65 SHUN PIKE, JOHNSTON, RHODE ISLAND
PROVIDENCE COUNTY

PERMITTING PLAN SET
DECEMBER, 2019

Kindly be advised that this Permit is equivalent to a verification as to type or extent of freshwater wetlands on site.



VICINITY MAP
SCALE: 1"=4000'



SITE MAP
SCALE: 1"=300'

SOURCE: AERIAL ORTHOGRAPHIC IMAGERY PROVIDED BY GOOGLE EARTH, IMAGERY DATE, 6/29/2018. ACCESSED, 10/19/2019.

OWNER/TEAM INFORMATION

CIVIL ENGINEER

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
31 BELLOWS ROAD
RAYNHAM, MA 02767
PHONE: (774) 501-2176
CONTACT: KARLIS P. SKULTE, P.E.

APPLICANT/OWNER

RHODE ISLAND RESOURCE RECOVERY CORPORATION
65 SHUN PIKE
JOHNSTON, RI 02919
PHONE: (401) 942-1430
CONTACT: INGA LERMONTOV-HOIT

WETLANDS CONSULTANT

LUCAS ENVIRONMENTAL, LLC
500A WASHINGTON STREET
QUINCY, MA 02169
PHONE: (617) 405-4053
FAX: (617) 405-4465
CONTACTS: TOM LIDDY, P.W.S.

TELECOMMUNICATION AND SECURITY DESIGN

BUILDING TECHNOLOGY CONSULTING, LLC
992 BEDFORD STREET
BRIDGEWATER, MA 02324
PHONE: (508) 819-1550
CONTACTS: WILLIAM HOOLEY, R.C.D.D.

ELECTRIC , SITE LIGHTING, AND NATURAL GAS DESIGN

WOZNY/BARBAR & ASSOCIATES, INC.
161 EXCHANGE STREET, 3RD FLOOR
PAWTUCKET, RI 02860
PHONE: (781) 826-4144
CONTACTS: WILLIAM M. SKWIRZ

DRAWING INDEX

DRAWING NUMBER	SHEET TITLE
	CIVIL ENGINEERING PLANS
C000	TITLE SHEET
C001	GENERAL NOTES
C100	OVERALL EXISTING CONDITIONS PLAN
C101	KEY MAP PLAN
C102	EXISTING CONDITIONS PLAN
C103	EXISTING CONDITIONS PLAN
C200	LAYOUT & MATERIALS PLAN
C201	LAYOUT & MATERIALS PLAN
C300	GRADING & DRAINAGE PLAN
C301	GRADING & DRAINAGE PLAN
C302	GRADING & DRAINAGE PLAN
C500	UTILITIES PLAN
C501	UTILITIES PLAN
C700	PLANTING SCHEDULE AND CHARTS
C701	OVERALL SITE PLANTING PLAN
C702	PLANTING PLAN
C703	PLANTING PLAN
C800	DETAILS SHEET 1
C801	DETAILS SHEET 2
C802	DETAILS SHEET 3
C803	DETAILS SHEET 4
C804	DETAILS SHEET 5

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/01/2020	REVISIONS/PERMITTAL FOR RESPONSE TO RIDEM COMMENTS
2	04/06/2020	WETLAND REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

TITLE SHEET

JUN 17 2020

DATE:	DECEMBER 2019
DWG SCALE:	AS SHOWN
PROJECT NO.	192-973
APPROVED BY:	BV
DRAWN BY:	DR
CHECKED BY:	KPS

DRAWING NO.:
C000

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

6/4/2020

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

P:\2019\192-973\-CADD\Dwg\SWM-RIDEM Resubmission\192973-SWM-C000-Title Page-Mod2020 (3).dwg, 6/10/2020 12:53 PM, - dpetrello - LP, 6/10/2020 1253 PM

GENERAL NOTES

1. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
2. EXISTING SITE INFORMATION / TOPOGRAPHIC SURVEY WAS PROVIDED BY RIRRC, AND UTILIZES INFORMATION FROM A PREVIOUSLY APPROVED PLAN SET ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION," DATED APRIL 2007.
3. CEC IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN
4. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES (INCLUDING THOSE LABELED PER RECORD DATA) PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
5. 48 HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE RHODE ISLAND UTILITY PROTECTION SERVICES, AND ALL OTHER AGENCIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF RHODE ISLAND UNDERGROUND PROTECTION, INC.
6. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
7. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE PROJECT WITH THE CONSTRUCTION OF THE PROPOSED MAINTENANCE GARAGE BY OTHERS AND THE CONSTRUCTION OF THE TRANSFER BUILDING BY OTHERS. THE CONSTRUCTION OF THE VARIOUS PROJECTS WILL BE OCCURRING CONCURRENTLY AND WILL REQUIRE COORDINATION BETWEEN THE VARIOUS PARTIES.
8. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNER'S REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
9. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
10. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
11. ANY WORK PERFORMED IN THE LOCAL OR STATE RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
12. THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM) FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS.
13. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL, PRACTICES REQUIRED BY CITY OF JOHNSON AND RIDEM.
14. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS.
15. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.
16. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.
17. BEFORE INSTALLATION OF STORM OR SANITARY SEWER, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
18. ADJUST/RECONSTRUCT ALL EXISTING CASTINGS, CLEANOUTS, ETC. WITHIN PROJECT AREA TO GRADE AS REQUIRED.
19. CONTRACTOR TO REMOVE & REPLACE PAVEMENT AS SPECIFIED.
20. ALL STANDARD PARKING PLACES ARE 9' BY 18', UNLESS OTHERWISE NOTED.
21. SITE SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

DEMOLITION NOTES

1. ALL EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES FOUNDATION SLABS, WALLS AND FOOTINGS. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACKFILLED WITH SATISFACTORY MATERIALS AND COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATION.
2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD BY THE CONTRACTOR.
3. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
4. TREE PROTECTION FENCING SHALL BE IN ACCORDANCE WITH THE DRAWINGS. DO NOT OPERATE OR STORE EQUIPMENT, NOR HANDLE OR STORE MATERIALS WITHIN THE DRIP LINES OF THE TREES SHOWN TO REMAIN.
5. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
6. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.
7. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY / AGENCY.
8. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR OBTAINS PRIOR WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
9. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND FUNCTION PROPERLY PRIOR TO INITIALIZATION OF DEMOLITION ACTIVITIES.
10. ASBESTOS OR HAZARDOUS MATERIALS ARE NOT EXPECTED, IF FOUND ON SITE, SUCH MATERIALS SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
11. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
12. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
13. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC.. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
15. PROVIDE NEAT, STRAIGHT, FULL DEPTH, SAW CUTS OF EXISTING PAVEMENT WHERE INDICATED ALONG LIMITS OF PAVEMENT DEMOLITION.
16. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL. WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO PHASE I ESA, PHASE II, WETLAND AND STREAM DELINEATION AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
17. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE IF THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF THE REPORT OF GEOTECHNICAL INVESTIGATION. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE LANDSCAPING.
18. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVING, PRIOR TO INSTALLATION OF PAVED SURFACES.
4. SITE WORK CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH TO ALL SURFACES. SITE WORK CONCRETE SHALL BE TYPE II (4,000 PSI @ 28 DAYS) UNLESS OTHERWISE NOTED.
5. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN, WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
6. SITE DIMENSIONS SHOWN ARE TO THE FACE OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
7. COORDINATES ARE FOR BUILDING COLUMNS, EXTERIOR BUILDING WALL, CENTER OF DRIVEWAYS, CENTER OF STRUCTURES, UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
9. REFER TO THE ARCHITECTURAL, PLUMBING & ELECTRICAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRY LOCATIONS AND PRECISE BUILDING DIMENSIONS.
10. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF JOHNSTON. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, LANDSCAPING, ETC.

GRADING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINAL GRADES, TOP OF GROUND LEVEL, OR TOP OF PAVEMENT, OR GRATE ELEVATION AT THE DRAWDOWN POINT, UNLESS INDICATED OTHERWISE.
2. REFER TO AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY CIVIL AND ENVIRONMENTAL CONSULTANTS, INCORPORATED, TITLED "GEOTECHNICAL LETTER REPORT, FACILITY ENTRANCE AND UTILITY DESIGN" DATED NOVEMBER 27, 2019.
3. SITE BUILDING PAD EXCAVATION AND CONSTRUCTION TO BE PER THE SPECIFICATIONS. BUILDING PAD PREPARATION SHALL BEGIN BY CLEARING & STRIPPING UNSUITABLE MATERIAL FROM PAD SITE, THEN PLACEMENT & COMPACTION OF BACKFILL MATERIAL PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. ALL BACKFILL MATERIAL MUST BE ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.
4. ALL FILL UNDER PAVEMENT SHALL BE COMPACTED TO THE TECHNICAL SPECIFICATION AND THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. IF THERE ARE CONFLICTS, THE SPECIFICATION SHALL PREVAIL.
5. ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.
6. CONTRACTOR SHALL STRICTLY ADHERE TO THE EROSION & SEDIMENT CONTROL PLAN PREPARED FOR THIS PROJECT.
7. EARTHWORK SHALL INCLUDE CLEARING AND GRUBBING, STRIPPING AND STOCKPILING TOPSOIL, MASS GRADING, EXCAVATION, FILLING, UNDER CUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
8. CONTRACTOR TO REFILL UNDERCUT AREAS WITH SUITABLE MATERIAL AND COMPACT AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
9. PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO A DEPTH INDICATED ON THE LANDSCAPE PLANS (6" MINIMUM).
10. PAVEMENT SLOPES ACROSS ACCESSIBLE PARKING STALLS AND ADJOINING ACCESS AISLES SHALL BE MAXIMUM 2% AND SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT.
11. ALL SLOPES IN NON-PAVED AREAS SHALL BE 3:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
12. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN, UNLESS NOTED OTHERWISE.
13. COMPACTED FILLS ARE TO BE MADE TO A MINIMUM OF THREE FEET ABOVE THE CROWN OF ANY PROPOSED SEWER PRIOR TO CUTTING OF TRENCHES FOR PLACEMENT OF SAID SEWERS. ALL FILLS SHALL BE CONTROLLED, COMPACTED, AND INSPECTED BY AN APPROVED TESTING LABORATORY OR AN INSPECTOR FROM THE APPROPRIATE GOVERNMENTAL AGENCY.
14. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE OWNER AND SHALL REMAIN ON THE PROPERTY OF THE OWNER, UNLESS SPECIFIED OTHERWISE BY THE OWNER. ALL EXCESS SOIL MATERIALS SHALL BE STOCKPILED BY THE CONTRACTOR IN DESIGNATED LOCATIONS DETERMINED BY THE OWNER.
15. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING THE SITE EARTHWORK BY IMPORTING OR EXPORTING AS NECESSARY TO ACHIEVE DESIGN GRADES AND SPECIFICATIONS.

STORM DRAINAGE NOTES

1. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
3. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
4. ANY FIELD TILE CUT IN EXCAVATION, WHICH DRAINS AN OFFSITE AREA, MUST BE TIED INTO THE STORM DRAINAGE SYSTEM.
5. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, CONTRACTOR IS TO COORDINATE WITH ARCHITECTURAL AND PLUMBING DRAWINGS, UNDER SEPARATE CONTRACT..
6. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
7. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 4 SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
8. STORM SEWER PIPE LABELED "STM" SHALL BE ONE OF THE FOLLOWING: HDPE SDR-35, OR HIGH DENSITY POLYETHYLENE. STORM SEWER PIPE LABELED "RCP" SHALL BE REINFORCED CONCRETE PIPE. ALL STORM IS TO BE INSTALLED PER THE SPECIFICATIONS.

UTILITY NOTES

1. ALL PROPOSED UTILITY LINES AND EXTENSIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PRIVATE UTILITY AGENCY / DISTRICT / MUNICIPALITY / COMPANY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE UTILITY DISCONNECTIONS WITH THE APPROPRIATE AGENCY.
2. THE CONTRACTOR IS PARTICULARLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON IS BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. WATERLINE CROSSINGS SHALL MAINTAIN A VERTICAL SEPARATION OF 18" MINIMUM. SANITARY SEWER SHALL BE LOCATED 18" BELOW WATERMAIN AT ALL CROSSINGS. WATERMAIN SHALL BE LOCATED A MINIMUM OF 10' HORIZONTALLY FROM ANY SANITARY SEWER OR STORM SEWER. ALL MEASUREMENTS SHALL BE TAKEN FROM OUTSIDE OF SEWER PIPE TO THE OUTSIDE OF WATERMAIN PIPE. ONE FULL LENGTH OF WATERMAIN PIPE SHALL BE LOCATED AT ALL CROSSINGS TO ENABLE BOTH JOINTS TO BE LOCATED AS FAR FROM SEWER AS POSSIBLE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.
6. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
7. SANITARY SEWER SHALL BE PVC-SDR 35 PER ASTM D-3034 OR APPROVED EQUAL (CONFORMING TO CITY JOHNSTON WATER & SEWER DEPARTMENT RULES AND REGULATIONS) INSTALLED AT A MINIMUM SLOPE OF ONE PERCENT (1.00%) UNLESS OTHERWISE NOTED. SANITARY SERVICE SHALL BE INSTALLED AT A MINIMUM DEPTH OF FOUR FEET (4') UNLESS OTHERWISE NOTED. A MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED AT ALL WATERLINE & STORM SEWER CROSSINGS. SANITARY SERVICE JOINTS ALL CONFORM TO ASTM D-3212.
8. DISTANCES SHOWN FOR BOTH SANITARY AND STORM SEWER PIPES ARE MEASURED FROM CENTER OF STRUCTURE, CONTRACTOR RESPONSIBLE FOR ACTUAL FIELD CUT LENGTH. COORDINATES FOR STORM & SANITARY STRUCTURES ARE SHOWN TO THE CENTER STRUCTURE, UNLESS OTHERWISE NOTED.
9. ROOF DRAINS, FOUNDATION DRAINS AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
10. ADJUST ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETC. TO MATCH PROPOSED FINISHED GRADES, UNLESS OTHERWISE INDICATED.
11. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL IMPROVEMENTS. INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE HORIZONTAL AND VERTICAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.
12. MECHANICAL/ELECTRICAL CONTRACTORS SHALL BRING ALL UTILITIES 10' OUTSIDE BUILDING WALL, OR IN ACCORDANCE WITH STATE OF RHODE ISLAND PLUMBING CODE, AS APPROPRIATE, COORDINATE WITH OWNER AND ENGINEER.

WATER MAIN INSTALLATION NOTES

1. CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE TOWN OF JOHNSTON AND PROVIDENCE WATER SUPPLY BOARD REGULATIONS, AS APPLICABLE. IN CASE OF DISCREPANCY BETWEEN THE CONTRACT DOCUMENTS AND THE PROVIDENCE WATER SUPPLY BOARD REGULATIONS, THE PROVIDENCE WATER REGULATIONS SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
2. CONTRACTOR WILL BE REQUIRED TO ORDER THE PROPOSED WATER METER THROUGH THE TOWN OF JOHNSTON WATER DEPARTMENT. A SENSUS COMPACT FIRE LINE FIRE SERVICE ASSEMBLY, CONSISTING OF AN 8" FIRE LINE ASSEMBLY WITH A 2" BRONZE BY-PASS SHALL BE PROVIDED. THE TOWN CONTACT FOR ORDERING THE METER IS AS FOLLOWS, IF THE TOWN REPRESENTATIVE IS NOT AVAILABLE THEN CONTRACTOR SHOULD CONTACT MILLENIUM WATER REPRESENTATIVE.

   TOWN OF JOHNSTON – WATER DEPARTMENT
   TRISH SCHIAVITTI
   401-231-4000, EXT. 4188
   WATERDEPT@JOHNSTON-RI.US

   MILLENIUM WATER, LLC
   JIM MAJEWSKI
   508-864-7077 (CELL)
   800-624-2377 (OFFICE)
   JIMMY@THEWATEREXPERTS.COM
3. MILLENNIUM WATER OR TOWN OF JOHNSTON DEPARTMENT OF PUBLIC WORKS PERSONNEL SHALL BE PRESENT ON SITE DURING ALL CONSTRUCTION ACTIVITIES RELATING TO OR PERFORMED IN THE VICINITY OF EXISTING PUBLIC WATER UTILITY INFRASTRUCTURE (I.E. TIE-INS, ISOLATION, ETC.). CONTRACTOR SHALL NOT OPERATE EXISTING VALVES, HYDRANTS, ETC.. THE TOWN OF JOHNSTON REPRESENTATIVE OR MILLENNIUM WATER PERSONNEL SHALL HAVE THE SOLE AUTHORITY FOR OPERATION OF EXISTING WATER UTILITY INFRASTRUCTURE.
4. THE PIPING LAYOUT INDICATED IS DIAGRAMMATIC ONLY AND DOES NOT NECESSARILY SHOW ALL THE REQUIRED FITTINGS FOR PROPER HORIZONTAL OR VERTICAL ALIGNMENT. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS TO OBTAIN PROPER ALIGNMENT BASED UPON FIELD CONDITIONS, AND ALL FITTING BEADS SHALL BE CONSIDERED PART OF BID LINE ITEM COST.
5. THE CONTRACTOR SHALL MAINTAIN A MINIMUM VERTICAL CLEARANCE BETWEEN THE NEW WATER MAIN AND ALL OTHER EXISTING UTILITIES OF AT LEAST 18-INCHES.
6. ALL NEW WATER MAINS AND SERVICES SHALL HAVE A MINIMUM DEPTH OF COVER EQUAL TO 5.0 FEET WHEREVER POSSIBLE. PIPE INSULATION, AS SPECIFIED AND DIRECTED BY THE ENGINEER, SHALL BE REQUIRED FOR WATER MAINS WITHOUT THIS SPECIFIED MINIMUM COVER.
7. THE NEW WATER MAIN SHALL PASS UNDER ALL EXISTING UTILITIES EXCEPT SEWERS UNLESS OTHERWISE NOTED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER.
8. NEW WATER MAINS, SIZES 3" THROUGH 12" SHALL BE CLASS 52 DUCTILE IRON (D.I). RESTRAINED JOINT PIPING. BELOW GROUND FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL RESTRAINED JOINTS (MEGALUGS) WITH CONCRETE THRUST BLOCKS UNLESS OTHERWISE NOTED. PUSH-ON PIPE JOINTS SHALL HAVE RESTRAINED GASKETS. TIE RODS SHALL BE USED FOR THRUST RESTRAINT WHERE CONCRETE THRUST BLOCKS CANNOT BE USED. ABOVE GROUND PIPE AND FITTINGS SHALL BE FLANGED D.I. ABOVE GROUND PIPING SHALL HAVE MACHINE THREADED FLANGES WHERE POSSIBLE. UNI-FLANGE SHALL BE USED WHERE REQUIRED BUT MUST BE RESTRAINED WITH 3/4" THREADED RODS.
9. ALL WATER SERVICE PIPE, 2" AND SMALLER, SHALL BE K SOFT COPPER FROM WATERMAIN THRU CURB STOP; K SOFT COPPER OR AS APPROVED BY CITY OF JOHNSON WATER DEPARTMENT.
10. CONTRACTOR SHALL SET ALL VALVE BOXES TO MATCH FINAL GRADE ELEVATIONS.
11. NEW WATER MAINS, METER AND BACKFLOW PREVENTER WETTED COMPONENTS SHALL BE DISINFECTED AND PRESSURE TESTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS. NO NEW WATER MAINS SHALL BE PHYSICALLY CONNECTED TO EXISTING MAINS UNTIL DISINFECTION IS COMPLETED AND BACTERIA TEST ARE APPROVED BY THE TOWN OF JOHNSTON OR ITS WATER SYSTEM OPERATOR, MILLENNIUM WATER. A CLOSED VALVE WILL NOT CONSTITUTE PHYSICAL SEPARATION BETWEEN NEW AND EXISTING MAINS. AN APPROVED BACKFLOW PREVENTER MUST BE USED FOR ANY CONNECTIONS TO NEW MAINS PRIOR TO ACCEPTANCE.
12. FOR TESTING PURPOSES IT MAY BE NECESSARY FOR THE CONTRACTOR TO INSTALL CORPORATIONS WITHIN THE PIPING SYSTEM AT HIGH POINTS TO FACILITATE AIR RELEASE OR AT END POINTS TO PROVIDE SUFFICIENT FLUSHING CAPACITY. CORPORATIONS SHALL BE INSTALLED USING A SADDLE. SUCH CORPORATIONS SHALL BE REMOVED AND CAPPED W/ BRASS PLUG PRIOR TO ACTIVATING THE PIPELINE.

WATER METER AND BACKFLOW PREVENTION NOTES

1. THE METER/BACKFLOW PREVENTER CABINET SHALL BE PRE-FABRICATED, CONSTRUCTED OF REINFORCED ALUMINUM. ACCESS SHALL BE PROVIDED THROUGH FRONT ACCESS PANELS WHICH SHALL BE NEOPRENE GASKETED. THE ENTIRE UNIT SHALL BE LOCKABLE. THE CABINET SHALL BE STRUCTURALLY LINED WITH A SPRAY APPLIED, OR SANDWICH LAMINATE, UNICELLULAR NON-WICKING INSULATION RATED R-8 MINIMUM, AND CONTAIN THERMOSTATICALLY CONTROLLED HEAT SOURCE(S) MOUNTED TO THE INTERIOR WALL. CABINET SHALL BE ANCHORED TO CONCRETE BASE SLAB ACCORDING TO MANUFACTURER'S REQUIREMENTS, WITH A ⅜" COMPRESSABLE NEOPRENE BETWEEN THE ENCLOSURE AND CONCRETE SLAB. ALL FASTENERS AND MOUNTING HARDWARE SHALL BE STAINLES

NORTH

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED LIMIT OF DISTURBANCE
- EXISTING EXTENT OF WETLAND
- EXISTING PERIMETER WETLAND

REFERENCES

1. LIMIT OF WETLAND DELINEATIONS ARE TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I-4A, THROUGH I-4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. AERIAL ORTHOGRAPHIC IMAGES ARE BASED ON ORTHOGRAPHIC DATA PROVIDED BY GOOGLE EARTH PRO. ORTHOGRAPHIC IMAGERY DATED, 6/26/2018. ACCESSED, 10/19/2019.
3. LIMIT OF DISTURBANCE (LOD) SHOWN IS FOR GENERAL GUIDANCE ONLY. SITE CONDITIONS MAY REQUIRE ADDITIONAL MEASURES OUTSIDE OF OR WITHIN LOD, OR REVISION TO LOD LIMIT.
4. PROPERTY LINES ARE BASED ON GIS DATA OBTAINED FROM THE CITY OF JOHNSTON GEOGRAPHIC INFORMATION SYSTEM DATABASE AND SHOULD BE CONSIDERED APPROXIMATE.

RECEIVED
Office of Land Management
JUN 17 2020
Office of Water Resources

APPROXIMATE PROPERTY LINE
ALMY RESERVOIR
EXISTING SWAMP WETLAND SERIES "C"
EXISTING SWAMP WETLAND SERIES "B"
EXISTING POND/MARSH WETLAND SERIES "D"
CENTRAL AVENUE
APPLE TREE LANE
APPROXIMATE LIMIT OF DISTURBANCE
EXISTING FORESTED WETLAND SERIES "E"
EXISTING EMERGENT PLANT COMMUNITY WETLAND SERIES "AA"
EXISTING FORESTED WETLAND SERIES "I"
EXISTING FORESTED WETLAND SERIES "J"
EXISTING LANDFILL
EXISTING TIPPING BUILDING
EXISTING SEDIMENTATION POND 13
EXISTING ECO DEPOT
EXISTING ADMINISTRATION BUILDING
EXISTING SCALES
EXISTING MATERIAL RECYCLING FACILITY
EXISTING LEACHATE PRE-TREATMENT FACILITY
SCITUATE AVENUE
EXISTING POND 12
EXISTING SEDIMENTATION POND 2
SHUN PIKE
MAIN SITE ENTRANCE
EXISTING SEDIMENTATION POND 11
EXISTING SEDIMENTATION POND 10
EXISTING WETLAND SERIES "G"
EXISTING WETLAND SERIES "A"
UPPER SIMMONS RESERVOIR

Kindly be advised that this Permit is not equivalent to verification of the type or of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 400 800

6/15/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/01/2020	REVISION SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS
2	05/05/2020	WETLANDS REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION FACILITY RELOCATION AND ENTRANCE PROJECT CENTRAL LANDFILL 65 SHUN PIKE, JOHNSTON, RI

OVERALL EXISTING CONDITIONS PLAN

DATE:	DECEMBER 2019
DRAWN BY:	DR
DWG SCALE:	1"=400'
CHECKED BY:	KPS
PROJECT NO.:	192-973
APPROVED BY:	BV

DRAWING NO.: **C100**

P:\2019\192-973-C100\dwg\SW3-8X24 Resolution\192973-SWM-C100--Existing Conditions Plan.dwg[C100] 6/5/2020 - gwinnell - LS 6/10/2020 12:51 PM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I–4A, THROUGH I–4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLANE) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
5. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
6. EXISTING CONTOURS SHOWN WITH THE LIMITS OF THE PROJECT MAY NOT REFLECT ACTUAL CONDITIONS WHEN CONTRACTOR MOBILIZES. CONTRACTOR MUST VERIFY EXISTING CONDITIONS WITH OWN SURVEY PRIOR TO START OF WORK.
7. PROPERTY LINES ARE BASED ON GIS DATA OBTAINED FROM THE CITY OF JOHNSTON GEOGRAPHIC INFORMATION SYSTEM DATABASE AND SHOULD BE CONSIDERED APPROXIMATE.

NORTH

LEGEND
- EXISTING EXTENT OF WETLAND
- EXISTING PERIMETER WETLAND
- EXISTING WATERBODY LINE
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- PROPOSED LIMITS OF DETENTION POND
- PROPOSED LIMIT OF DISTURBANCE
- EXISTING PROPERTY BOUNDARY
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED GRAVEL PAVEMENT

APPLE TREE LANE
EXISTING POND/MARSH WETLAND SERIES "D"
50' PERIMETER WETLAND
600' RESIDENTIAL VEGETATED BUFFER
PROPOSED ACCESS ROAD
SHEET C102, C200, C501
50' PERIMETER WETLAND
EXISTING FORESTED WETLAND SERIES "E"
PROPOSED SHALLOW WET VEGETATED TREATMENT SYSTEM (WEST)
PROPOSED INFILTRATION BASIN (CENTRAL)
PROPOSED SHALLOW WET VEGETATED TREATMENT SYSTEM (EAST)
PROPOSED INFILTRATION BASIN (EAST)
OLD PLOUGH ROAD
FUTURE BULKY WASTE RECYCLING FACILITY
PROPOSED TIP BUILDING
EXISTING EMERGENT PLANT COMMUNITY WETLAND SERIES "AA" TO BE RESTORED.
EXISTING FORESTED WETLAND SERIES "I"
600' VEGETATED BUFFER FROM RESIDENTIAL PROPERTY (TYP.)
PROPOSED MATTRESS BUILDING
PROPOSED MAINTENANCE GARAGE
SHEET C102, C200, C300, C500, C501
EXISTING SEDIMENTATION POND 13
SHEET C102, C200, C300
EXISTING FORESTED WETLAND SERIES "J"
APPROXIMATE LIMIT OF DISTURBANCE
EXISTING TIPPING FACILITY TO BE DEMOLISHED
EXISTING BUILDING TO BE DEMOLISHED
EXISTING FACILITIES AND SITE FEATURES WITHIN PHASE VI EXPANSION AREA ARE TO BE DEMOLISHED UNDER SEPARATE CONTRACT
LIMIT OF PHASE VI LANDFILL EXPANSION
SHEET C103, C201, C301
EXISTING ADMIN BUILDING TO BE DEMOLISHED
PHASE VI ACCESS ROAD
PREVIOUSLY APPROVED PHASE VI ACCESS ROAD LAYOUT
SCITUATE AVENUE
PROPOSED SEDIMENTATION POND 14 (PER PHASE VI PROJECT)
LIMIT OF PHASE VI DISTURBANCE
PROPOSED SITE ENTRANCE
EXISTING MATERIAL RECYCLING FACILITY TO REMAIN
EXISTING SCALES TO REMAIN
EXISTING LEACHATE PRE-TREATMENT FACILITY TO REMAIN
REPLACE EXISTING ARM GATES WITH ROLLER GATES
SHUN PIKE
INSTALL DIRECTIONAL ENTRY SIGNAGE – FINAL LOCATION TO BE COORDINATED WITH OWNER

Environmental Review JUN 17 2020 Office of Water Resources

Kindly be advised that this Permit is subject to a verification of the location and/or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED SEP 8 2020 FILE # 19-0357 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET 0 150 300

6/4/2020
BARRY VANLAARHOVEN No. 11758 REGISTERED PROFESSIONAL ENGINEER CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1.	3/27/2020	REVISION/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS
2.	10/5/2020	WETLANDS REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

KEY MAP PLAN

DATE:	DECEMBER 2019
DRAWN BY:	DR
CHECKED BY:	KPS
DWG SCALE:	AS SHOWN
PROJECT NO:	192-973
APPROVED BY:	BV

DRAWING NO.: C101

P:\2019\192-973\...\Key Map.dwg[11x17 LS](6.10.2020 - dpotvin) - LP, 6/10/2020 12:51 PM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I–4A, THROUGH I–4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

   THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
5. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.

   EXISTING CONTOURS SHOWN WITHIN THE LIMITS OF THE PROJECT MAY NOT REFLECT ACTUAL CONDITIONS WHEN CONTRACTOR MOBILIZES. CONTRACTOR SHALL VERIFY THE EXISTING CONDITION WITH OWN SURVEY PRIOR TO START OF WORK AND SHALL PROVIDE THE SURVEY TO THE OWNER AND ENGINEER.
7. SHOULD EXISTING UTILITIES CONFLICT WITH REQUIRED INSTALLATION, OWNER AND DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE CONFLICT. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATION OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER PRIOR TO BEGINNING THE WORK.

   LIMIT OF DISTURBANCE (LOD) SHOWN IS FOR GENERAL GUIDANCE ONLY. SITE CONDITIONS MAY REQUIRE ADDITIONAL MEASURES OUTSIDE OF OR WITHIN LOD, OR REVISIONS TO LOD LIMIT.

NORTH

EMERGENT PLANT COMMUNITY WETLAND SERIES "AA" TO BE RESTORED

WETLAND TO BE RESTORED UNDER THE SUPERVISION OF A PROFESSIONAL WETLAND SCIENTIST IN ACCORDANCE WITH THE RIDEM FRESHWATER WETLANDS PROGRAM BIOLOGICAL REVIEW SHEET DATED MAY 1, 2020.

EXISTING FORESTED WETLAND SERIES "I"

EXISTING FORESTED WETLAND SERIES "J"

EXISTING LOAM STOCKPILE

EXISTING WOODS

APPROXIMATE LIMIT OF DISTURBANCE

EXISTING ABANDONED FIRE HYDRANT

EXISTING DETERIORATED PAVED ROADWAY

EXISTING ABANDONED 16" WATER MAIN

EXISTING ABANDONED FIRE HYDRANT

EXISTING ABANDONED FIRE HYDRANT

EXISTING DUAL 24" HDPE CULVERTS

EXISTING SEDIMENTATION POND 13

EXISTING DRAINAGE SWALE

EXISTING 10"WXS"H CONCRETE BOX CULVERT

LIMIT OF PHASE VI LANDFILL EXPANSION

EXISTING LEACHATE MANHOLE

EXISTING GRAVEL ACCESS ROAD

EXISTING LEACHATE MANHOLE

EXISTING SPARE UTILITY CONDUIT

EXISTING DEBRIS FENCE

EXISTING OUTLET CONTROL

EXISTING PAVED ROAD

CUT AND CAPPED EXISTING WATER MAIN WITH 2" BLOWOFF VALVE

EXISTING UTILITY POLE

EXISTING DETERIORATED PAVED ROAD

EXISTING SANITARY SEWER FORCE MAIN

EXISTING UTILITY POLE WITH STREETLIGHT

EXISTING FIRE HYDRANT

EXISTING 16" WATER MAIN

EXISTING SEWER MANHOLE

EXISTING CHAIN LINK FENCE

EXISTING SEWER MANHOLE

EXISTING SANITARY SEWER FORCE MAIN

EXISTING ABANDONED SEWER FORCEMAIN

PROPOSED LIMIT OF DISTURBANCE

EXISTING ABANDONED 10" PVC SEWER

EXISTING GRAVEL AREA

EXISTING UTILITY POLE WITH LIGHT

EXISTING UTILITY POLE

EXISTING GAS SERVICE

EXISTING DRAINAGE CATCH BASIN

EXISTING UTILITY POLE WITH LIGHT

SCITUATE AVENUE

AP 43 LOT 410
AP 43 LOT 407
AP 43 LOT 406
AP 43 LOT 405
AP 43 LOT 413
AP 43 LOT 414
AP 43 LOT 584
AP 43 LOT 261
AP 43 LOT 412
AP 43 LOT 404
AP 43 LOT 5
AP 43 LOT 152
AP 43 LOT 1
AP 43 LOT 127
AP 43 LOT 278
AP 43 LOT 283
AP 43 LOT 126
AP 43 LOT 128
AP 43 LOT 129
AP 43 LOT 120
AP 43 LOT 123
AP 43 LOT 122
AP 43 LOT 121
AP 43 LOT 279
AP 43 LOT 282
AP 43 LOT 118
AP 43 LOT 119
AP 43 LOT 130
AP 43 LOT 117
AP 43 LOT 433
AP 43 LOT 280
AP 43 LOT 281

MATCHLINE SEE SHEET C103

MATCHLINE SEE SHEET C103

SCALE IN FEET
0 60 120

Environmental Management
JUN 17 2020
Office of Water Resources

Kindly be advised that this Permit is equivalent to a verification as to the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 18 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

6/16/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

LEGEND

- EXISTING INTERIOR PROPERTY LINE
- EXISTING PROPERTY BOUNDARY
- EXISTING ABUTTING PROPERTY LINE
- EXISTING FENCE LINE
- EXISTING GUARD RAIL LINE
- EXISTING WATERBODY LINE
- EXISTING TREE LINE
- EXISTING WALL LINE
- EXISTING PAVED PATH
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE WITH LIGHTING
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING SIGN SYMBOL
- EXISTING TREE SYMBOLS
- EXISTING EXTENT OF WETLAND
- EXISTING STORM PIPE
- EXISTING WATER SERVICE LINE
- EXISTING SANITARY SEWER LINE
- EXISTING FORCE MAIN LINE
- EXISTING OVERHEAD WIRE LINE
- EXISTING UNGERGROUND ELECTRIC LINE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND GAS LINE
- PROPOSED LIMIT OF DISTURBANCE

REVISION RECORD		
NO	DATE	DESCRIPTION
1	04/01/2020	REVISION/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS
2	05/29/2020	WETLANDS REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

EXISTING CONDITIONS PLAN

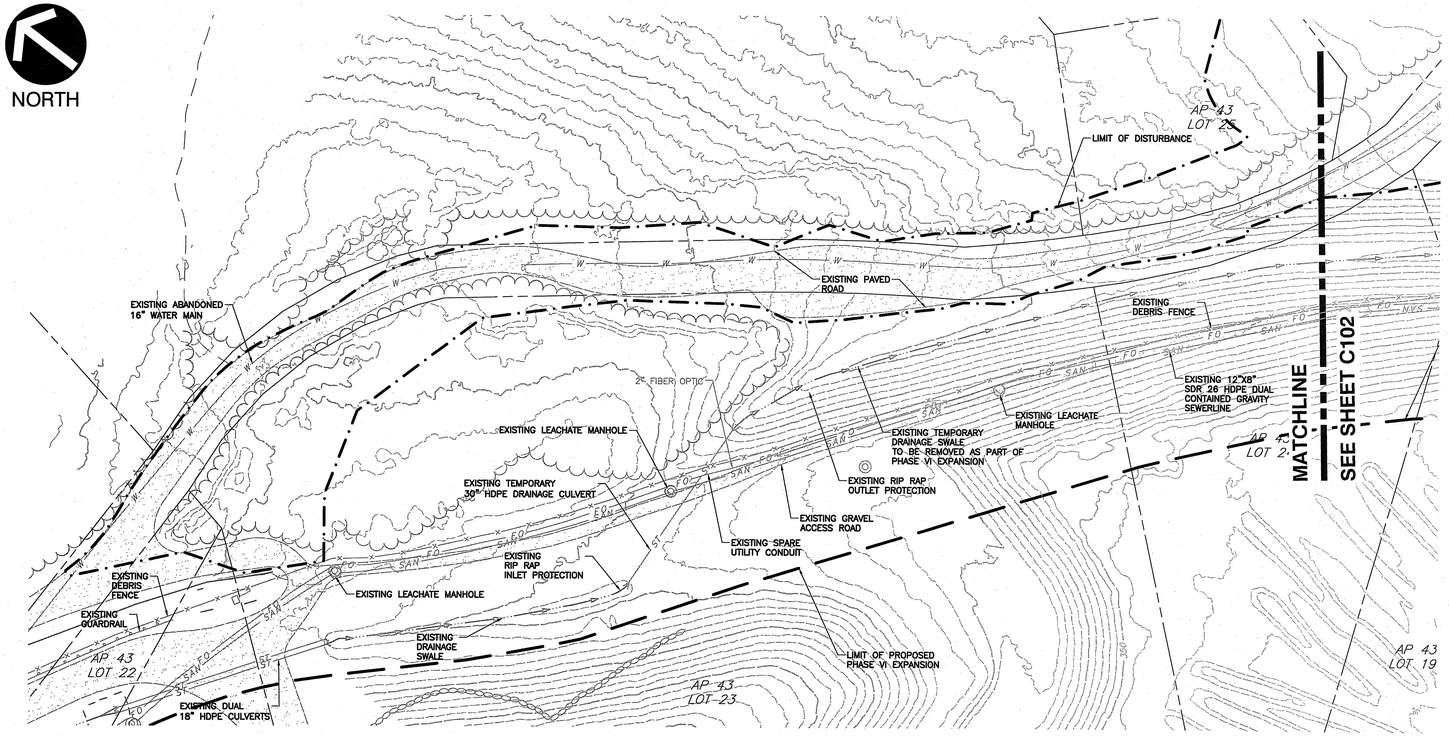
DATE:	DECEMBER 2019
DWG SCALE:	1"=60'
PROJECT NO:	192-973
DRAWN BY:	DR
CHECKED BY:	KPS
APPROVED BY:	BV

DRAWING NO.: C102

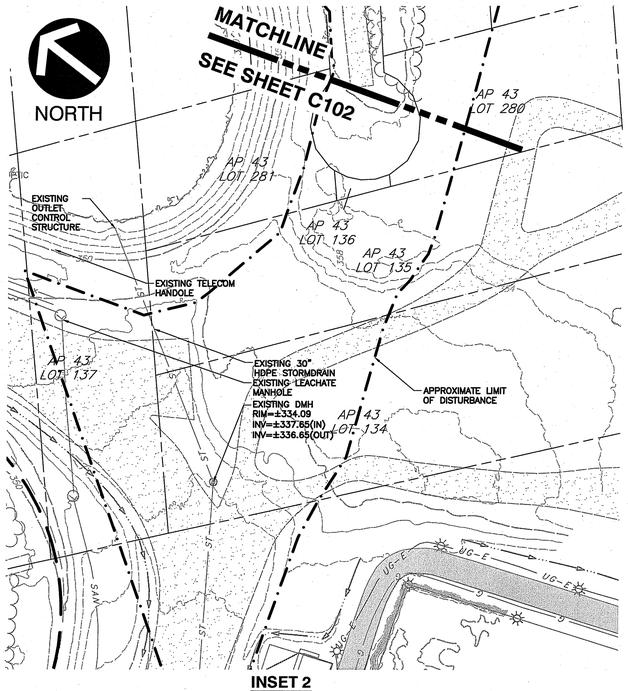
P:\2019\192-973\~DSGN\Dwg\SHT4-RIDEM Resubmission\192973-SHT4-C102,C103-Limit of Work Plan.dwg[C102] LS(6/2/2020 - dpetrone) - LP, 6/16/2020 12:18 PM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION.
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
5. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
6. EXISTING CONTOURS SHOWN WITHIN THE LIMITS OF THE PROJECT MAY NOT REFLECT ACTUAL CONDITIONS WHEN CONTRACTOR MOBILIZES. CONTRACTOR SHALL VERIFY THE EXISTING CONDITION WITH OWN SURVEY PRIOR TO START OF WORK AND SHALL PROVIDE THE SURVEY TO THE OWNER AND ENGINEER.
7. SHOULD EXISTING UTILITIES CONFLICT WITH REQUIRED INSTALLATION, OWNER AND DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE CONFLICT. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATION OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER PRIOR TO BEGINNING THE WORK.
8. EXISTING INVERT ELEVATIONS AND PIPE SIZES FOR POND 13 INFRASTRUCTURE IS BASED ON PLANS ENTITLED, "POND 13 DRAINAGE PIPE PLAN AND PROFILE – I IFB#100," DATED JANUARY 2014, PREPARED BY CIVIL & ENVIRONMENTAL CONSULTANTS INCORPORATED.
9. LIMIT OF DISTURBANCE (LOD) SHOWN IS FOR GENERAL GUIDANCE ONLY. SITE CONDITIONS MAY REQUIRE ADDITIONAL MEASURES OUTSIDE OF OR WITHIN LOD, OR REVISIONS TO LOD LIMIT.
10. PROPERTY LINES ARE BASED ON GIS DATA OBTAINED FROM THE CITY OF JOHNSTON GEOGRAPHIC INFORMATION SYSTEM DATABASE AND SHOULD BE CONSIDERED APPROXIMATE.



INSET 1
SCALE: 1"=60'



INSET 2
SCALE:1"=60'

LEGEND

- EXISTING INTERIOR PROPERTY LINE
- EXISTING PROPERTY BOUNDARY
- EXISTING ABUTTING PROPERTY LINE
- EXISTING FENCE LINE
- EXISTING GUARD RAIL LINE
- EXISTING WATERBODY LINE
- EXISTING TREE LINE
- EXISTING WALL LINE
- EXISTING PAVED PATH
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE WITH LIGHTING
- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING SIGN SYMBOL
- EXISTING TREE SYMBOLS
- ST — EXISTING STORM PIPE
- W — EXISTING WATER SERVICE LINE
- SAN — EXISTING SANITARY SEWER LINE
- FM — EXISTING FORCE MAIN LINE
- OH-E — EXISTING OVERHEAD WIRE LINE
- UG-E — EXISTING UNGERGROUND ELECTRIC LINE
- FO — EXISTING FIBER OPTIC LINE
- G — EXISTING UNDERGROUND GAS LINE

Environmental Management
APR 10 2020
Office of Water Resources

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 60 120

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1.	04/01/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

EXISTING CONDITIONS PLAN

DATE:	DECEMBER 2019
DWG SCALE:	1"=60'
PROJECT NO:	192-9731
DRAWN BY:	DR
CHECKED BY:	KPS
APPROVED BY:	BV

DRAWING NO.:
C103

P:\2019\192-9731-0001\Dwg\3804-REDM Resubmission\192931-3804-C102_C103-Limit of Work Plan.dwg[C103] LS(4/1/2020 - trashorough) - LP, 4/1/2020 2:44 PM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I–4A, THROUGH I–4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
4. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
5. PROPERTY LINE INFORMATION DEDICATED ON THIS PLAN IS BASED ON TOWN OF JOHNSON GIS INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE.

NORTH

WETLAND TO BE RESTORED UNDER THE SUPERVISION OF A PROFESSIONAL WETLAND SCIENTIST IN ACCORDANCE WITH THE RIDEM FRESHWATER WETLANDS PROGRAM BIOLOGICAL REVIEW SHEET DATED MAY 1, 2020

EXISTING PAVEMENT TO BE DEMOLISHED AND RE–VEGETATED (SEE SHEET 701)

EXISTING FORESTED WETLAND SERIES "I"

DRAINAGE BASIN MAINTENANCE ACCESS PATH

RIP RAP OVERFLOW

INFILTRATION BASIN

PROPOSED SHALLOW WET VEGETATED TREATMENT SYSTEM

SEDIMENT FOREBAY

OUTLET CONTROL STRUCTURE (SEE SHEET C302)

PROPOSED INFILTRATION BASIIN

PROPOSED RETAINING WALL

PROPOSED STEEL GUARD RAIL AND FENCE

PROPOSED GRAVEL SURFACE

10' SNOW STORAGE

PROPOSED OVERSIZED PARKING

OVERSIZED PARKING SPACES

MAINTENANCE GARAGE (N.I.C. SEE PLANS BY OTHERS)

ADA ACCESSIBLE PARKING SPACES

PROPOSED CHAINLINK FENCING

JOIN EXISTING FENCE

PROPOSED UTILITY POLE

BOOTH FOR SPOTTER

PROPOSED BITUMINOUS PAVEMENT

SNOW STORAGE

SIGNS (R1–1)(R6–1L) (R5–1)

SIGNS (R1–1) (R6–1R)

PROPOSED BITUMINOUS ASPHALT PAVEMENT

FUTURE LANE EXPANSION AREA

SIGN (R1–1)

GATE KEY ACCESS CONTROL PEDESTAL

PROPOSED SLIDING ACCESS GATES A

END VGC

ADA RAMP

PROPOSED TRANSFORMER PAD

PROPOSED TRANSFER FACILITY

ADA RAMP TO LOADOUT

PROPOSED FUTURE BULKY WASTE RECYCLING FACILITY

PROPOSED ADMINISTRATIVE BUILDING

PROPOSED BITUMINOUS ASPHALT SURFACE

SP–1 CUSTOM SIGN

PROPOSED SCALES

PROPOSED SCALE HOUSE AND PAY BOOTH

PROPOSED SCALE

SEE SHEET C201 FOR DETAIL

PROPOSED SLIDING ACCESS GATES C

VEHICULAR GATE SENSORS

WAYFINDING SIGNS SP5–8 SHALL BE LOCATED BY THE CLIENT

GATE KEYPAD ACCESS CONTROL PEDESTAL

VEHICULAR GATE

40' PAVED ACCESS ROAD

SENSORS

REMOVE EXISTING CHAINLINK FENCE

JOIN EXISTING CHAINLINK FENCE

DIRECTIONAL / ENTRY SIGN (SP2) FINAL SIZE AND LOCATION AND ORIENTITION TO BE COORDIANTED WITH OWNER

MAINTAIN EXISTING CHAINLINK FENCE

CONCRETE SIDEWALK

MATCH EXISTING

MATCH EXISTING DIRECTIONAL/ENTRY SIGN (SP1) FINAL SIZE AND LOCATION AND ORIENTITION TO BE COORDIANTED WITH OWNER

SIGN (R4–7)

SAWCUT EXISTING PAVEMENT

SIGN (R1–1)

ADA RAMP

SCITUATE AVE

SHUN PIKE

APPROXIMATE LIMIT OF DISTURBANCE

LIMIT OF DISTURBANCE

EXTENT OF PHASE VI EXPANSION LANDFILL LIMITS

MATCHLINE SEE SHEET 201

MATCHLINE SEE SHEET 201

SIGN CHART

SITE	M.U.T.C.D. Code	Height	Width
STOP	R1–1	30"	30"
	R4–7	30"	24"
DO NOT ENTER	R5–1	30"	30"
ONE WAY	R6–1L	12"	36"
ONE WAY	R6–1R	12"	36"

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING ABUTTING PROPERTY LINE
- EXISTING WETLAND LINE
- EXISTING FENCE LINE
- EXISTING GUARD RAIL LINE
- EXISTING WATERBODY LINE
- EXISTING TREE LINE
- EXISTING WALL LINE
- EXISTING PAVED PATH
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING FIRE HYDRANT
- EXISTING SIGN SYMBOL
- EXISTING TREE SYMBOLS
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED SITE LIGHTING
- PROPOSED SIGN
- PROPOSED ENTRANCE
- PROPOSED OVERHEAD DOOR
- EOP EDGE OF PAVEMENT
- VGC VERTICAL GRANITE CURB
- PCC PRECAST CONCRETE CURB
- DWL DASHED WHITE LINE
- SWL SOLID WHITE LINE
- N.I.C. NOT IN CONTRACT

- PROPOSED SIGN
- PROPOSED ENTRANCE
- PROPOSED OVERHEAD DOOR
- EOP EDGE OF PAVEMENT
- VGC VERTICAL GRANITE CURB
- PCC PRECAST CONCRETE CURB
- DWL DASHED WHITE LINE
- SWL SOLID WHITE LINE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 60 120

6/4/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

RECEIVED
JUN 17 2020
Office of Water Resources

REVISION RECORD

NO	DATE	DESCRIPTION
1	4/24/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS
2	6/5/2020	WETLANDS REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.ceciinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

LAYOUT & MATERIALS PLAN

DATE:	DECEMBER 2019
DRAWN BY:	DR
DWG SCALE:	1"=60'
CHECKED BY:	KPS
PROJECT NO:	192-573
APPROVED BY:	BV

DRAWING NO.: C200

\\cei-boston\projects\2019\192-573\-04001\Dwg\SHEET-REDUX Resubmission\192573-SHT-12000-Site Layout Plan.dwg(12000) LS(6/11/2020 - dpetrucci) – LP: 6/11/2020 10:49 AM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION.
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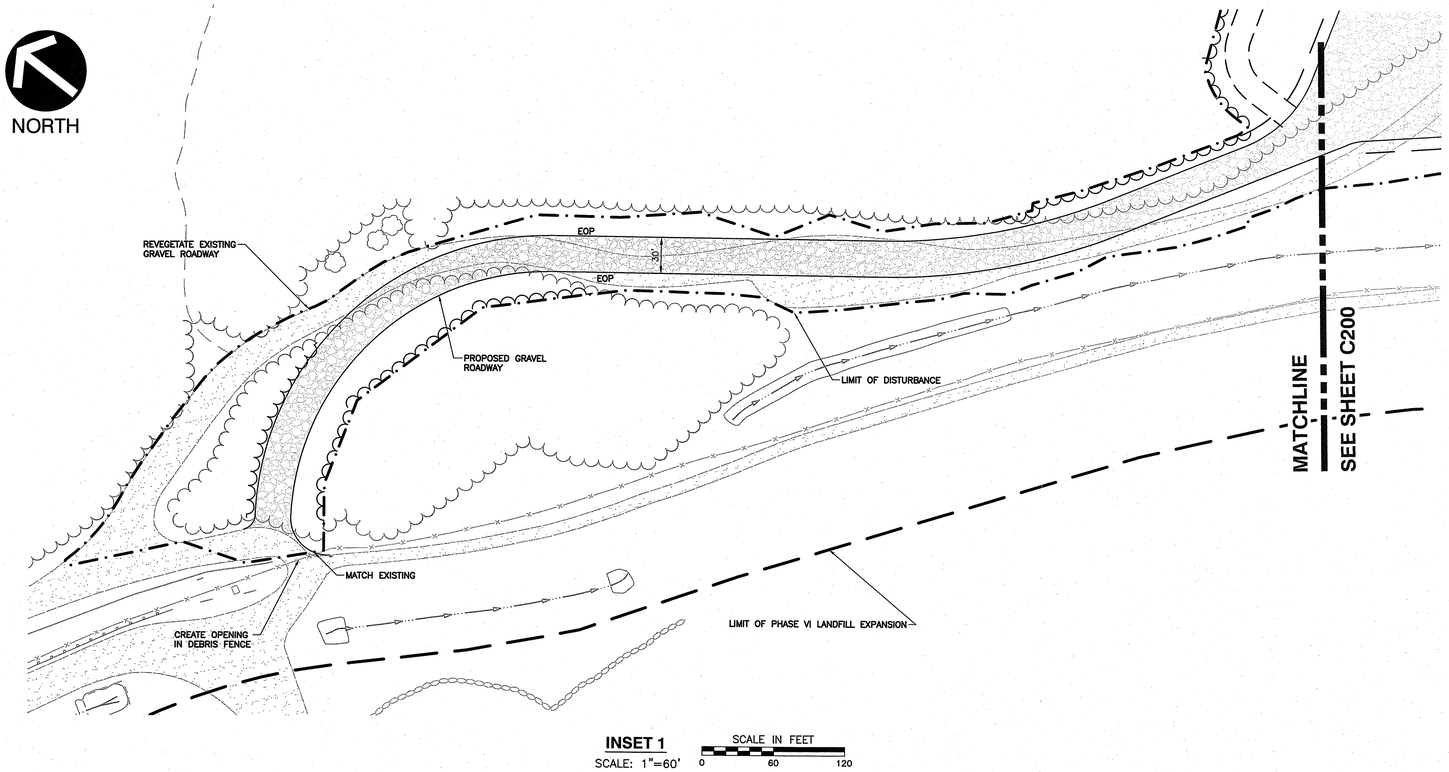
5. PROPERTY LINE INFORMATION DEDICATED ON THIS PLAN IS BASED ON TOWN OF JOHNSON GIS INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE.
6. SCALES SHALL BE EQUIPPED WITH APPROPRIATE SGINALIZATION AND CONTROLS THAT ALLOW FOR CONTROL OF WAITING VEHICLES AND COMMUNICAITON ALLOWING FOR EFFICIENT MANAGEMENT OF TRAFFIC.
7. INBOUND SCALE SHALL BE EQUIPPED WITH A RADIATION DETECTION SYSTEM LOCATED ON THE DRIVER'S SIDE OF THE ENTRY PRIOR TO THE RAMP. THE RADIATION DETECTOR SHALL BE LUDLUM MODEL 375P MANUFACTURED BY LUDLUM MANUFACTUREMENTS, INC. OR AN APPROVED EUQAL. THE CONTRACTOR SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO FURNISH AND INSTALL THE REQUIRED EQUIPMENT.

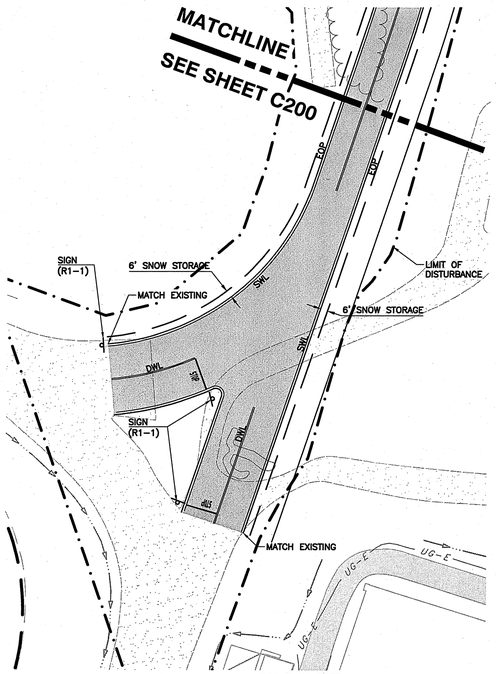
NORTH



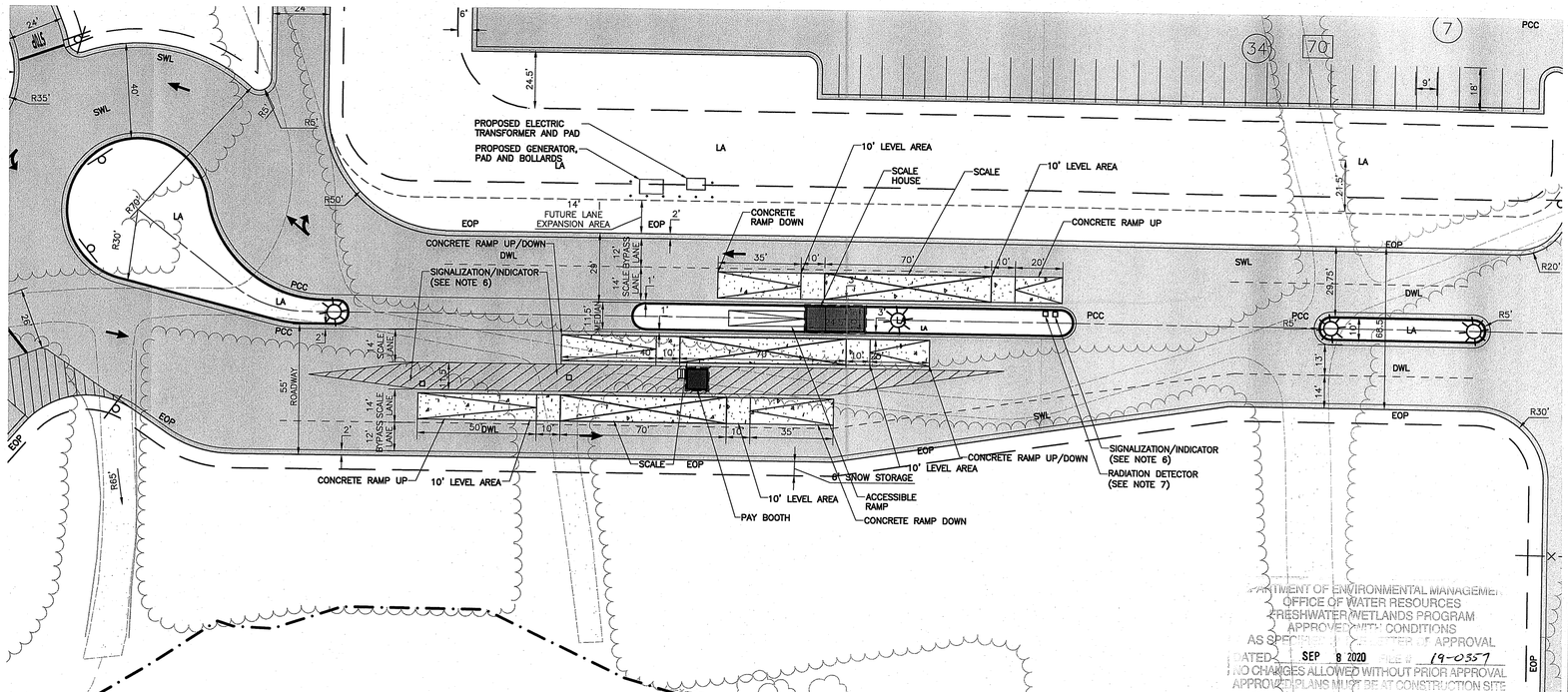
INSET 1
SCALE: 1"=60'
SCALE IN FEET 0 60 120

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING ABUTTING PROPERTY LINE
- EXISTING FENCE LINE
- EXISTING GUARD RAIL LINE
- EXISTING WATERBODY LINE
- EXISTING TREE LINE
- EXISTING WALL LINE
- EXISTING PAVED PATH
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING FIRE HYDRANT
- EXISTING SIGN SYMBOL
- EXISTING TREE SYMBOLS
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED SIGN
- EN — PROPOSED ENTRANCE
- OHD — PROPOSED OVERHEAD DOOR
- EOP — EDGE OF PAVEMENT
- VGC — VERTICAL GRANITE CURB
- PCC — PRECAST CONCRETE CURB
- DWL — DASHED WHITE LINE
- SWL — SOLID WHITE LINE



INSET 2
SCALE:1"=60'
SCALE IN FEET 0 60 120



INSET 3
SCALE:1"=20'
SCALE IN FEET 0 20 40

Kindly be advised that this Permit is subject to a verification of the boundary of freshwater wetlands on site.

Environmental Management
APR 10 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1.	04/01/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION FACILITY RELOCATION AND ENTRANCE PROJECT CENTRAL LANDFILL 65 SHUN PIKE, JOHNSTON, RI

SITE LAYOUT & MATERIALS PLAN

DATE:	DECEMBER 2019
DRAWN BY:	DR
CHECKED BY:	KPS
DWG SCALE:	AS SHOWN
PROJECT NO:	192-873
APPROVED BY:	BV

DRAWING NO.: **C201**

\\srv-boston\projects\2019\192-873_CADD\Dwg\SWPPP-REEM Resubmission\192873-SWPP-C200-Site Layout Plan.dwg(C201) LS(4/2/2020 - kshultz) - LP: 4/3/2020 8:42 AM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL. INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I–4A, THROUGH I–4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON VERTICAL DATUM NAVD 88.
4. THESE PLANS HAVE BEEN PREPARED FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
5. PROPERTY LINES ARE BASED ON GIS DATA OBTAINED FROM THE CITY OF JOHNSTON GEOGRAPHIC INFORMATION SYSTEM DATABASE AND SHOULD BE CONSIDERED APPROXIMATE.
7. EXISTING CONTOURS SHOWN WITH THE LIMITS OF THE PROJECT MAY NOT REFLECT ACTUAL CONDITIONS WHEN CONTRACTOR MOBILIZES. CONTRACTOR MUST VERIFY EXISTING CONDITIONS WITH OWN SURVEY PRIOR TO START OF WORK.

NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
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LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING WETLAND LINE
- EXISTING STORM PIPE
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED ENTRANCE
- PROPOSED OVERHEAD DOOR
- PROPOSED STORM PIPE
- PROPOSED SWALE
- PROPOSED CULVERT
- PROPOSED LIMITS OF DETENTION POND
- PROPOSED ROOF DRAIN
- PROPOSED INDEX (MAJOR) CONTOUR
- PROPOSED INTERMEDIATE (MINOR) CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED PERIMETER EROSION CONTROLS
- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION EXIT
- PROPOSED CHECK DAM

NORTH

DEWATERING VALVE
PERFORATED VERTICAL DRAIN PIPE INV=329.0
INFILTRATION BASIN BOTTOM=329.0 TOP OF BERM=332.0 (SEE SHEET C302)
WETLAND TO BE RESTORED UNDER THE SUPERVISION OF A PROFESSIONAL WETLAND SCIENTIST IN ACCORDANCE WITH THE RIDEM FRESHWATER WETLANDS PROGRAM BIOLOGICAL REVIEW SHEET DATED MAY 1, 2020.
OUTLET CONTROL STRUCTURE (SEE SHEET C302)
DEWATERING VALVE
EXISTING FORESTED WETLAND SERIES "I"
SITE LIGHTING (N.I.C. BY OTHERS)
CULVERT 10 50 LF 18" HDPE @ 0.60%
FES (RIP RAP) INV=326.0
SWALE WITH 2:1 SIDESLOPES ALONG EDGE OF WETLAND "AA"
EMERGENT PLANT COMMUNITY WETLAND SERIES "AA" TO BE RESTORED
SWALE 1 TYPE: 1
36 LF 6" HDPE @ 1.67%
PERIMETER EROSION CONTROL (TYP.)
71 LF 24" HDPE @ 1.12%
OUTLET CONTROL STRUCTURE (SEE SHEET C302)
INFILTRATION BASIN (SEE NOTES)
ROOF DRAIN CULVERT (N.I.C. BY OTHERS)
SWALE 2 TYPE: 1
75 LF 42" HDPE @ 3.46%
SEDIMENT FOREBAY BOTTOM=329.0
PERFORATED VERTICAL DRAIN PIPE INV=323.5
CULVERT 1 181 LF 36" HDPE @ 1.94%
FES INV=320.0
FES INV=333.5
RIPRAP INLET PROTECTION
MAINTENANCE GARAGE (N.I.C. SEE PLANS BY OTHERS) FFE = 346.5
AP 43 LOT 310
SHALLOW WET VEGETATED TREATMENT SYSTEM (WEST) (SEE SHEET C302)
TW=339.6 BW=334.6
SHALLOW WET VEGETATED TREATMENT SYSTEM (EAST) (SEE SHEET C302)
SWALE 3 TYPE: 2
SWALE 9 TYPE: 2
PERFORATED VERTICAL DRAIN PIPE INV=316.0
CLEANOUT INV=328.0
CULVERT 3 6" HDPE @ 5.63%
SWALE 4 TYPE: 3
TW=338 BW=334.0
CULVERT 2 55 LF 12" HDPE @ 0.73%
CULVERT 4 68 LF 12" HDPE @ 1.50%
RIPRAP OUTLET PROTECTION
FES INV=336.0
SWALE 6 TYPE: 3
CULVERT 7 72 LF 24" HDPE @ 1.39%
SWALE 8 TYPE: 1
RIP RAP INLET PROTECTION
MATCH GRADE TO EXISTING PAVEMENT
SWALE 10 TYPE: 2
SILT SOCK INLET PROTECTION
SEDIMENT FOREBAY BOTTOM/ ELEV=323.0
INV=328.9
175 LF 12" HDPE @ 1.14%
CLEANOUT INV=329.2
CLEANOUT INV=330.0
PROPOSED TRANSFER BUILDING
SWALE 12 TYPE: 1
SWALE 13 TYPE: 2
STABILIZED CONSTRUCTION EXIT
SHALLOW WET VEGETATED TREATMENT SYSTEM (WEST) (SEE SHEET C302)
SWALE 5 TYPE: 2
PROPOSED FUTURE SOLID WASTE RECYCLING FACILITY FFE = 342.0
PROPOSED BAITHOUSE BUILDING FFE = 341.9
TEMPORARY CHECK DAMS (TYP.)
PERIMETER EROSION CONTROLS (TYP.)
CULVERT 5 200 LF 24" HDPE @ 1.04%
CULVERT 8 94 LF 18" HDPE @ 1.06%
SWALE 16 TYPE: 2
SWALE 14 TYPE: 2
SILT SOCK INLET PROTECTION
FES INV=334.0
CULVERT 9 113 LF 24" HDPE @ 1.32%
RIPRAP INLET PROTECTION INV=335.5
SWALE 17 TYPE: 1
DUAL 24" HDPE CULVERT 'C'
INV IN NORTH 349.48
INV IN SOUTH=349.43
INV OUT NORTH=344.24
INV OUT SOUTH=344.18
10'W x 5'H CONC. BOX CULVERT
INV IN=353.81
INV OUT=353.11
EXISTING SEDIMENTATION POND 13
MATCHLINE SEE SHEET C301
EXISTING 24" STORM DRAIN
EXISTING 10'W x 5'H STORM DRAIN
POND 13 OUTLET CONTROL STRUCTURE
SHUN PIKE
SITUATE AVENUE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

Environmental Management
JUN 17 2020
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 SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

6/4/2020

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

SCALE IN FEET
0 60 120

MATCHLINE SEE SHEET C301

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/01/2020	RESPONSE TO RIDEM COMMENTS
2	05/29/2020	WETLANDS REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

GRADING, DRAINAGE AND E&S PLAN

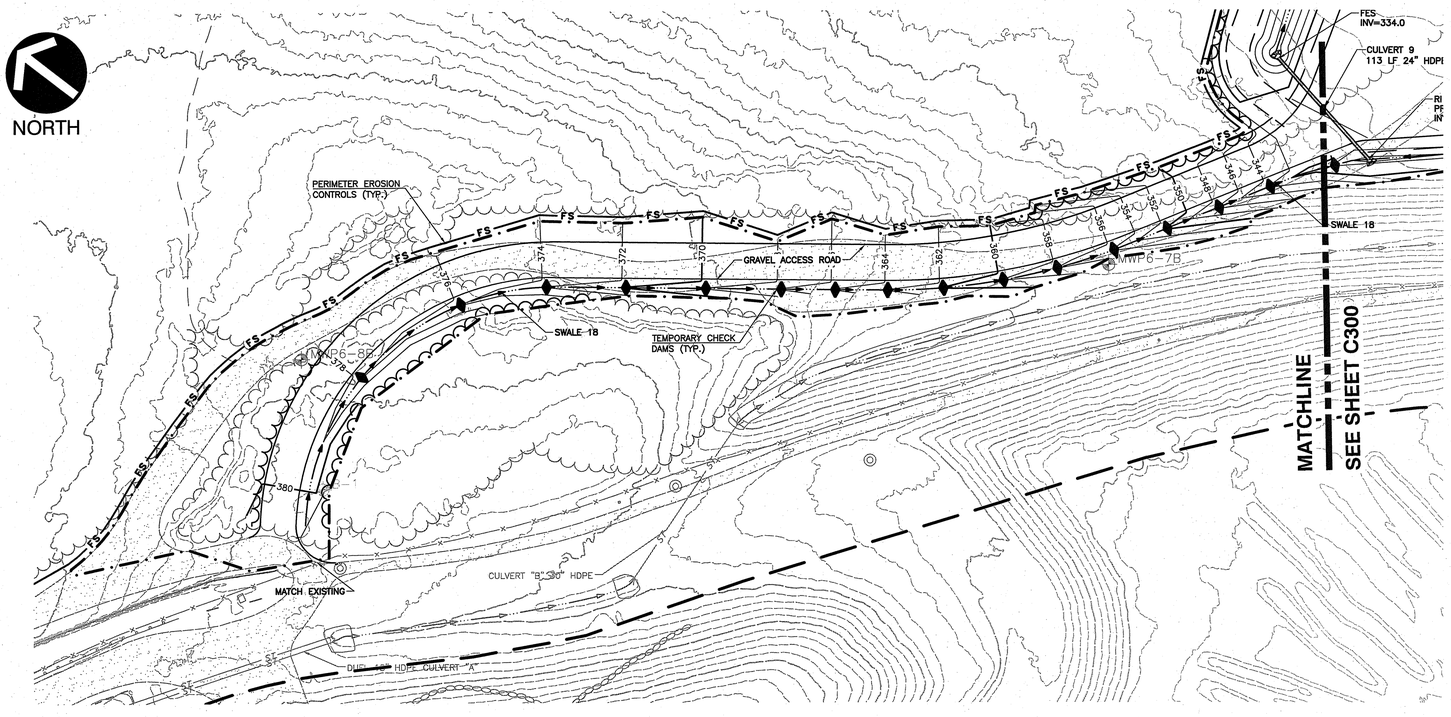
DATE: DECEMBER 2019 | DRAWN BY: DR
DWG SCALE: 1"=60' | CHECKED BY: KPS
PROJECT NO: 192-973
APPROVED BY: BV

DRAWING NO.: C300

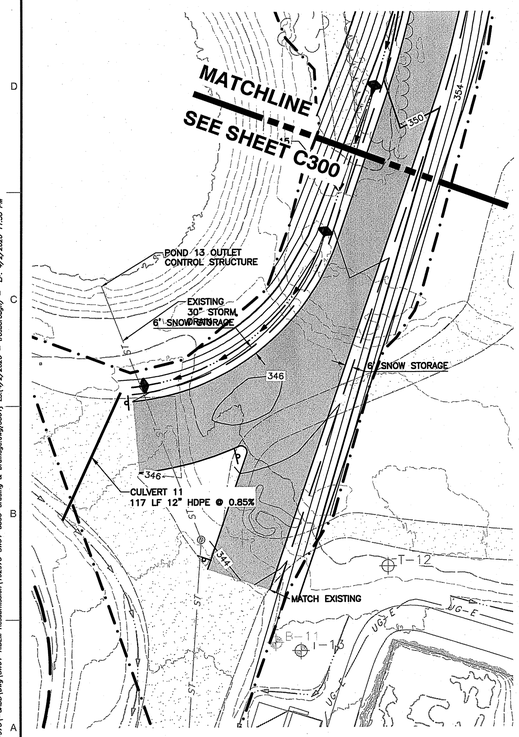
P:\2019\192-973\--CAD\Dwg\SHT#-RIDEM Resubmission\192973-SHT#-C300--Grading & Drainage.dwg[C300] LS(6/3/2020 - @whmob) -- LS 6/10/2020 12:35 PM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROMA PLAN ENTITLES, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL. INC./PARE CORPORATION.
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON VERTICAL DATUM NAVD 88.
4. THESE PLANS HAVE BEEN PREPARED FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLES "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
5. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
6. EXISTING CONTOURS SHOWN WITH THE LIMITS OF THE PROJECT MAY NOT REFLECT ACTUAL CONDITIONS WHEN CONTRACTOR MOBILIZES AS ONGOING EXCAVATION AND FILLING ACTIVITIES ARE OCCURRING DAILY. CONTRACTOR SHOULD VERIFY EXISTING CONDITIONS WITH OWN SURVEY PRIOR TO START OF WORK.
7. SHOULD EXISTING UTILITIES CONFLICT WITH REQUIRED INSTALLATION, OWNER AND DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE CONFLICT. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATION OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO BEGINNING THE WORK.



INSET 1
SCALE: 1"=60'
SCALE IN FEET 0 60 120



INSET 2
SCALE: 1"=60'
SCALE IN FEET 0 60 120

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING STORM PIPE
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED ENTRANCE
- PROPOSED OVERHEAD DOOR
- PROPOSED STORM PIPE
- PROPOSED SWALE
- PROPOSED CULVERT
- PROPOSED LIMITS OF DETENTION POND
- PROPOSED ROOF DRAIN
- PROPOSED 6" ZONE
- PROPOSED 6"–18" ZONE
- PROPOSED INTERIM ZONE (18"–48")
- PROPOSED INDEX (MAJOR) CONTOUR
- PROPOSED INTERMEDIATE (MINOR) CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED PERIMETER EROSION CONTROLS
- PROPOSED INLET PROTECTION
- PROPOSED RIP RAP

Environmental Management
APR 10 2020
Office of Water Resources

REVISION RECORD

NO.	DATE	DESCRIPTION
1	4/01/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Jonathan D. Stancek

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL
Barry VanLaarhoven

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

GRADING, DRAINAGE AND E&S PLAN

DATE:	DECEMBER 2019	DRAWN BY:	DR
DWG SCALE:	AS SHOWN	CHECKED BY:	KPS
PROJECT NO:			192-973
APPROVED BY:			BV

DRAWING NO.: **C301**

P:\2019\192-973\1-CAD\1Dwg\SMP4-RIDEM Resubmission\192973-SMP4-C300-Grading & Drainage.dwg(C301) 15:04:2/2020 - trostanowgh) - LP: 4/2/2020 11:50 PM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROMA PLAN ENTITLES, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL. INC./PARE CORPORATION.
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NORTH

SHALLOW WET VEGETATED TREATMENT SYSTEM (EAST)
PERMANENT POOL ELEV=327.5
TOP OF BERM ELEV=333.0
OVERFLOW ELEV=332.0
OUTLET CONTROL STRUCTURE (SEE SHEET C302)

TOP OF BERM 20' WIDE ACCESS PATH

48" DEPTH DEEP ZONE
6-18" DEPTH SHALLOW ZONE
6" MAX DEPTH SHALLOW ZONE

DEWATERING VALVE
PERFORATED VERTICAL DRAIN PIPE INV=329.0
INV=327.5
10' RIP RAP OVERFLOW ELEV=332.0
INFILTRATION BASIN BOTTOM=329.0 TOP OF BERM=332.0 (SEE SHEET C302)
CULVERT 10 50 LF 18" HDPE @ 0.60% INV=336.5
INV=336.0

PERFORATED VERTICAL DRAIN PIPE INV=323.5
PERMANENT POOL ELEV=327.5
DEWATERING VALVE
BOTTOM OF DEEP POOL ELEV=323.5
20' RIPRAP OVERFLOW ELEV=332.0
FES (RIP RAP) INV=326.0
FLARED END SECTION WITH RIP RAP INV=329.0

36 LF 48" HDPE @ 1.67%
INFILTRATION BASIN (CENTRAL) BOTTOM ELEV=320.0 TOP OF BERM ELEV=325.0 OVERFLOW ELEV=324.0
INV=320.0
OUTLET CONTROL STRUCTURE INV (LOW FLOW)=327.5 INV (HIGH FLOW)=329.3 INV (OUT)=322.6
SWALE 2
10' SNOW STORE
71 LF 24" HDPE @ 1.12%
45' WIDE RIP RAP OVERLOW ELEV=324.0
OUTLET CONTROL STRUCTURE INV (HIGH FLOW)=322.75 INV (OUT)=320.0
40' WIDE RIP RAP OVERFLOW ELEV=332.0
75 LF 42" HDPE @ 3.46%
SEDIMENT FOREBAY BOTTOM=329.0
CULVERT 1 181 LF 36" HDPE @ 1.94%
RIPRAP INLET PROTECTION
FES INV=333.5
FES INV=314.0
FES INV=320.0
TP-CEC1
TP-CEC2
B-4
B-5
30' WIDE RIP RAP OVERLOW ELEV=326.5
SHALLOW WET VEGETATED TREATMENT SYSTEM (WEST)
PERMANENT POOL ELEV=320.5
TOP OF BERM ELEV=327.5
OVERFLOW ELEV=326.5
BOTTOM ELEV=316.0
PERFORATED VERTICAL DRAIN PIPE INV=316.0
TOP OF BERM 20' WIDE ACCESS PATH
INV=320.0
SWALE 3
STONE CHECK DAM (TYP.)
137 LF 18" HDPE @ 5.83%
CULVERT 3
OUTLET CONTROL STRUCTURE INV (LOW FLOW)=320.5 INV (MID FLOW)=322.1 INV (HIGH FLOW)=325.0 INV (OUT)=320.5
T-1
CULVERT 2 43 LF 12" HDPE @ 0.69%
338.80
338.40
INV=327.2
339.15
INV= 337.5
CULVERT 4 65 LF 12" HDPE @ 0.77%
341.00
SEDIMENT FOREBAY BOTTOM ELEV=323.0
30' RIPRAP OVERFLOW ELEV=326.5
INV=328.9
CLEANOUT INV=338.0
CLEANOUT INV=329.2
CLEANOUT INV=330.0
PROPOSED TRANSFER BUILDING
342.00
341.25
340.00
339.58
339.78
339.80
339.63
340.63
SWALE 16
341.00
341.69
340.60
T-4
T-5
B-2
48" DEPTH DEEP ZONE
6-18" DEPTH SHALLOW ZONE
SWALE 5 (TYPE: 2)
6" MAX DEPTH SHALLOW ZONE
SWALE 5

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING DITCH LINE & RIP RAP APRON
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING STORM PIPE
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED ENTRANCE
- PROPOSED OVERHEAD DOOR
- PROPOSED STORM PIPE
- PROPOSED SWALE
- PROPOSED CULVERT
- PROPOSED LIMITS OF DETENTION POND
- PROPOSED ROOF DRAIN
- PROPOSED 6" ZONE
- PROPOSED 6"-18" ZONE
- PROPOSED INTERIM ZONE (18"-48")
- PROPOSED DEEP WATER ZONE (>4')
- PROPOSED INDEX (MAJOR) CONTOUR
- PROPOSED INTERMEDIATE (MINOR) CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED PERIMETER EROSION CONTROLS
- PROPOSED INLET PROTECTION
- PROPOSED RIP RAP

SCALE IN FEET
0 30 60

RECEIVED
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
APR 10 2020
Office of Water Resources

Kindly be advised that this Permit is for the limit of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	4/6/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
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R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

GRADING, DRAINAGE AND E&S PLAN

DATE:	DECEMBER 2019
DRAWN BY:	DR
DWG SCALE:	AS SHOWN
CHECKED BY:	KPS
PROJECT NO:	192-973
APPROVED BY:	BV

DRAWING NO.: C302

NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
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REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL, LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I-4A, THROUGH I-4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON VERTICAL DATUM NAVD 88.
4. THESE PLANS HAVE BEEN PREPARED FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.

NORTH

WETLAND TO BE RESTORED UNDER THE SUPERVISION OF A PROFESSIONAL WETLAND SCIENTIST IN ACCORDANCE WITH THE RIDEM FRESHWATER WETLANDS PROGRAM BIOLOGICAL REVIEW SHEET DATED MAY 1, 2020.

EMERGENT PLANT COMMUNITY WETLAND SERIES "AA" TO BE RESTORED

SITE LIGHTING (N.I.C. BY OTHERS)

SHALLOW WET VEGETATED TREATMENT SYSTEM (EAST)

INFILTRATION BASIN

OUTLET CONTROL STRUCTURE (SEE SHEET C302)

PROPOSED FIRE HYDRANT WITH 6" G.V.

8" X 6" TEE

R250'

SMH-A1 (SEPARATOR)
RIM=±337.3
INV IN=±329.0(TRANSFER)
INV OUT=±328.9(SMH-A2)

105 LF 6" PVC @ 0.50%

SMH-A2 (MH)
RIM=±338.8
INV IN=±328.2(SMH-A1)
INV IN=±331.6(SMH-A3)
INV OUT=±328.2(PUMP)

SMH-A4 (DROP MH)
RIM=±343.8
INV IN=±337.6((BLDG.)
INV OUT=±330.1(PUMP)

77 LF 12" PVC @ 1.01%

140 LF 6" PVC @ 0.50%

SHALLOW WET VEGETATED TREATMENT SYSTEM (WEST)

ELECTRIC TRANSFORMER (SEE ELECT. PLANS FOR DETAILS)

PROPOSED TRANSFER BUILDING

45° BEND WITH THRUST BLOCK

251 LF 6" PVC @ 0.50%

238 LF 8" PVC @ 2.00%

SMH-A3 (MH)
RIM=±339.8
INV OUT=±336.5(SMH-A2)

PROPOSED FUTURE SHALLOW WASTE RECYCLING FACILITY

PROPOSED MATERIALS BUILDING

FIRE HYDRANT WITH 6" G.V.

8" X 6" TEE

45° BEND WITH THRUST BLOCK

SITE LIGHTING (TYP.) (REFER TO ELECTRICAL SITE PLAN)

PROPOSED FIRE HYDRANT WITH 6" G.V.

8" X 6" TEE

PROPOSED TELECOMMUNICATIONS LINES (SEE TELCOM. PLANS FOR DETAILS)

PROPOSED FIRE HYDRANT WITH 6" G.V.

8" X 6" TEE

8" DIP

MAINTENANCE GARAGE (N.I.C. SEE PLANS BY OTHERS)

STUB AND CAP 12" PVC FOR CONNECTION BY OTHERS

ROOF DRAINS (N.I.C.) SEE PLANS BY OTHERS)

45° BEND WITH THRUST BLOCK

INSTALL PROPOSED PUMPS IN PRECAST CONCRETE CHAMBER WITH VALVES, FLOW METER AND VENTS. REFER TO ELECTRIC PLANS FOR POWER.

ELECTRIC GENERATOR (SEE ELECTRIC PLANS)

ELECTRIC TRASNSFORMER (SEE ELECTRIC PLANS)

546 LF 4" HDPE FORCEMAIN

362 LF 6" PVC @ 1.00%

52 LF 6" PVC @ 1.00%

PROPOSED FIRE HYDRANT WITH 6" G.V.

SMH-A5 (MH)
RIM=±345.9
INV IN=±337.8(BLDG.)
INV OUT=±337.6(PUMP)

INSET 1 (SEE SHEET C501)

117 LF 6" PVC @ 1.71%

PUMP (SEWER PUMP)
RIM=±343.0
INV IN=±327.0(SMH-A2)
INV IN=±330.0(SCALEHOUSE)
INV IN=±334.0(SMH-A5)
INV IN=±329.3(SMH-A4)
INV OUT=±326.9(FORCEMAIN)

SITE LIGHTING (TYP.) (REFER TO ELECTRICAL SITE PLAN)

DUAL 24" HDPE CULVERT 'C'
INV IN NORTH=349.48
INV IN SOUTH=349.43
INV OUT NORTH=344.24
INV OUT SOUTH=344.18

10'W x 5'H CONC. BOX CULVERT
INV IN=353.81
INV OUT=353.11

EXISTING SEDIMENTATION POND 13

274 LF SDR-26 12X8

280 LF SDR-26 12X8

LMH 7
RIM=368.48
INV IN=360.79

LMH 8
RIM=364.11
INV IN=352.11

LMH No. 9
RIM=356.47
INV IN=348.47
INV OUT=348.38

MATCHLINE SEE SHEET C501

OUTLET STRUCTURE

SMH
RIM=345.49
INV IN=337.80
INV OUT=337.78

SMH
RIM=343.57
INV IN=335.84
INV OUT=335.58

SMH
RIM=350.0
SUMP=344.0

N.I.C. WATER SERVICE INSTALLATION BY OTHERS
6" X 8" TEE WITH 6" GATE VALVE, STUB AND CAP FOR FUTURE SERVICE
4" X 8" TEE WITH 4" GATE VALVE, STUB AND CAP FOR FUTURE SERVICE

PROPOSED FIRE HYDRANT WITH 6" G.V.

8" X 6" TEE.

ELECTRIC SWITCHGEAR (SEE ELECT. PLANS FOR DETAILS)

METER BOX AND BACKFLOW

CONNECT TO EXISTING 16" WATER MAIN AND INSTALL 16X8 REDUCER

CONNECT TO EXISTING FORCE MAIN AT 4" STUB

ELECTRIC SERVICE CONNECTION & POLES (SEE ELECT. PLANS FOR DETAILS)

SITE LIGHTING (TYP.) (SEE ELECT. PLANS FOR DETAILS)

SITE LIGHTING (TYP.) (REFER TO ELECTRICAL SITE PLAN)

SITE LIGHTING (TYP.) (REFER TO ELECTRICAL SITE PLAN)

TELECOMMUNICATIONS HANDHOLE (SEE TELCOM. PLANS FOR DETAILS)

MAINTAIN EXISTING 8" PVC FORCEMAIN

CONNECT TO EXISTING GAS MAIN

SCITUATE AVENUE

SHUN PIKE

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING ABUTTING PROPERTY LINE
- EXISTING TREE LINE
- EXISTING BUILDING
- EXISTING PAVEMENT
- EXISTING DETERIORATED PAVEMENT
- EXISTING STORM PIPE
- EXISTING WETLAND LINE
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED SIGN
- PROPOSED ENTRANCE (EN)
- PROPOSED OVERHEAD DOOR (OHD)
- PROPOSED STORM PIPE
- PROPOSED SWALE
- PROPOSED CULVERT
- PROPOSED LIMITS OF DETENTION POND
- PROPOSED ROOF DRAIN (RD)
- PROPOSED SANITARY SEWER (SAN)
- PROPOSED SANITARY MANHOLE (S)
- PROPOSED SANITARY CLEANOUT (C)
- PROPOSED WATER LINE (W)
- PROPOSED UNDERGROUND ELECTRIC (E)
- PROPOSED OVERHEAD ELECTRIC/TELECOM (OH-W)
- PROPOSED TELECOMMUNICATIONS LINES (T)
- PROPOSED UNDERGROUND GAS (G)
- PROPOSED UTILITY POLE
- PROPOSED SITE LIGHTING
- PROPOSED FORCE MAIN (FM)

Kindly be advised that this Permit is not entitlement to a verification of the type or extent of freshwater wetlands on site.

Environmental Management JUN 17 2020 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 SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 60 120

6/16/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	5/07/2020	RESPONSE TO RIDEM COMMENTS
2	05/29/2020	WETLANDS REVISIONS IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION FACILITY RELOCATION AND ENTRANCE PROJECT CENTRAL LANDFILL 65 SHUN PIKE, JOHNSTON, RI

UTILITIES PLAN

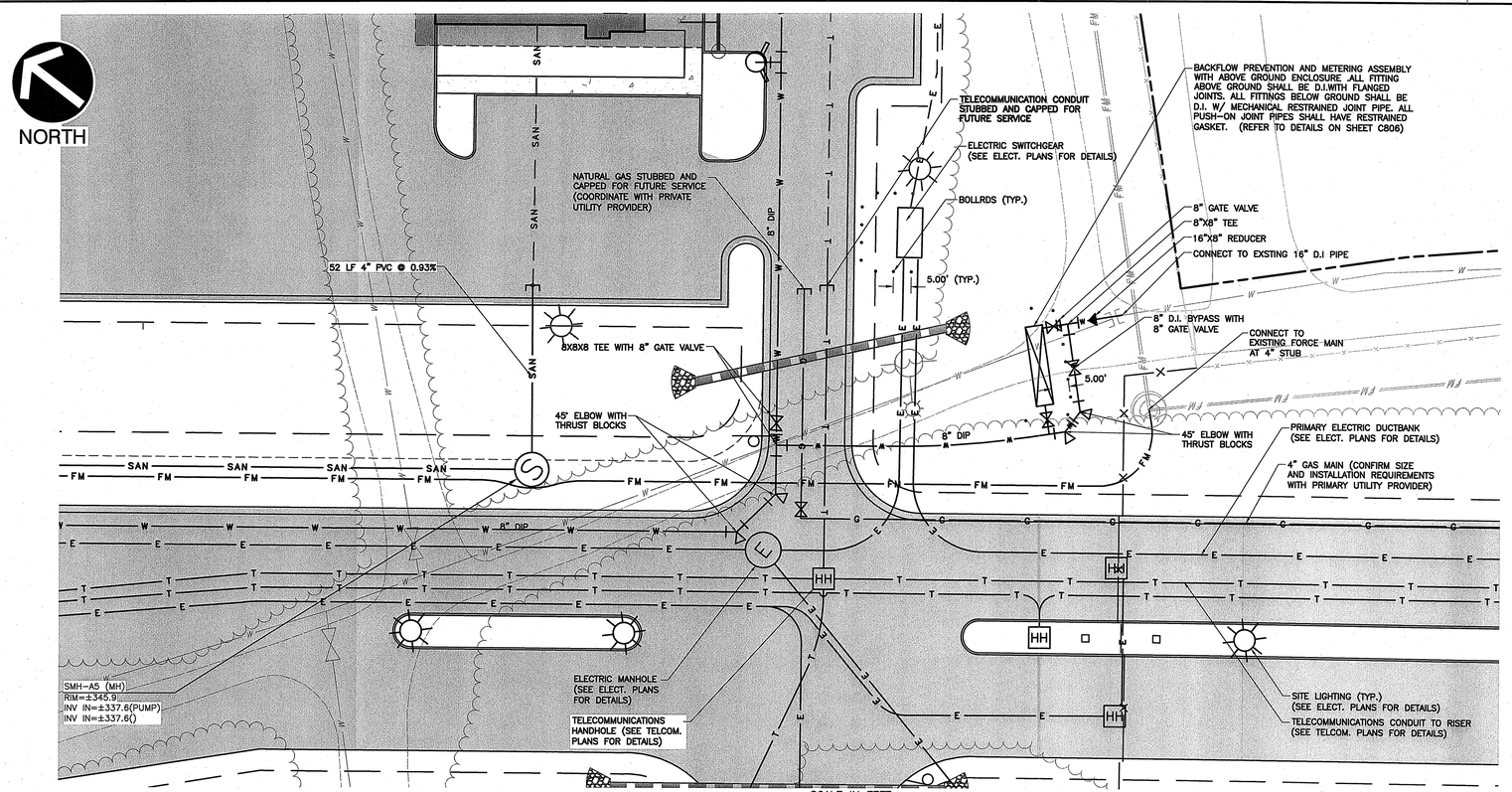
DATE:	DECEMBER 2019
DWG SCALE:	1"=60'
PROJECT NO:	192-973
DRAWN BY:	DR
CHECKED BY:	KPS
APPROVED BY:	BV

DRAWING NO.: C500

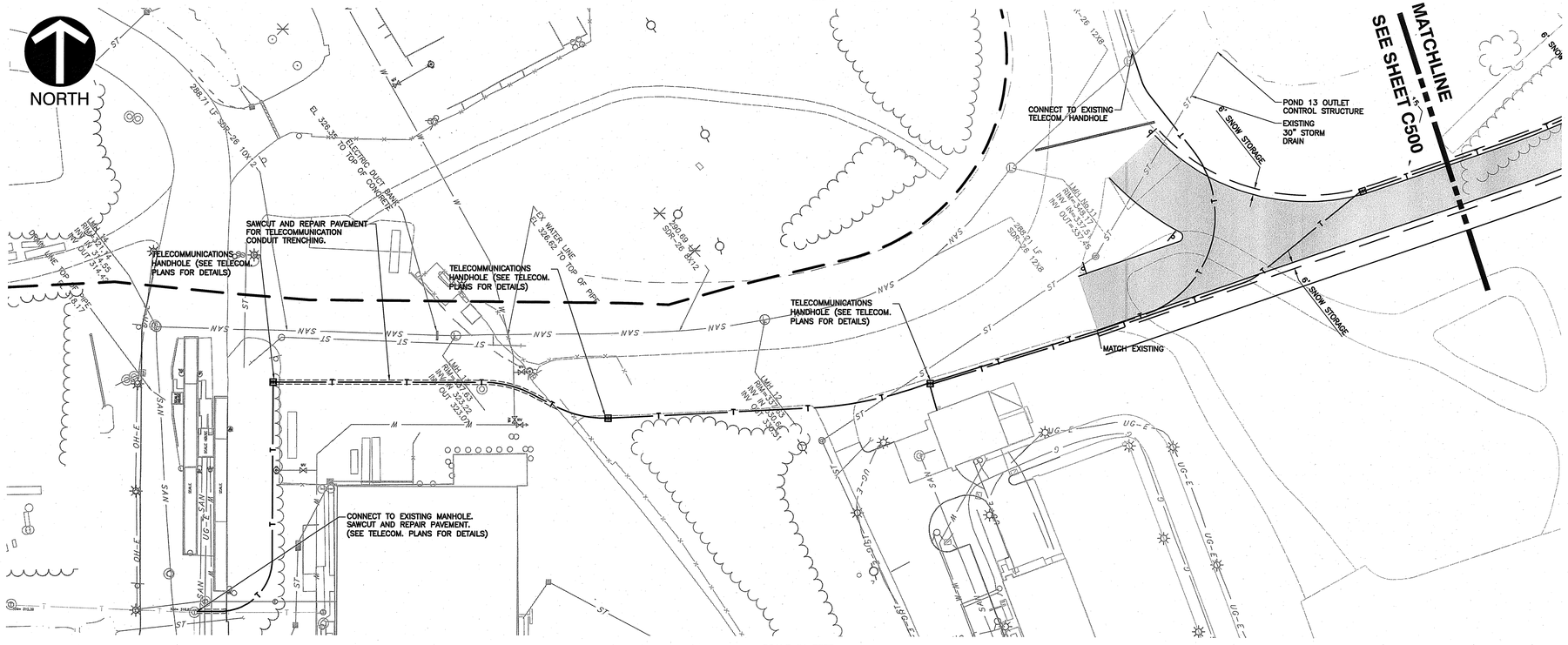
P:\192\192-973\...\Reg\SHOP-RIDEM Resubmission\192973-SHOP-C500-Utilities Plan.dwg(C500) LS(6/11/2020 - dpatnode) - LP: 6/11/2020 10:53 AM

REFERENCES

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROMA PLAN ENTITLES, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL. INC./PARE CORPORATION.
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON VERTICAL DATUM NAVD 88.
4. THESE PLANS HAVE BEEN PREPARED FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLES "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.
5. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATIONS OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO BEGINNING THE WORK. UTILITIES (LOCATION AND ELEVATION) WERE PROVIDED BY RHODE ISLAND RESOURCE RECOVERY CORPORATION AND NOT FIELD VERIFIED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATION.
6. SHOULD EXISTING UTILITIES CONFLICT WITH REQUIRED INSTALLATION, OWNER AND DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE CONFLICT. CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS, LOCATIONS OF ALL STRUCTURES, AND LOCATION OF ALL UTILITIES WHICH MAY AFFECT THE WORK PRIOR TO BEGINNING ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO BEGINNING THE WORK.



INSET 1
SCALE: 1"=20'
SCALE IN FEET 0 20 40



INSET 2
SCALE: 1"=60'
SCALE IN FEET 0 60 120

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING TREE LINE
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED BUILDING OVERHANG
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED SIGN
- PROPOSED ENTRANCE
- PROPOSED OVERHEAD DOOR
- PROPOSED STORM PIPE
- PROPOSED SWALE
- PROPOSED CULVERT
- PROPOSED LIMITS OF DETENTION POND
- PROPOSED ROOF DRAIN
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED WATER LINE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED OVERHEAD ELECTRIC/TELECOM
- PROPOSED TELECOMMUNICATION LINES
- PROPOSED UNDERGROUND GAS
- PROPOSED UTILITY POLE
- PROPOSED SITE LIGHTING

Environmental Management
APR 10 2020
Office of Water Resources

Kindly be advised that this Permit is issued subject to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	4/6/2020	RESPONSE TO RIDEM COMMENTS

CEC
Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

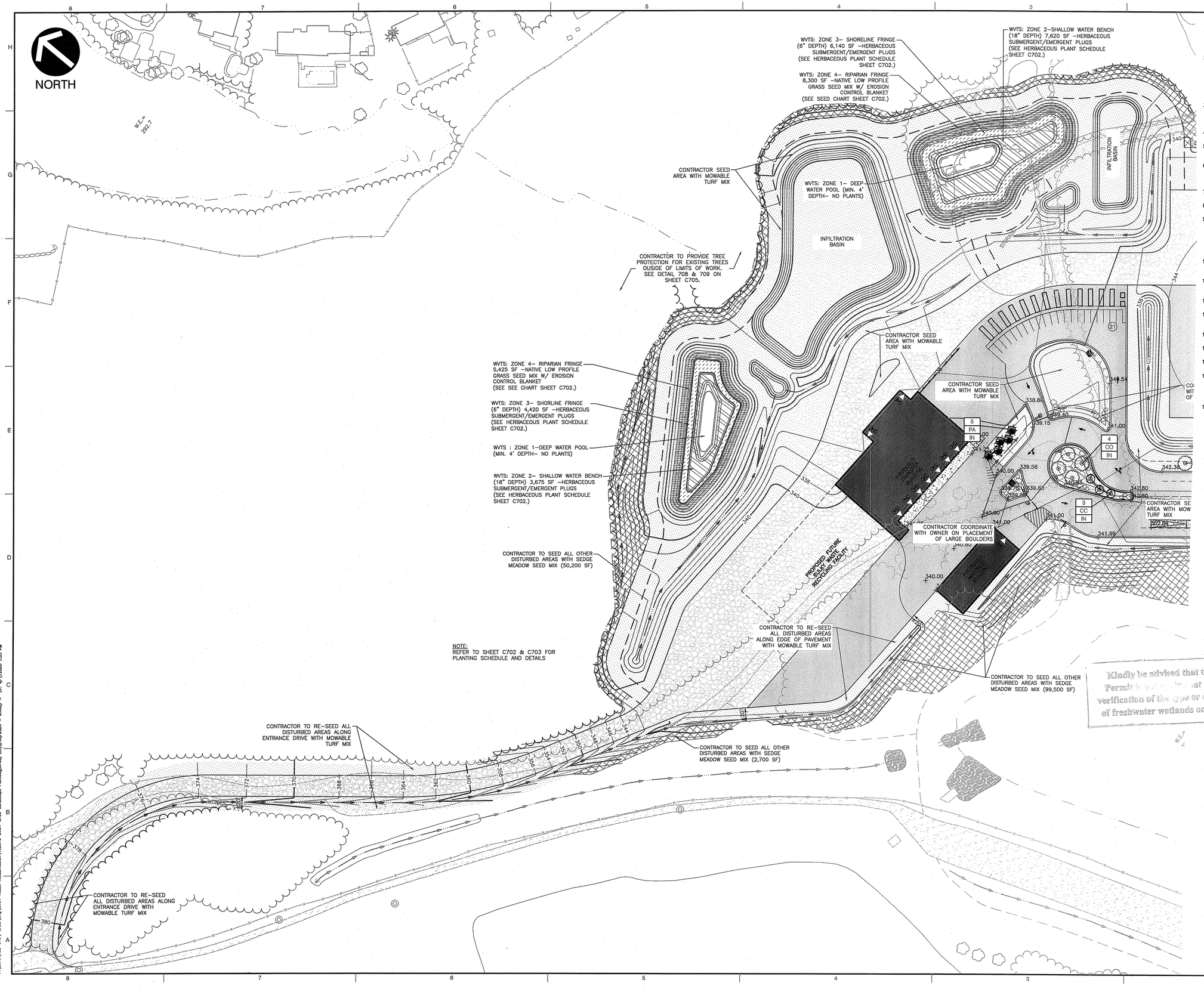
R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

UTILITIES PLAN

DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
PROJECT NO:	192-973
DRAWN BY:	DR
CHECKED BY:	KPS
APPROVED BY:	BV

DRAWING NO.: C501

P:\192\01\192-0273-0400\Dwg\SWCA-R02A Resubmission\192073-SWCA-C500-Utilities Rev-4wp(C501).ctb 4/6/2020 - tmalonejr - 4/6/2020 11:59 PM



GENERAL LANDSCAPE NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY, OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND ELEVATIONS DURING THE ENTIRE CONSTRUCTION SCHEDULE. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD DIMENSIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
3. CONTRACTOR SHALL MAINTAIN ONE SET OF AS–BUILT/RECORD DRAWINGS ON THE JOB SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
4. NO CHANGES TO THE SITE LANDSCAPE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
5. CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUALITY AND QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN ON DRAWINGS.
6. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT "AMERICAN ASSOCIATION OF NURSERY STOCK. ANSI Z60.1–2004", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN.
7. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED.
8. ALL PLANTS SHALL BE PLANTED SO THAT THE ROOT CROWN IS PLANTED AT GRADE LEVEL.
9. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING. TWINE OR ROPE SHALL BE REMOVED FROM AROUND CROWN OF TRUNK TO PREVENT GIRDLING OF TREE OR SHRUB.
10. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
11. THE DAY PRIOR TO PLANTING, THE LOCATIONS OF ALL TREES AND SHRUBS SHALL BE STAKED FOR APPROVAL BY OWNER(S).
12. THE LANDSCAPE CONTRACTOR SHALL REFER TO CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
13. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE (1) CALENDAR YEAR FROM THE TIME OF SUBSTANTIAL COMPLETION OF PROJECT.
14. IF THERE IS A DISCREPANCY BETWEEN THE PLANS AND THE PLANT SCHEDULE, THE PLANS SHALL TAKE PRECEDENCE.
15. CONTRACTOR SHALL REPAIR ANY DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
16. STAKES AND OR GUY WIRES SHALL BE REMOVED AFTER ONE (1) YEAR OF INSTALLATION.
17. ALL EXISTING LANDSCAPING SHALL BE MAINTAINED DURING CONSTRUCTION. ANY MATERIAL DEEMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT, WILL BE REPLACED EQUIVALENT IN SIZE AND SHAPE AT NO COST TO OWNER.
18. IF PLANT SPECIES SPECIFIED ARE FOUND TO BE UNAVAILABLE OR NOT IN SUFFICIENT QUANTITIES AT TIME OF PLANTING, THE CONTRACTOR MAY SUBSTITUTE SPECIES UPON WRITTEN APPROVAL BY LANDSCAPE ARCHITECT.

SYMBOL	DESCRIPTION
1	PLANT QUANTITY
AG	PLANT TYPE
FN	REQ. LOCATION
IN	INTERIOR PARCEL PLANTINGS
WV	WETLAND VEGETATION TREATMENT SYSTEMS

LEGEND:

- WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 2 – SEE CHART, SHEET C702.
- WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 3 – SEE CHART, SHEET C702.
- WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 4 – SEE CHART, SHEET C702.
- SEDGE MEADOW SEED MIX– SEE CHART SHEET C702.
- MOWABLE TURF SEED MIX

Kindly be advised that this Permit is subject to a verification of the type or extent of freshwater wetlands on site.

Environmental Management APR 10 2020 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 SEP 8 2020 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DRAFT
4/16/2020

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO	DATE	REVISION RECORD DESCRIPTION

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
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R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

OVERAL SITE PLANTING PLAN

DATE:	MARCH 2020	DRAWN BY:	DR
DWG SCALE:	AS SHOWN	CHECKED BY:	DRAFT
PROJECT NO:			192-973
APPROVED BY:			KPS

DRAWING NO.:
C700

P:\192\192-973_CAD\Dwg\SWM–ROEM Resubmission\192973–SWM–C700–Landscape Plan.dwg(C700) LSG/29/2020 – dlively – 4/1/2020 7:53 PM

EMERGENT PLANT COMMUNITY WETLAND SERIES "AA" TO BE RESTORED

NORTH

INFILTRATION BASIN

WETLAND TO BE RESTORED UNDER THE SUPERVISION OF A PROFESSIONAL WETLAND SCIENTIST IN ACCORDANCE WITH THE RIDEM FRESHWATER WETLANDS PROGRAM BIOLOGICAL REVIEW SHEET DATED MAY 1, 2020.

CONTRACTOR TO PROVIDE TREE PROTECTION FOR EXISTING TREES OUSIDE OF LIMITS OF WORK. SEE DETAIL 708 & 709 ON SHEET C705.

CONTRACTOR TO SEED ALL OTHER DISTURBED AREAS WITH SEDGE MEADOW SEED MIX (3,900 SF)

MAINTENANCE GARAGE (N.I.C. SEE PLANS BY OTHERS)

CONTRACTOR COORDINATE WITH OWNER ON PLACEMENT OF LARGE BOULDERS

CONTRACTOR SEED AREA WITH MOWABLE TURF MIX

NOTE:
REFER TO SHEET C702 & C703 FOR PLANTING SCHEDULE AND DETAILS

CONTRACTOR TO RE-SEED ALL DISTURBED AREAS ALONG ENTRANCE DRIVES MOWABLE TURF MIX

MATCH GRADE TO EXISTING PAVEMENT

STORAGE

PRIVATE AVENUE

SHUN PIKE

CONTRACTOR TO SEED ALL OTHER DISTURBED AREAS WITH SEDGE MEADOW SEED MIX (5,500 SF)

CONTRACTOR TO SEED ALL OTHER AREAS WITH SEDGE MEADOW SEED MIX (99,500 SF)

CONTRACTOR TO SEED ALL OTHER AREAS WITH SEDGE MEADOW SEED MIX (6,400 SF)

W.E.= 339.7

GENERAL LANDSCAPE NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY, OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
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SYMBOL	DESCRIPTION
	1 PLANT QUANTITY AG PLANT TYPE FN REQ. LOCATION
IN	INTERIOR PARCEL PLANTINGS
WV	WETLAND VEGETATION TREATMENT SYSTEMS

LEGEND:

- WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 2 – SEE CHART, SHEET C702.
- WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 3 – SEE CHART, SHEET C702.
- WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 4 – SEE CHART, SHEET C702.
- SEDGE MEADOW SEED MIX– SEE CHART SHEET C702.
- MOWABLE TURF SEED MIX

Amendments and revisions to plan JUN 17 2020 Office of Water Resources

REFERENCES:

1. LIMIT OF WETLAND DELINEATION WAS TAKEN FROM A PLAN ENTITLED, "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL INC./PARE CORPORATION. ADDITIONALLY, A SITE INSPECTION WAS PERFORMED BY LUCAS ENVIRONMENTAL LLC ON MAY 14, 2020 AND ADDITIONAL WETLANDS WERE DELINEATED IN THE FIELD, INCLUDING WETLAND SERIES "AA" AND SUPPLEMENTAL FLAGS I–4A, THROUGH I–4D ON THE PREVIOUSLY DELINEATED WETLAND SERIES "I".
2. THE HORIZONTAL COORDINATES AND BEARING SYSTEM SHOWN HEREON ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (RHODE ISLAND STATE PLAN) COORDINATE SYSTEM. THE VALUES SHOWN HEREON ARE IN U.S. SURVEY FEET.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION FROM PREVIOUSLY APPROVED SET OF PLANS ENTITLED "EXISTING CONDITIONS PLAN, PHASE VI LANDFILL, LICENSING PERMIT APPLICATION", DATED APRIL 2007, PREPARED BY GZA GEOENVIRONMENTAL, INC./PARE CORPORATION.

Kindly be advised that this Permit is ... ent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

SCALE IN FEET
0 60 120

6/4/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	05/08/2020	WETLANDS REVISION IN RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
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R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND
ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

OVERALL SITE PLANTING PLAN

DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
DRAWN BY:	DR
CHECKED BY:	DRAFT
PROJECT NO.:	192-973
APPROVED BY:	KPS

DRAWING NO.:
C701

P:\2019\192-973\...\Drawings\19204-REDR Resubmission\192973-19204-C700-Landscape Plan.dwg(C701) 5/6/3/2020 - dpetrucci) - LP, 5/10/2020 12:46 PM

Sedge Meadow Seed Mix SEDGE MEADOW SEED MIX– SEE CHART		PLS
Botanical Name	**Common Name**	**Ounces/Acre**
Permanent Grasses/Sedges:		
Calamagrostis canadensis	Bluejoint Grass	1.00
Carex comosa	Bristly Sedge	2.00
Carex cristatella	Crested Oval Sedge	1.00
Carex frankii	Bristly Cattail Sedge	2.00
Carex lupulina	Common Hop Sedge	3.00
Carex lurida	Bottlebrush Sedge	2.00
Carex stipata	Common Fox Sedge	1.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	3.00
Elymus virginicus	Virginia Wild Rye	24.00
Glyceria striata	Fowl Manna Grass	0.50
Juncus effusus	Common Rush	0.50
Leersia oryzoides	Rice Cut Grass	1.00
Scirpus atrovirens	Dark Green Rush	1.00
Scirpus cyperinus	Wool Grass	0.50
Scirpus pendulus	Red Bulrush	0.50
Schoenoplectus tabernaemontani	Great Bulrush	1.00
Spartina pectinata	Prairie Cord Grass	2.00
	Total	**47.00**
Temporary Cover:		
Avena sativa	Common Oat	540.00
	Total	**540.00**
Forbs:		
Alisma subcordatum	Common Water Plantain	1.00
Angelica atropurpurea	Great Angelica	4.00
Asclepias incarnata	Swamp Milkweed	2.00
Bidens cernua	Nodding Bur Marigold	2.00
Boehmeria cylindrica	False Nettle	0.50
Coreopsis tripteris	Tall Coreopsis	1.00
Doellingeria umbellata	Flat-Top Aster	0.50
Eupatorium perfoliatum	Common Boneset	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	1.00
Helenium autumnale	Sneezeweed	1.00
Hibiscus laevis	Smooth Rose Mallow	2.00
Iris virginica v. shrevei	Blue Flag	3.00
Liatris spicata	Marsh Blazing Star	2.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.25
Lycopus americanus	Common Water Horehound	0.50
Penthorum sedoides	Ditch Stonecrop	1.00
Physostegia virginiana	Obedient Plant	0.50
Persicaria spp.	Pinkweed Species	2.00
Pycnanthemum virginianum	Common Mountain Mint	0.50
Sagittaria latifolia	Common Arrowhead	1.00
Senna hebecarpa	Wild Senna	4.00
Silphium perfoliatum	Cup Plant	1.00
Sparganium eurycarpum	Common Bur Reed	4.00
Symphyotrichum novae-angliae	New England Aster	0.50
Symphyotrichum puniceum	Bristly Aster	1.00
Thalictrum dasycarpum	Purple Meadow Rue	1.00
Verbena hastata	Blue Vervain	2.00
Vernonia fasciculata	Common Ironweed	1.00
Zizia aurea	Golden Alexanders	1.00
	Total	**42.00**

APPLY 39.31 PLS POUNDS PER ACRE

Low-profile Prairie Seed Mix WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 4 – CHART		PLS
Botanical Name	**Common Name**	**Ounces/Acre**
Permanent Grasses:		
Bouteloua curtipendula	Side-Oats Grama	16.00
Carex spp.	Prairie Sedge Species	4.00
Elymus canadensis	Canada Wild Rye	32.00
Koeleria macrantha	June Grass	1.00
Panicum virgatum	Switch Grass	1.00
Schizachyrium scoparium	Little Bluestem	36.00
	Total	**90.00**
Temporary Cover:		
Avena sativa	Common Oat	360.00
Lolium multiflorum	Annual Rye	100.00
	Total	**460.00**
Forbs:		
Amorpha canescens	Lead Plant	0.50
Asclepias syriaca	Common Milkweed	2.00
Asclepias tuberosa	Butterfly Weed	2.00
Baptisia alba	White Wild Indigo	2.00
Chamaecrista fasciculata	Partridge Pea	10.00
Coreopsis lanceolata	Sand Coreopsis	5.00
Coreopsis palmata	Prairie Coreopsis	1.00
Dalea candida	White Prairie Clover	1.50
Dalea purpurea	Purple Prairie Clover	1.50
Desmanthus illinoensis	Illinois Sensitive Plant	3.00
Echinacea purpurea	Broad-Leaved Purple Coneflower	8.00
Eryngium yuccifolium	Rattlesnake Master	2.00
Lespedeza capitata	Round-Headed Bush Clover	2.00
Liatris aspera	Rough Blazing Star	0.50
Lupinus perennis v. occidentalis	Wild Lupine	4.00
Monarda fistulosa	Wild Bergamot	0.50
Oligoneuron rigidum	Stiff Goldenrod	1.00
Parthenium integrifolium	Wild Quinine	1.00
Penstemon digitalis	Foxglove Beard Tongue	0.50
Penstemon hirsutus	Hairy Beard Tongue	1.00
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	5.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	1.00
Silphium terebinthinaceum	Prairie Dock	1.00
Solidago speciosa	Showy Goldenrod	0.50
Symphyotrichum ericoides	Heath Aster	0.25
Symphyotrichum laeve	Smooth Blue Aster	1.00
Symphyotrichum novae-angliae	New England Aster	0.50
Tradescantia ohiensis	Common Spiderwort	1.00
Verbena stricta	Hoary Vervain	1.00
Vernonia gigantea	Smooth Tall Ironweed	1.50
Veronicastrum virginicum	Culver's Root	0.25
	Total	**66.00**

APPLY 38.50 PLS POUNDS PER ACRE

HERBACEOUS PLUG PLANTING AREA

PROVIDE EQUAL QUANTITIES OF EACH PLANT SPECIES IN 2–1/4" PLUGS. PLANT IN DRIFTS OF 32–48 PLANTS OF EACH SPECIES PER CLUSTER.

WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 2 – SEE CHART BELOW

WET VEGETATED TREATMENT SYSTEM (WVTS) ZONE 3 – SEE CHART

HERBACEOUS PLUG PLANT SCHEDULE ZONE 2:

LEGEND	BOTANICAL NAME	COMMON NAME	QUANTITY (32 PER FLAT)
	Carex emoryi	Riverbank Tussock Sedge	20
	Carex vulpinoidea	Fox Sedge	25
	Deschampsia cespitosa	Tufted Hair Grass	20
	Leersia oryzoides	Rice Cutgrass	20
	Liatris spicata	Dense Blazing Star	20
	Zizania aquatica	Wild Rice	20
	Iris virginica	Blue Flag Iris	30
	Decodon verticillatus	Swamp Loosestrife	20
	Sagittaria latifolia	Arrowhead	28
	Pontederia cordata	Pickerelweed	20
	Peltandra virginica	Arrow arum	20
	Saururus cernuus	Lizard's Tail	25
	Hibiscus moscheutos	Marsh Hibiscus	20
	Acorus calamus	Sweet Flag	25
	Solidago patula	Swamp Goldenrod	20
	Scirpus cyperinus	Wool Grass	20

Total 353 FLATS (11,296 PLUGS) (SPACE PLANTS ON 12" O.C.).

NOTE:
CONTAINER GROWN PLANTS (PLUGS) MUST BE WILD ECOTYPE.

HERBACEOUS PLUG PLANT SCHEDULE ZONE 3:

LEGEND	BOTANICAL NAME	COMMON NAME	QUANTITY (32 PER FLAT)
	Carex emoryi	Riverbank Tussock Sedge	25
	Carex vulpinoidea	Fox Sedge	25
	Deschampsia cespitosa	Tufted Hair Grass	20
	Echinacea purpurea	Purple Coneflower	20
	Liatris spicata	Dense Blazing Star	20
	Liatris scariosa var. nieuwlandii	Savanna Blazing Star	20
	Iris virginica	Blue Flag Iris	30
	Decodon verticillatus	Swamp Loosestrife	20
	Sagittaria latifolia	Arrowhead	20
	Pontederia cordata	Pickerelweed	20
	Lobelia cardinalis	Cardinal Flower	20
	Lobelia siphilitica	Great Blue Lobelia	20
	Ratibida pinnata	Yellow Coneflower	15
	Rudbeckia hirta	Black-Eyed Susan	15
	Solidago patula	Swamp Goldenrod	20
	Helliopsis helianthoides	False Sunflower	20

Total 330 FLATS (10,560 PLUGS) (SPACE PLANTS ON 12" O.C.).

NOTE:
CONTAINER GROWN PLANTS (PLUGS) MUST BE WILD ECOTYPE.

OVERALL PLANTING SCHEDULE

LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE COND	REMARKS	HEIGHT AT MATURITY SPREAD AT MATURITY
TREE/ EVERGREENS SCHEDULE							
	AR	3	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2–1/2" Cal. B & B	Deciduous Tree	50' 50'
	AF	9	Acer x freemanii 'Jeffersred'	Autumn Blaze Red Maple	2–1/2" Cal. B & B	Deciduous Tree	50' 30'
	CO	4	Carya ovata	Shagbark Hickory	2–1/2" Cal. B & B	Deciduous Tree	70–90' 50'
	CC	7	Cercis canadensis	Eastern Redbud	6'– 8' Ht. B & B	Ornamental tree (clump form)	20'–25' 20'–25'
	CV	10	Crateagus viridis 'Winter King'	Winter King Hawthorn	1–1/2" Cal. B & B	Ornamental Tree	15' 15'
	QB	10	Quercus bicolor	Swamp White Oak	2–1/2" Cal. B & B	Deciduous Tree	50' 50'
	NS	3	Nyssa sylvatica	Black Gum	2–1/2" Cal. B & B	Deciduous Tree	40'–50' 20'–30'
	PA	27	Picea pungens	Colorado Spuce	5'–6" Ht. B & B	Evergreen Tree	40'–50' 15'–20'
	UA	17	Ulmus americana	American Elm	2–1/2" Cal. B & B	Deciduous Tree	60' 50'

Environmental Management
APR 10 2020
Office of Water Resources

Kindly be advised that this Permit is not ... ent to a verification of the ... or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DRAFT
4/6/2020

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

PLANTING SCHEDULES AND CHARTS

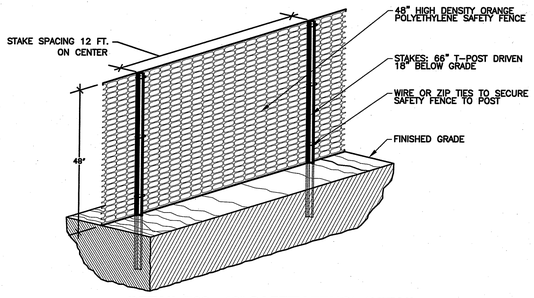
DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
PROJECT NO.	192-973
DRAWN BY:	DR
CHECKED BY:	DRAFT
APPROVED BY:	KPS

DRAWING NO.:
C702

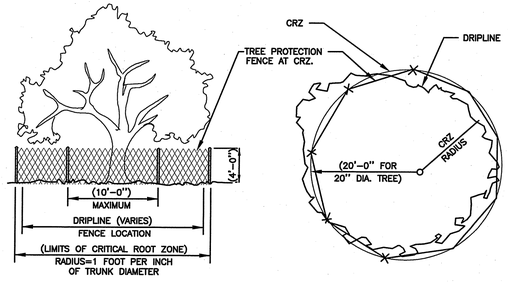
P:\19191\90-9271-0400\Dwg\SWPP-REDM Resubmission\192973-SWPP-0700-Landscape Plan.dwg(C702) LS(5/30/2020 - driver) - LP 4/1/2020 7:04 PM

NOTES

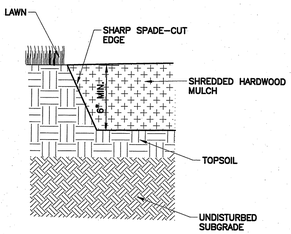
1. INSTALL TREE PROTECTION FENCING EXACTLY AS SHOWN ON THIS PLAN. ANY ADJUSTMENTS TO FENCING LOCATIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT. DAMAGES WILL BE ASSESSED IF TREE PROTECTION FENCING IS ADJUSTED WITHOUT APPROVAL. FENCE LOCATIONS MUST BE APPROVED IN THE FIELD PRIOR TO START OF CONSTRUCTION.
2. ALL TREE PRUNING AND LIMB RESTRAINT SHALL BE PERFORMED BY THE CERTIFIED ARBORIST ONLY. CONTRACTOR SHALL NOT PRUNE TREES OR RESTRAIN LIMBS.
3. NO STAGING, EQUIPMENT, OR VEHICLES ON NON-PAVED AREAS UNLESS INDICATED OTHERWISE ON PLAN.
4. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.



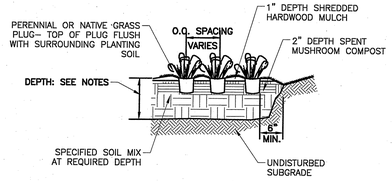
DETAIL 709 - 48" SAFETY FENCE DETAIL
NOT TO SCALE



DETAIL 708 - 48" TREE PROTECTION DETAIL
NOT TO SCALE

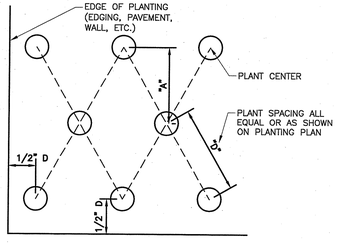


DETAIL 707 - SPADE EDGING DETAIL
NOT TO SCALE

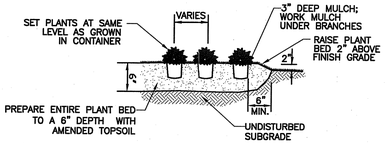


DETAIL 705 - PLUG PLANTING DETAIL
NOT TO SCALE

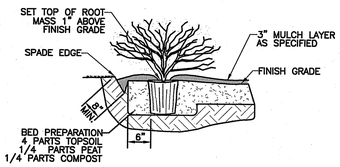
"D"	"A"	NO. OF PLANTS/ SF
6" O.C.	5.2"	4.61
9" O.C.	6.93"	2.60
10" O.C.	8.66"	1.66
12" O.C.	10.4"	1.15
15" O.C.	13.0"	0.738
18" O.C.	15.6"	0.512
24" O.C.	20.8"	0.29
30" O.C.	26.0"	0.185
36" O.C.	30.0"	0.128



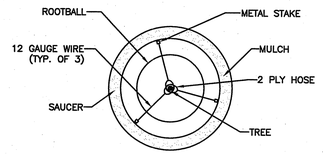
DETAIL 704- PLANTING SPACING- STAGGERED
NOT TO SCALE



DETAIL 703 - ORNAMENTAL GRASS/ PERENNIAL AND GROUNDCOVER PLANTING DETAIL
NOT TO SCALE

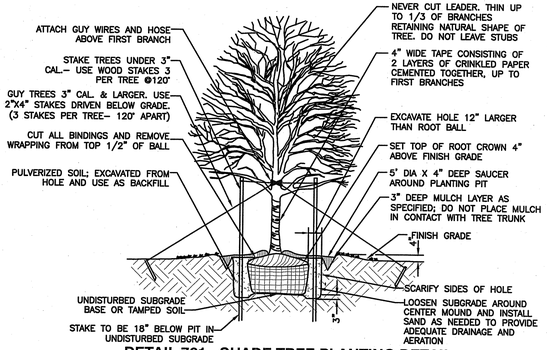


DETAIL 702 - SHRUB/ SMALL TREE PLANTING DETAIL
NOT TO SCALE

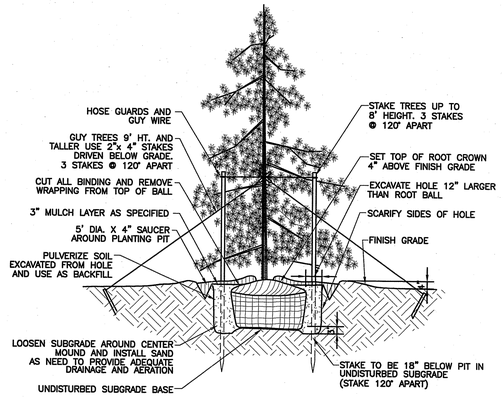


NOTE: LOCATE 1 STAKE DIRECTLY SOUTHWEST OF TREE TRUNK

DETAIL 702 - TREE STAKING DETAIL
NOT TO SCALE



DETAIL 701 - SHADE TREE PLANTING DETAIL
NOT TO SCALE



DETAIL 700 - EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

HERBACEOUS PLUG PLANTING SPECIFICATIONS:

1. NON-LOCAL PLANTS SHALL BE SCHEDULED FOR SHIPPING SO THAT THE PLANTS ARRIVE AT THE CONSTRUCTION SITE OR DESIGNATED DELIVERY LOCATION NO EARLIER THAN TWENTY-FOUR (24) HOURS PRIOR TO THE ANTICIPATED PLANTING DATE FOR THOSE SPECIFIC PLANTS. HOWEVER, IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE PLANTS ARE PROPERLY STORED.
2. ALL NON-DORMANT PLANTS SHALL BE HANDLED, CULLED, AND SORTED IN A SHADED LOCATION. IF INSUFFICIENT NATURAL SHADE EXISTS, SHADE SHALL BE ERECTED BY THE CONTRACTOR USING TARPS OR OTHER MATERIALS APPROVED BY THE ENGINEER. IF DIRECTED BY THE ENGINEER, THERMALREFLECTIVE TARPS SHALL BE USED TO COVER THE PLANT MATERIALS.
3. PLANTING SEASON (WINDOW): THE PLANTING DATES FOR NON-DORMANT PLANTS SHALL BE FROM MARCH 1ST TO MAY 1ST, PROVIDED THE GROUND IS NOT FROZEN OR AS SHOWN ON THE PLANS. DORMANT WETLAND HERBACEOUS SPECIES MAY BE PLANTED FROM DECEMBER 1ST TO MARCH 1ST, PROVIDED THE GROUND IS NOT FROZEN OR AS SHOWN ON THE PLANS. AT THE DISCRETION OF THE ENGINEER, NON-DORMANT STOCK OF THE SAME PLANT SPECIES AS SPECIFIED MAY BE SUBSTITUTED AT THE SAME BID PRICE AS DORMANT STOCK. THE ENGINEER MAY REJECT THE USE OF DORMANT PLANTS AND/ORCERTAIN PLANTING WINDOWS, AS SHOWN ON THE PLANS.
4. IF THE PLANT MATERIALS ARE NOT INSTALLED WITHIN THE SPECIFIED PLANTING WINDOW, THE ENGINEER MAY INSTITUTE A ONE (1)-YEAR PLANT ESTABLISHMENT PERIOD FOR THE PLANTING, AS SOLELY DETERMINED BY THE ENGINEER. THE REQUIREMENTS FOR THIS PLANTING ESTABLISHMENT PERIOD SHALL BE AS OUTLINED IN SUBSECTION (P) PLANT ESTABLISHMENT PERIOD. WITH LATER PLANTINGS, THE ENGINEER MAY ALSO REQUIRED PLANTING UNDER A FLOODED CONDITION, AS DIRECTED BY THE ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER.
5. PLANT INSTALLATION PERIOD: AFTER PLANT DELIVERY TO THE CONSTRUCTION SITE OR TO THE DESIGNATED DELIVERY LOCATION, ALL DORMANT NON-LOCAL PLANT MATERIAL SHALL BE INSTALLED WITHIN FIFTY-EIGHT (58) HOURS, AND ALL NON-LOCAL DORMANT PLANT MATERIAL SHALL BE INSTALLED WITHIN THIRTY-FOUR (34) HOURS. SHIPMENTS OF PLANT MATERIALS MAY BE STAGGERED OVER SEVERAL DAYS. LOCAL MATERIALS SHALL BE INSTALLED ON THE DAY OF DELIVERY.
6. TO PREVENT THE DESICCATION OF THE HERBACEOUS WETLAND PLANT MATERIALS, THE CONTRACTOR SHALL COMPLETE THE PLANTINGS OF THE WETLAND SYSTEMS WITHIN FIVE (5) CALENDAR DAYS OF THE INITIAL PLANTINGS OF EACH OF THOSE SYSTEMS. DURING THIS PERIOD, IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE SOIL IS KEPT SATURATED AND THE PLANTS ARE NOT DESICCATED, AS SOLELY DETERMINED BY THE ENGINEER.
7. REMOVE EXISTING SOIL MATERIAL BELOW THE FINAL DETENTION BASIN GRADE PER THE LIMITS SHOWN ON THE TYPICAL CROSS SECTION.
8. SOIL MODIFICATION SHALL BE COMPLETED PRIOR TO INSTALLATION. MODIFY SOIL BY THOROUGHLY MIXING INTO A HOMOGENEOUS MIXTURE, BY VOLUME, 30% TOP SOIL, 20% SAND, AND 50% ORGANIC COMPOST. LIGHTLY COMPACT THE TILLED SOIL WITH A ROLLER, CULTIVATOR, OR SIMILAR IMPLEMENT.
   - 8.1. SOILS SHOULD HAVE A pH OF BETWEEN 5.5 AND 6.5 AND A CLAY CONTENT LESS THAN 10%.
   - 8.2. IF SAND BROUGHT FROM OFF-SITE, SAND SHOULD BE CLEAN, COARSE AND CONFORM TO ASTM C-33.
9. INSTALLATION OF PLANTS:
   - 9.1. PLANTS SHALL BE INSTALLED BY CREATING A HOLE WITH A GAS POWERED HAND-HELD AUGER, OR SIMILAR.
   - 9.2. HOLES SHALL BE CREATED IN A STAGGERED PATTERN OF ONE (1) FOOT CENTER LATERALLY AND THREE (3) FOOT CENTERS LONGITUDINALLY.
   - 9.3. PLANT PLUGS LEVEL WITH EXISTING SOIL GRADE. BE CERTAIN THAT SOIL IS PLACED AROUND THE PLUGS AND FIRMED INTO PLACE. DO NOT FILL AROUND PLUGS WITH MULCH.
   - 9.4. THOROUGHLY SOAK PLUGGED AREA WITH WATER UNTIL SOIL IS MOIST TO A DEPTH OF 4 INCHES.
10. SEEDING:
   - 10.1. SEEDING SHALL BE USED TO SUPPLEMENT THE CONTAINER GROWN PLANTS PER THE APPROVED SEED MIX. ONLY APPLIES IF CONTAINER GROWN PLANT SPACING IS GREATER THAN ONE (1) FOOT HORIZONTALLY AND ONE (1) FOOT LATERALLY.
   - 10.2. HAND BROADCAST SEED/SAND MIXTURE ACROSS THE SPECIFIED TILLED AREA. APPLY HALF THE SEED/SAND MIXTURE OVER THE ENTIRE AREA. APPLY THE SECOND HALF OVER THE SAME AREA UTILIZING THE SAME PROCEDURE. THIS METHOD PREVENTS USING ALL OF THE SEED BEFORE THE ENTIRE AREA IS COVERED.
   - 10.3. LIGHTLY FIRM SEEDBED WITH A ROLLER WHERE SOIL MOISTURE PERMITS. DO NOT ROLL AREAS WHERE SOIL IS MOIST ENOUGH TO STICK TO THE ROLLER.
11. MAINTENANCE:
   - 11.1. AFTER PLANTING/SEEDING, PROTECT NATIVE VEGETATION AREAS WITH STAKES AND TAPE AROUND THE PERIMETER OF VEGETATION TO SUPPLEMENT THE "DO NOT MOW OR SPRAY" SIGNS DURING ESTABLISHMENT OF VEGETATION. THE FOLLOWING ITEMS SHALL BE COMPLETED AS RECOMMENDED BY THE PLANT SUPPLIER.
   - 11.2. PULL WEEDS OF THE FOLLOWING INVASIVE SPECIES DEEMED DETRIMENTAL TO VEGETATIVE SWALE PLANTINGS. PURPLE LOOSESTRIFE (LYTHRUM SALICARIA) COMMON REED (PHRAGMITES AUSTRALIS), CATTAILS (TYPHA SPP.) REMOVE NOXIOUS WEEDS AS REQUIRED BY STATE LAW.
   - 11.3. IF WEED GROWTH EXCEEDS TEN INCHES IN HIEGHT IN SEEDED AREAS, TRIM OR MOW TO 5 TO 6 INCHES. DO NOT CUT AREAS WHERE LIVE PLANTS WERE INSTALLED.
   - 11.4. MAINTAIN PERIMETER STAKE AND TAPE.
   - 11.5 THE MAINTENANCE LIMITS SHALL BE TO THE TOP OF BANK OF DETENTION AREA.

Environmental Management
APR 10 2020
Office of Water Resources

Kindly be advised that this Permit is not subject to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE 19-0357
CHANGES ALLOWED WITHOUT PRIOR APPROVAL
SIGNED COPY MUST BE AT CONSTRUCTION SITE

DRAFT
4/9/2020

BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.ceiinc.com

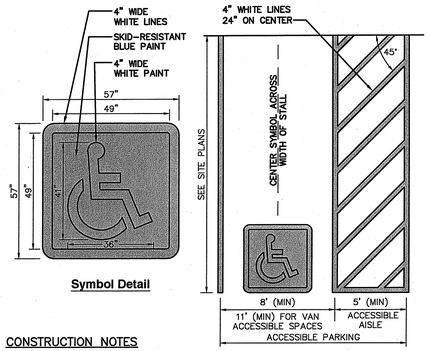
R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

PLANTING NOTES & DETAILS

DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
PROJECT NO:	192-973
DRAWN BY:	DR
CHECKED BY:	DRAFT
APPROVED BY:	KPS

DRAWING NO.: C703

P:\2019\192-973\...\Drwg\3804-R05M Resubmission\192973-3804-C700-Landscape Plan.dwg(C703) 15:43:30/2020 - ehines) - LP: 4/1/2020 7:54 PM



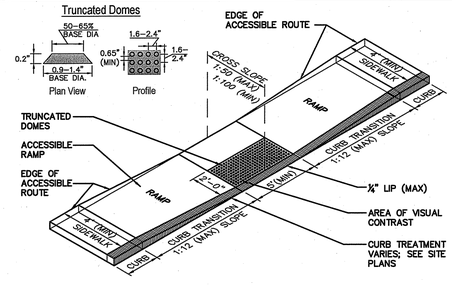
Symbol Detail

CONSTRUCTION NOTES

1. ACCESSIBLE PARKING SPACE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN.
2. ACCESSIBLE SYMBOL SHALL COMPLY WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AS DEPICTED IN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FIGURE 3B-19.
3. STRIPING SHALL BE 4" WIDE SOLID WHITE PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
4. SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1:50 (2.0%).

1 C800 ACCESSIBLE PARKING SPACE

N.T.S.

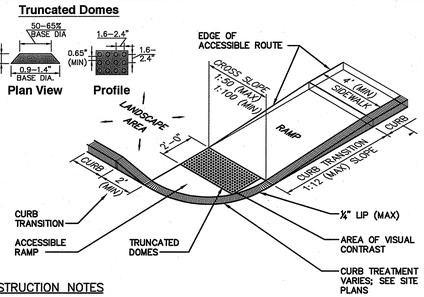


CONSTRUCTION NOTES

1. CURB RAMPS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN.
2. THE RUNNING SLOPE OF CURB RAMPS SHALL NOT BE GREATER THAN 1:12. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE GREATER THAN 1:20. THE CROSS SLOPE OF CURB RAMPS AND WALKING SURFACES SHALL NOT BE GREATER THAN 1:50 OR LESS THAN 1:100.
3. LANDINGS SHALL BE PROVIDED AT THE TOPS OF CURB RAMPS. THE LANDING CLEAR LENGTH SHALL BE 36 INCHES (3 FEET) MINIMUM. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING.
4. COUNTER SLOPES OF ADJOINING SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20.
5. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES AND BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.

2 C800 ACCESSIBLE CURB RAMP (TYPE "A")

N.T.S.

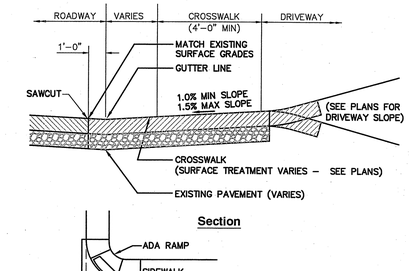


CONSTRUCTION NOTES

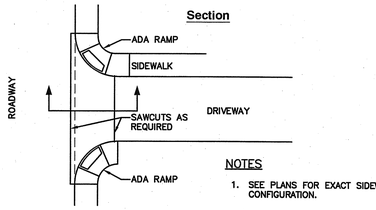
1. CURB RAMPS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN AND THE ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS (521 CMR).
2. THE RUNNING SLOPE OF CURB RAMPS SHALL NOT BE GREATER THAN 1:12. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE GREATER THAN 1:20. THE CROSS SLOPE OF CURB RAMPS AND WALKING SURFACES SHALL NOT BE GREATER THAN 1:50 OR LESS THAN 1:100.
3. LANDINGS SHALL BE PROVIDED AT THE TOPS OF CURB RAMPS. THE LANDING CLEAR LENGTH SHALL BE 36 INCHES (3 FEET) MINIMUM. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING.
4. COUNTER SLOPES OF ADJOINING SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20.
5. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES AND BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.

3 C800 ACCESSIBLE CURB RAMP (TYPE "B")

N.T.S.



Section



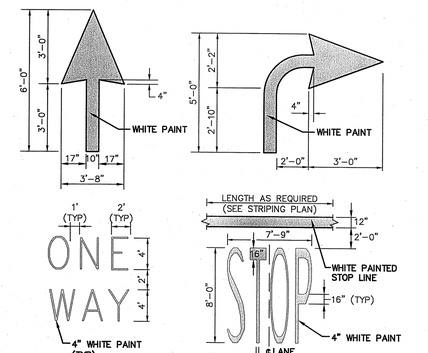
NOTES

1. SEE PLANS FOR EXACT SIDEWALK CONFIGURATION.

Plan

4 C800 DRIVEWAY ENTRANCE DETAIL

N.T.S.

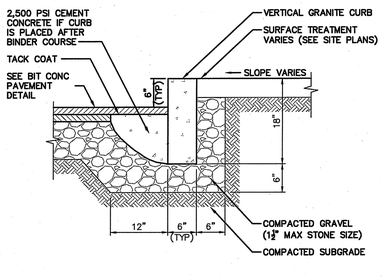


CONSTRUCTION NOTES

1. PAVEMENT MARKINGS TO BE INSTALLED FOR ON-SITE WORK IN THE LOCATIONS SHOWN ON THE LAYOUT AND MATERIALS PLAN.

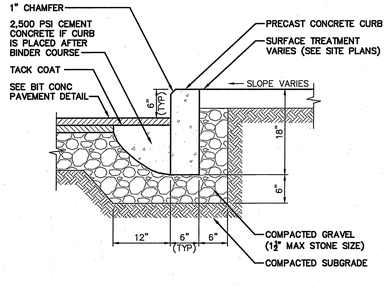
5 C800 PAINTED PAVEMENT MARKINGS

N.T.S.



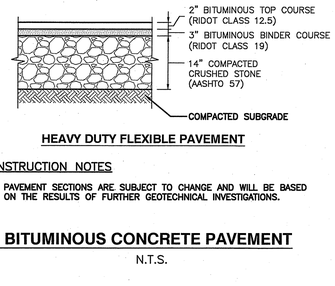
6 C800 VERTICAL GRANITE CURB

N.T.S.



7 C800 PRECAST CONCRETE CURB

N.T.S.



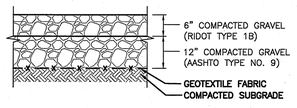
HEAVY DUTY FLEXIBLE PAVEMENT

CONSTRUCTION NOTES

1. PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

8 C800 BITUMINOUS CONCRETE PAVEMENT

N.T.S.

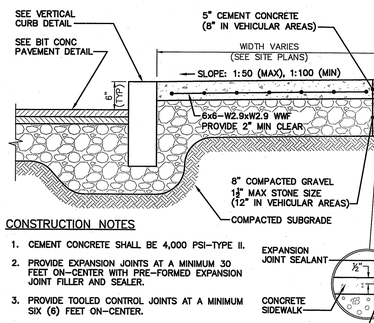


CONSTRUCTION NOTES

1. PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

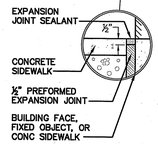
9 C800 GRAVEL ACCESS ROAD SECTION

N.T.S.



CONSTRUCTION NOTES

1. CEMENT CONCRETE SHALL BE 4,000 PSI–TYPE II.
2. PROVIDE EXPANSION JOINTS AT A MINIMUM 30 FEET ON–CENTER WITH PRE–FORMED EXPANSION JOINT FILLER AND SEALER.
3. PROVIDE TOOLED CONTROL JOINTS AT A MINIMUM SIX (6) FEET ON–CENTER.
4. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
5. FOR ACCESSIBLE ROUTES, SIDEWALKS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN.

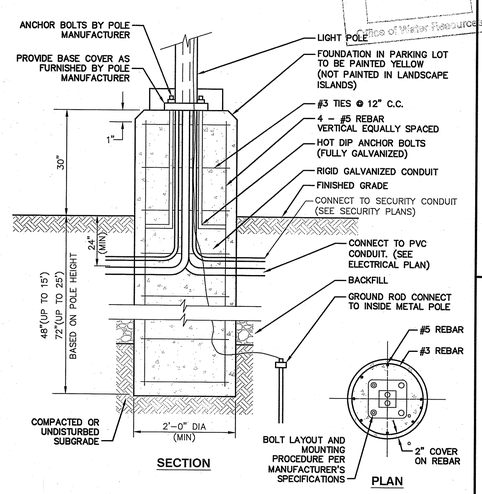


Expansion Joint Detail

6. FOR ACCESSIBLE ROUTES, THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE GREATER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE GREATER THAN 1:50 OR LESS THAN 1:100.
7. FOR ACCESSIBLE ROUTES, WHERE THE SIDEWALK IS LESS THAN FIVE (5) FEET IN WIDTH, EXCLUDING CURBING, A 5' X 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
8. FOR ACCESSIBLE ROUTES, A MINIMUM CLEARANCE OF THREE (3) FEET SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE; HYDRANTS, UTILITY POLES, SIGN POSTS, ETC.

10 C800 CONCRETE SIDEWALK

N.T.S.



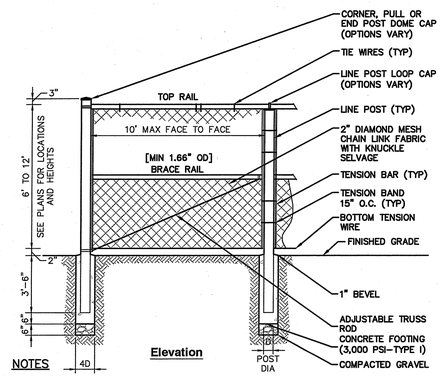
SECTION **PLAN**

CONSTRUCTION NOTES

1. LIGHT POLE FOUNDATION DESIGN IS SUBJECT TO CHANGE BASED ON FINAL POLE HEIGHT AND FIXTURE SELECTION AND GEOTECHNICAL SITE INVESTIGATIONS.
2. LIGHT POLE FOUNDATION TO BE PRECAST CONCRETE, MINIMUM 4,000 PSI. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC.

11 C800 LIGHTPOLE FOUNDATION DETAIL

N.T.S.



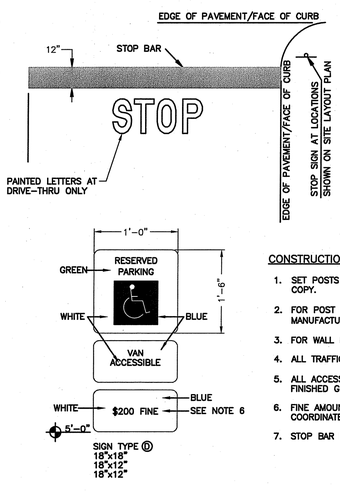
Elevation

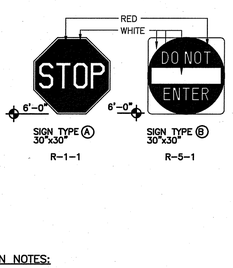
NOTES

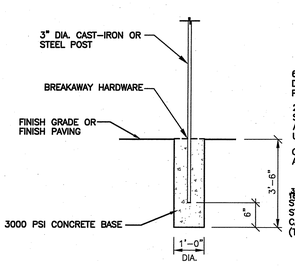
1. FENCE TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND THE CHAIN LINK FENCE MANUFACTURERS INSTITUTE PRODUCT MANUAL.
2. POSTS SHALL MAINTAIN A MINIMUM DEPTH OF 3'–6" IN GROUND AND SHALL NOT BE RACKED TO ACCOMMODATE CHANGES IN GRADE.
3. LINE OF FENCE, TOP AND BOTTOM, SHALL BE INSTALLED STRAIGHT AND TRUE. POSTS SHALL BE INSTALLED PARALLEL AND PLUMB. RAILS SHALL BE INSTALLED PARALLEL TO GROUND SURFACE AND EACH OTHER.

12 C800 6'-12' CHAIN LINK FENCE

N.T.S.





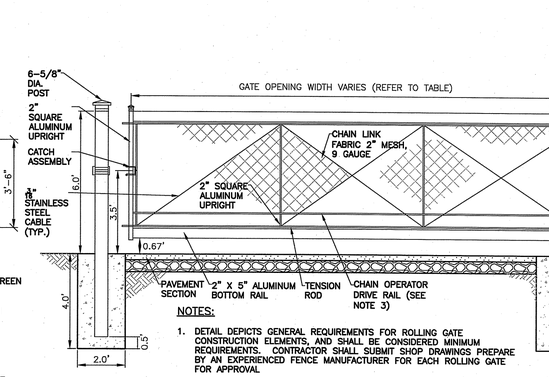


CONSTRUCTION NOTES:

1. SET POSTS IN CONCRETE TO A MINIMUM DEPTH OF 36". SIGN PANELS SHALL BE 0.100 ALUMINUM WITH RAISED OR SILKSCREEN COPY.
2. FOR POST MOUNTING, USE NON–CORROSIVE 3/8" 2. MACHINE BOLTS W/ WASHERS, 2 PER SIGN; OR IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. FOR WALL MOUNTING, USE NON–CORROSIVE 3/8" LAG BOLTS W/ LEAD EXPANSION SHIELD, 4 PER SIGN.
4. ALL TRAFFIC CONTROL SIGNS, SIGN POSTS, AND SIGN HARDWARE SHALL SATISFY THE REQUIREMENTS OF RIDOT.
5. ALL ACCESSIBLE PARKING SIGNAGE IS TO BE INSTALLED WITH THE BOTTOM EDGE OF THE LOWEST SIGN AT LEAST 60" ABOVE FINISHED GRADE.
6. FINE AMOUNT SHALL BE DISPLAYED IN ACCORDANCE WITH LOCAL LAW. THE AMOUNT SHOWN HEREON IS REPRESENTATIVE ONLY. COORDINATE POSTING OF FINE AMOUNT WITH LOCAL LAW ENFORCEMENT AGENCY.
7. STOP BAR MUST BE PAINTED WHITE

13 C800 SIGNS

N.T.S.



NOTES:

1. DETAIL DEPICTS GENERAL REQUIREMENTS FOR ROLLING GATE CONSTRUCTION ELEMENTS, AND SHALL BE CONSIDERED MINIMUM REQUIREMENTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PREPARE BY AN EXPERIENCED FENCE MANUFACTURER FOR EACH ROLLING GATE FOR APPROVAL
2. SEE TECHNICAL SPECIFICATIONS FOR HARDWARE & ELECTRICALLY OPERATED GATES.
3. CONTRACTOR TO COORDINATE GATE OPERATOR DRIVE RAIL WITH GATE OPERATOR DRIVE MANUFACTURER.
4. CONTRACTOR SHALL COORDINATE ELECTRIC SERVICE REQUIREMENTS FOR GATE WITH MOTOR MANUFACTURER.

GATE	W
A	28'
B	20'

14 C800 SLIDING FENCE GATE DETAIL

N.T.S.

Kindly be advised that an Permit is not an approval of the verification of the type or ex of freshwater wetlands on site.

Environmental Management APR 10 2020 Office of Water Resources

4/6/2020
BARRY VANLAARHOVEN No. 11758 REGISTERED PROFESSIONAL ENGINEER CIVIL
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

REVISION RECORD

NO	DATE	DESCRIPTION
1	4/6/2020	REVISIONS/ADDITIONAL FOR RESPONSE TO RIDEM COMMENTS

CEC
Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

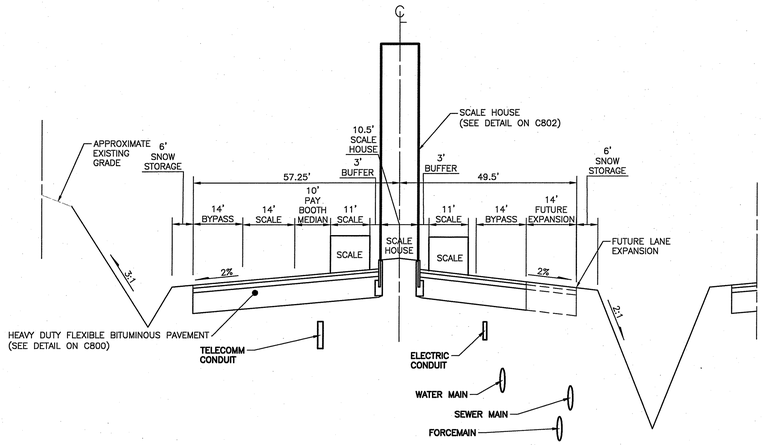
R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND
ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

DETAILS SHEET 1

DATE:	MARCH 2020
DRAWN BY:	DR
CHECKED BY:	KFS
DWG SCALE:	AS SHOWN
PROJECT NO.	192-973
APPROVED BY:	BV

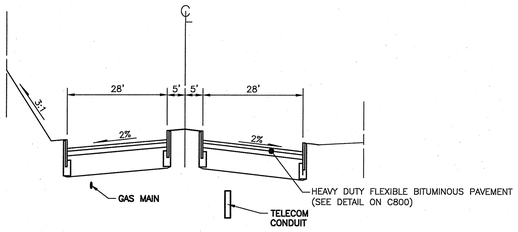
DRAWING NO.: C800

P:\2019\192-973\-CAD\[dwg]_C800-ROOM Installation\192973-SHT4-C800-Details.dwg(C800) LS(4/1/2020 - tvanlaarhoven) - LP: 4/1/2020 3:59 PM



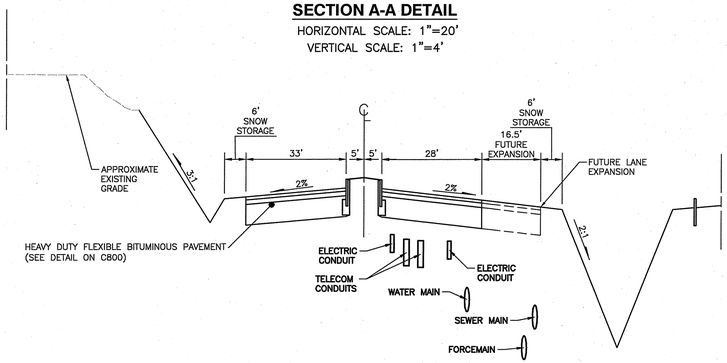
SECTION A-A DETAIL

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



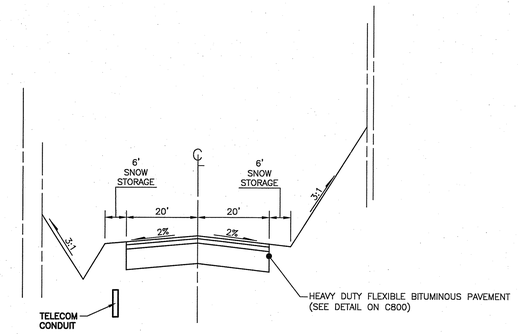
SECTION B-B DETAIL

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



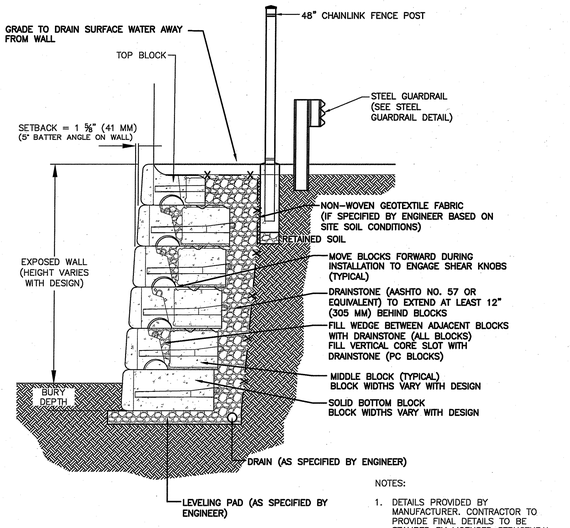
SECTION C-C DETAIL

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



SECTION D-D DETAIL

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

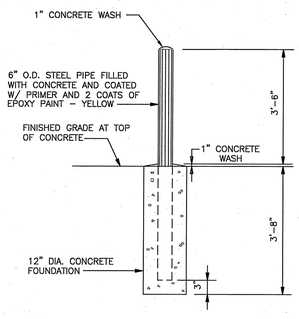


NOTES:

1. DETAILS PROVIDED BY MANUFACTURER. CONTRACTOR TO PROVIDE FINAL DETAILS TO BE STAMPED BY LICENSED STRUCTURAL ENGINEER.

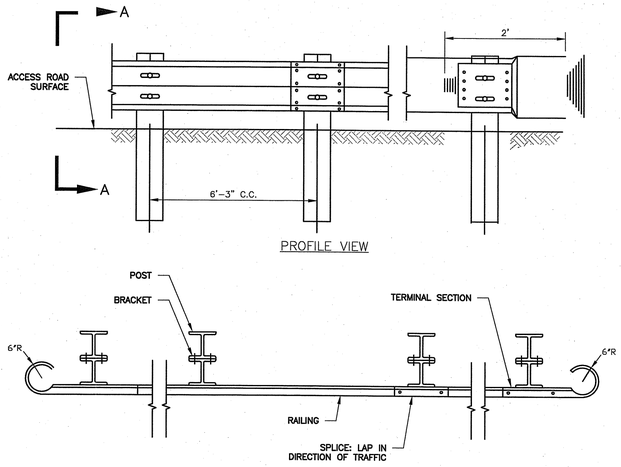
1 C801 TYPICAL GRAVITY WALL DETAIL

N.T.S.



2 C801 BOLLARD DETAIL

N.T.S.

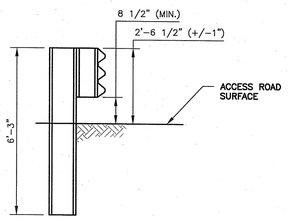


3 C801 STEEL GUARDRAIL DETAIL

N.T.S.

NOTE:

1. GUARDRAIL AND INSTALLATION SHALL MEET RI DOT STANDARDS AS REQUIRED.



SECTION A-A

Environmental Management
APR 10 2020
Office of Water Resources

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS TO BE AT CONSTRUCTION SITE

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO	DATE	REVISION RECORD DESCRIPTION
1	04/07/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO ITEMS COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

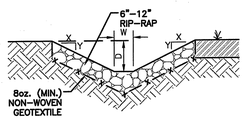
R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND
ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

DETAILS SHEET 2

DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
PROJECT NO:	192-973
DRAWN BY:	DR
CHECKED BY:	KPS
APPROVED BY:	BV

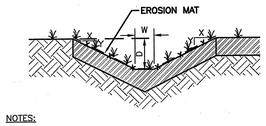
DRAWING NO.: C801

P:\192\01\02-0121-04\01\Dwg\SHOP-RDSP Resubmission\192973-SHOP-DS03-Details.dwg[C801] | 4/7/2020 - 7:59 AM | kmakowski | LP: 4/7/2020 - kmakowski



NOTE:

1. DRAINAGE SWALE TO BE LINED WITH RIP–RAP.



NOTES:

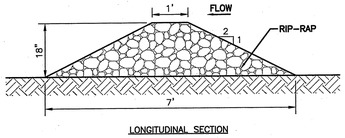
1. DRAINAGE SWALE TO BE LINED WITH EROSION MAT AND SEEDED.

2. SEED MIXTURE SHALL CONSIST OF 0.45lbs/1,000 ft^2CREEPING RED FESCUE AND 0.45lbs/1,000 ft^2 OF TALL FESCUE OR REED CANARY GRASS.

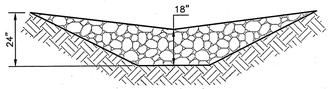
3. RIP–RAP (6"–12") SHALL BE PLACED IN AREAS AS INDICATED ON DRAWINGS, WITH AN 8oz. NON–WOVEN GEOTEXTILE BENEATH.

SWALE TYPE	W (FEET)	D (FEET)	SIDE SLOPE (RUN:RISE)	LINING
1	2	2	3:1	RIP–RAP
2	0	2	2:1	GRASS
3	4	2	2:1	RIP–RAP/GRASS

1/C802 DRAINAGE SWALES DETAIL
N.T.S.



LONGITUDINAL SECTION



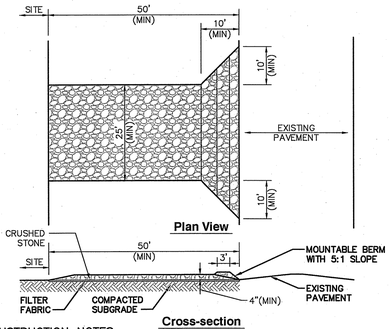
CROSS–SECTION

NOTES:

1. STONE SIZE SHALL AT A MINIMUM MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS M.01.09, TABLE 1 GRADATION II AS PROVIDED BELOW:

SIEVE	GRADATION % PASSING
2–1/4"	100
2"	90–100
1–1/2"	30–55
1–1/4"	0–25
1"	0–5

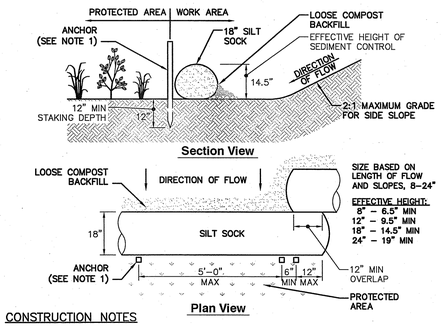
2/C802 TEMPORARY CHECK DAM DETAIL
N.T.S.



CONSTRUCTION NOTES

1. ENTRANCE WIDTH SHALL BE A TWENTY–FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO FINAL FINISHED MATERIALS BEING INSTALLED.

3/C802 STABILIZED CONSTRUCTION EXIT
N.T.S.



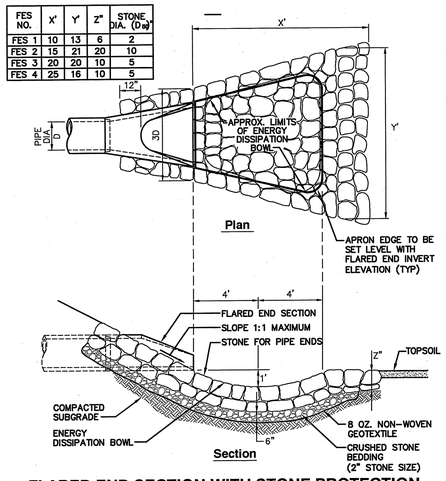
CONSTRUCTION NOTES

1. ANCHOR TO BE A 2" X 2" X 36" HARD WOOD STAKE, OR APPROVED EQUAL.
2. COMPOST FOR SILT SOCK FILL MATERIAL TO BE PROVIDED BY THE MANUFACTURER IN CONJUNCTION WITH THE ENGINEER TO PROVIDE THE REQUIRED REMOVAL OF SEDIMENT OR OTHER POLLUTANTS FROM RUNOFF.
3. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE LOCAL CONSERVATION AGENT OR THE DESIGN ENGINEER.
4. SILT SOCK SHALL BE INSPECTED PER LOCAL AND STATE REQUIREMENTS. REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY, AS NEEDED.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.

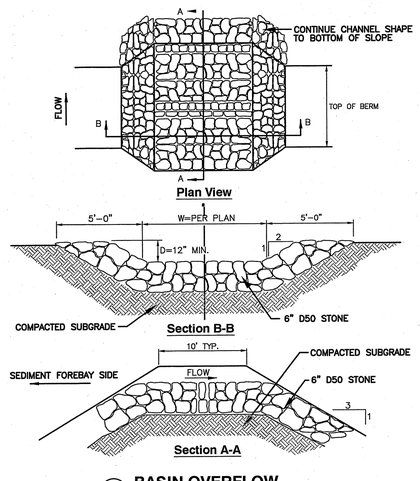
4/C802 PERIMETER EROSION CONTROL
N.T.S.

Environmental Management
APR 10 2020
Office of Water Resources

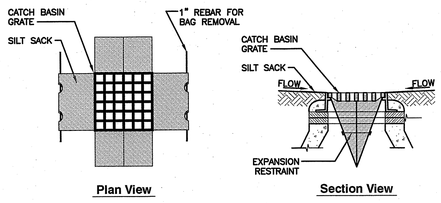
FES NO.	X'	Y'	Z"	STONE DIA. (D50)"
FES 1	10	13	6	2
FES 2	15	21	20	10
FES 3	20	20	10	5
FES 4	25	16	10	5



5/C802 FLARED END SECTION WITH STONE PROTECTION
N.T.S.



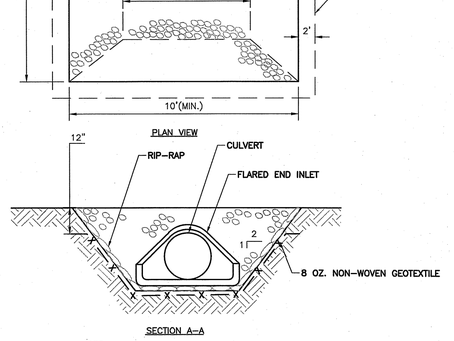
6/C802 BASIN OVERFLOW
N.T.S.



CONSTRUCTION NOTES

1. INSTALL SILT SACKS IN ALL CATCH BASINS WHERE INDICATED ON THE SITE PLANS BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER THE BINDER COURSE IS PLACED AND EROSION CONTROL BARRIERS HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACKS SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS. CLEANING OR REPLACEMENT SHALL BE PERFORMED AS NEEDED. MAINTAIN SILT SACKS UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

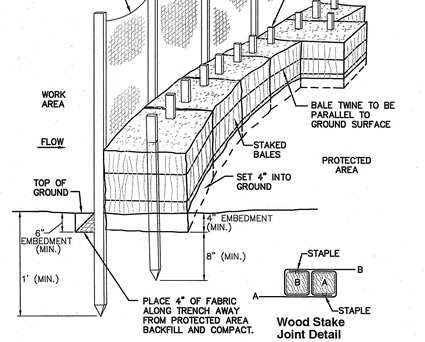
7/C802 SILT SACK INLET PROTECTION
N.T.S.



NOTE:

RIP–RAP SHALL BE WELL GRADED FROM A MINIMUM SIZE OF 6" TO A MAXIMUM SIZE OF 12".

8/C802 RIP–RAP INLET APRON DETAIL
N.T.S.



CONSTRUCTION NOTES

1. PLACE ONE STRAW BALE PERPENDICULAR ALONG STRAW BALE BARRIER (100' O.C.)

9/C802 PERIMETER EROSION CONTROL
N.T.S.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/01/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS

Civil & Environmental Consultants, Inc.
31 Bellows Road · Raynham, MA 02767
Ph: 774.501.2176 · 866.312.2024 · Fax: 774.501.2669
www.cecinc.com

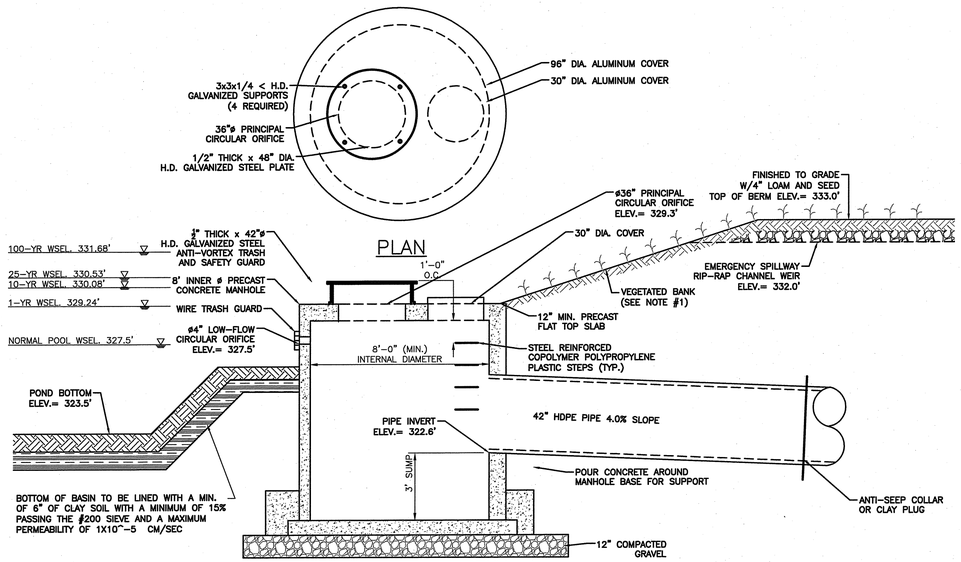
R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

DETAILS SHEET 3

DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
PROJECT NO:	192-973
APPROVED BY:	BV
DRAWN BY:	DR
CHECKED BY:	KPS

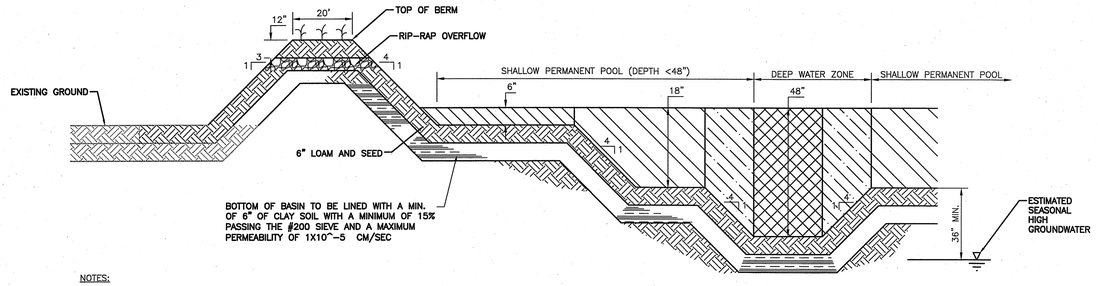
DRAWING NO.: C802

P:\192973\192-A731 - C&D\Dwg\SWPPP-RIDEM Resubmission\192973-SWPPP-C800-Details.dwg(C802) LSTAYLOR 4/1/2020 7:09 PM



1 C805 EAST WET VEGETATED TREATMENT BASIN OUTFLOW DEVICE DETAIL

N.T.S.



NOTES:

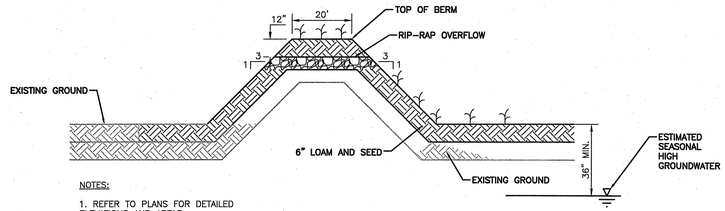
1. REFER TO PLANS FOR DETAILED SHALLOW WET VEGETATED TREATMENT SYSTEM AND CORRESPONDING AREAS.

LEGEND

- 6" MAX. DEPTH SHALLOW POOL
- 6-18" DEPTH SHALLOW POOL
- 18"-48" INTERMEDIATE ZONE
- DEEP WATER ZONE

2 C805 TYPICAL SHALLOW WET VEGETATED TREATMENT SYSTEM DETAIL

N.T.S

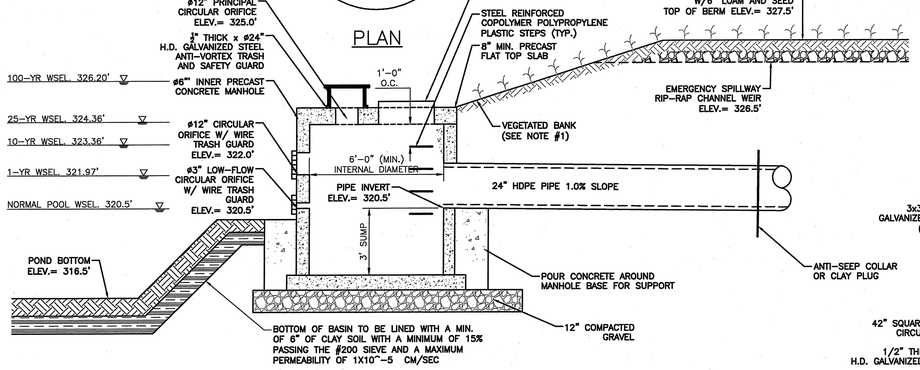


NOTES:

1. REFER TO PLANS FOR DETAILED ELEVATIONS AND AREAS.
2. DO NOT UTILIZE PROPOSED INFILTRATION BASIN AREAS AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION.

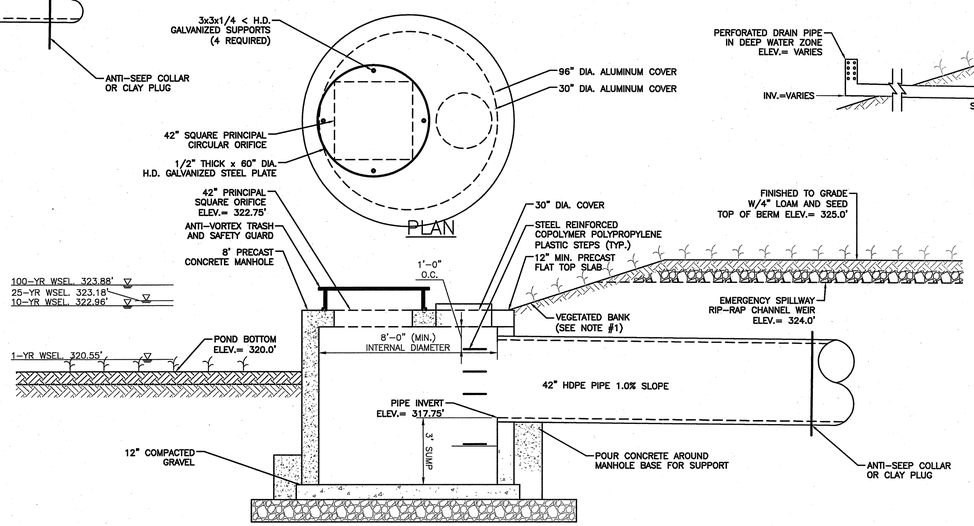
4 C805 TYPICAL INFILTRATION BASIN DETAIL

N.T.S



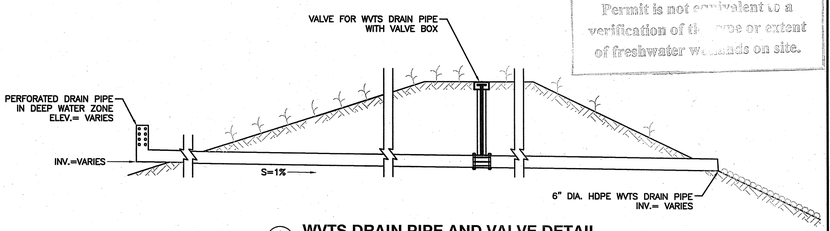
3 C805 WEST WET VEGETATED TREATMENT BASIN OUTFLOW DEVICE DETAIL

N.T.S



5 C805 CENTRAL INFILTRATION BASIN OUTFLOW DEVICE DETAIL

N.T.S



6 C805 WVTS DRAIN PIPE AND VALVE DETAIL

N.T.S.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

RECEIVED
APR 10 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/01/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO ITEMS/COMMENTS

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R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND
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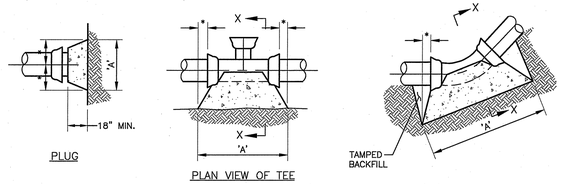
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

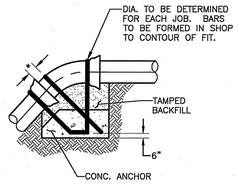
DETAILS SHEET 4

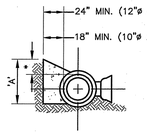
DATE:	MARCH 2020
DRAWN BY:	DR
CHECKED BY:	KPS
DWG SCALE:	AS SHOWN
PROJECT NO:	192-573
APPROVED BY:	BV

DRAWING NO.: C803

P:\192\192-573-CIVIL\dwg\Work-ROW Resubmission\192573-SHT4-DTL-Details.dwg[C803] LS(4/1/2020 - troskowsky) - LP: 4/1/2020, 7:10 PM







MINIMUM VOLUME OF CONCRETE

DIA.	VOLUME
6"	4 C.F.
8"	11 C.F.
10"	22 C.F.
12"	37 C.F.

'A' DIMENSIONS

DIA.	90°	45°	22 1/2°	TEE	PLUG
6"	17"	13"	9"	13"	14"
8"	23"	17"	12"	17"	19"
10"	28"	21"	15"	21"	24"
12"	34"	25"	18"	25"	29"

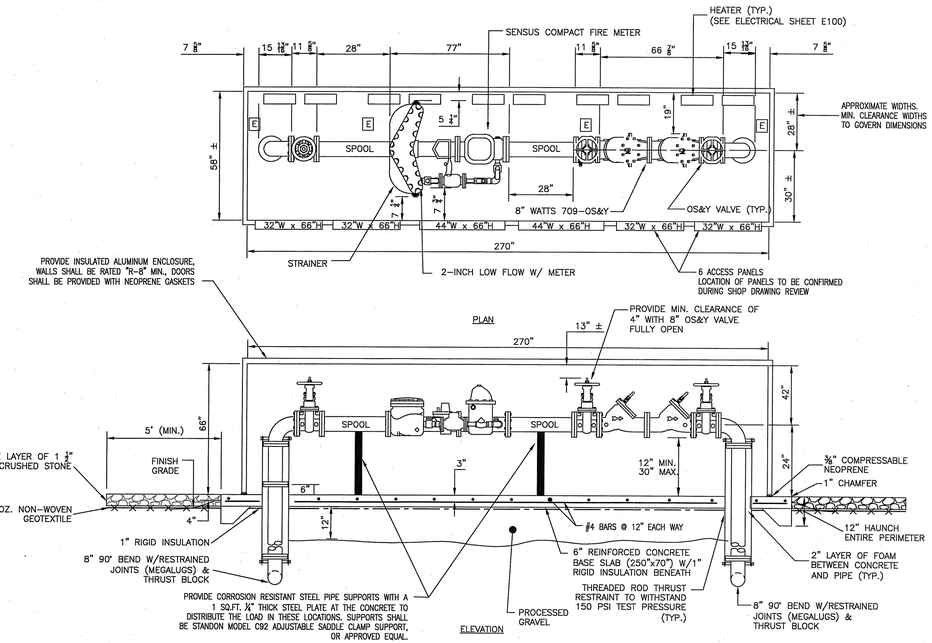
*=6" MINIMUM

NOTES:

1. CONCRETE, CONCRETE MATERIAL, FORMING, PLACING, FURNISHING, AND CURING FOR THRUST BLOCKS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE SPECIFICATIONS. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, LATEST EDITION.
2. ALL CONCRETE REINFORCING BARS SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI, AND SHALL CONFORM TO THE CURRENT ASTM DESIGNATION A615, "SPECIFICATIONS FOR DEFORMED BILLET–STEEL BARS FOR CONCRETE REINFORCEMENT".
3. TABLES ARE BASED ON ALLOWABLE EARTH PRESSURE OF 2,500 PSF. IF SOILS ENCOUNTERED AT THE TIME OF EXCAVATION DEMONSTRATE LOWER ALLOWABLE BEARING PRESSURE, THE AREA OF THE BLOCK MUST BE INCREASED PROPORTIONALLY.
4. TABLES APPLY TO PRESSURE IN THE PIPE OF NOT MORE THAN 150 PSI.
5. CONCRETE TO BE 3,500 PSI CONCRETE.
6. ALL THRUST BLOCKS TO BE CARRIED TO UNDISTURBED EARTH.

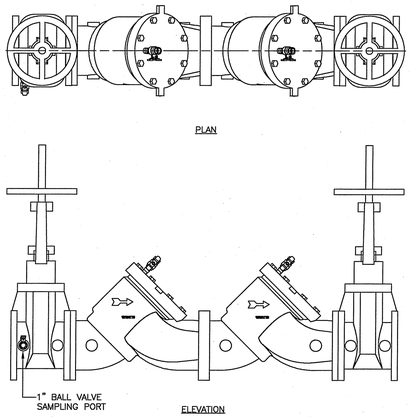
1 C806 CONCRETE THRUST BLOCK DETAILS

N.T.S.



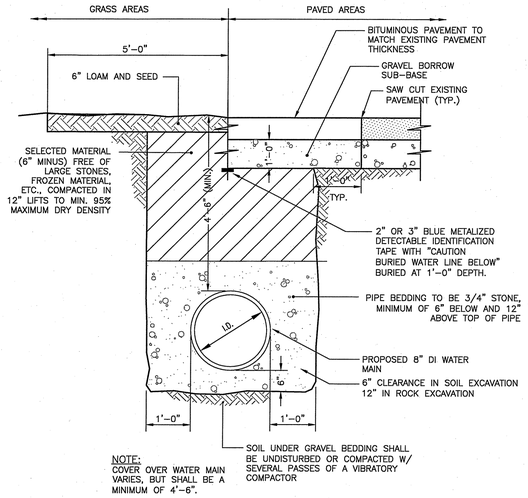
2 C806 FULL WATER METER AND BACKFLOW ENCLOSURE ASSEMBLY DETAILS

N.T.S.



3 C806 709-OSY WATTS 8-INCH DOUBLE CHECK BACKFLOW PREVENTER

N.T.S.



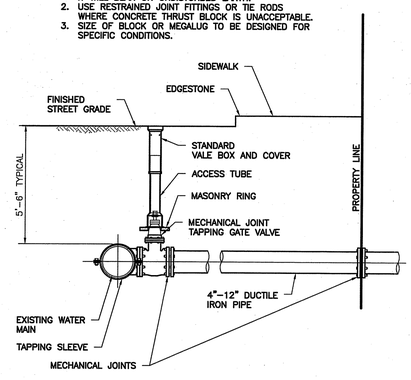
NOTE:
COVER OVER WATER MAIN VARIES, BUT SHALL BE A MINIMUM OF 4'–6".

4 C806 TYPICAL WATER MAIN TRENCH DETAIL

N.T.S.

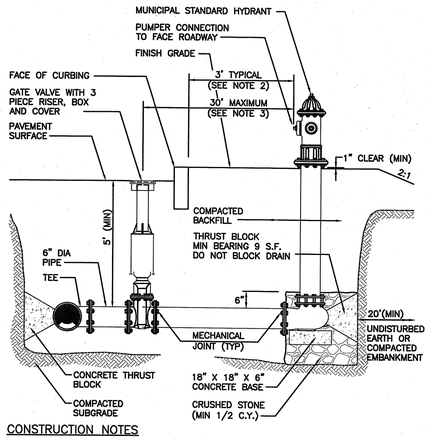
NOTE:

1. CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
2. USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
3. SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.



5 C806 WATER CONNECTION TO EXISTING MAIN

N.T.S.



CONSTRUCTION NOTES

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH, AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHODS OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF THREE (3) FEET AT HYDRANT. CONFIRM WITH LOCAL MUNICIPAL STANDARD.

6 C806 FIRE HYDRANT DETAIL

N.T.S.

REVISION RECORD

NO	DATE	DESCRIPTION
1	04/01/2020	REVISIONS/SUBMITTAL FOR RESPONSE TO RIDEM COMMENTS

APR 10 2020
Office of Water Resources

Civil & Environmental Consultants, Inc.
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R.I. RESOURCE RECOVERY CORPORATION
FACILITY RELOCATION AND ENTRANCE PROJECT
CENTRAL LANDFILL
65 SHUN PIKE, JOHNSTON, RI

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
REVIEWED WETLANDS PROGRAM
CONDITIONS
APPROVAL OR LETTER OF APPROVAL
DATED SEP 8 2020 FILE # 19-0357
NO CHANGES ALLOWED WITHOUT PRIORITY APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

4/6/2020
BARRY VANLAARHOVEN
No. 11758
REGISTERED PROFESSIONAL ENGINEER
CIVIL

DETAILS SHEET 5

DATE:	MARCH 2020
DWG SCALE:	AS SHOWN
PROJECT NO:	192-573
DRAWN BY:	DR
CHECKED BY:	KPS
APPROVED BY:	BV

DRAWING NO.: C804

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