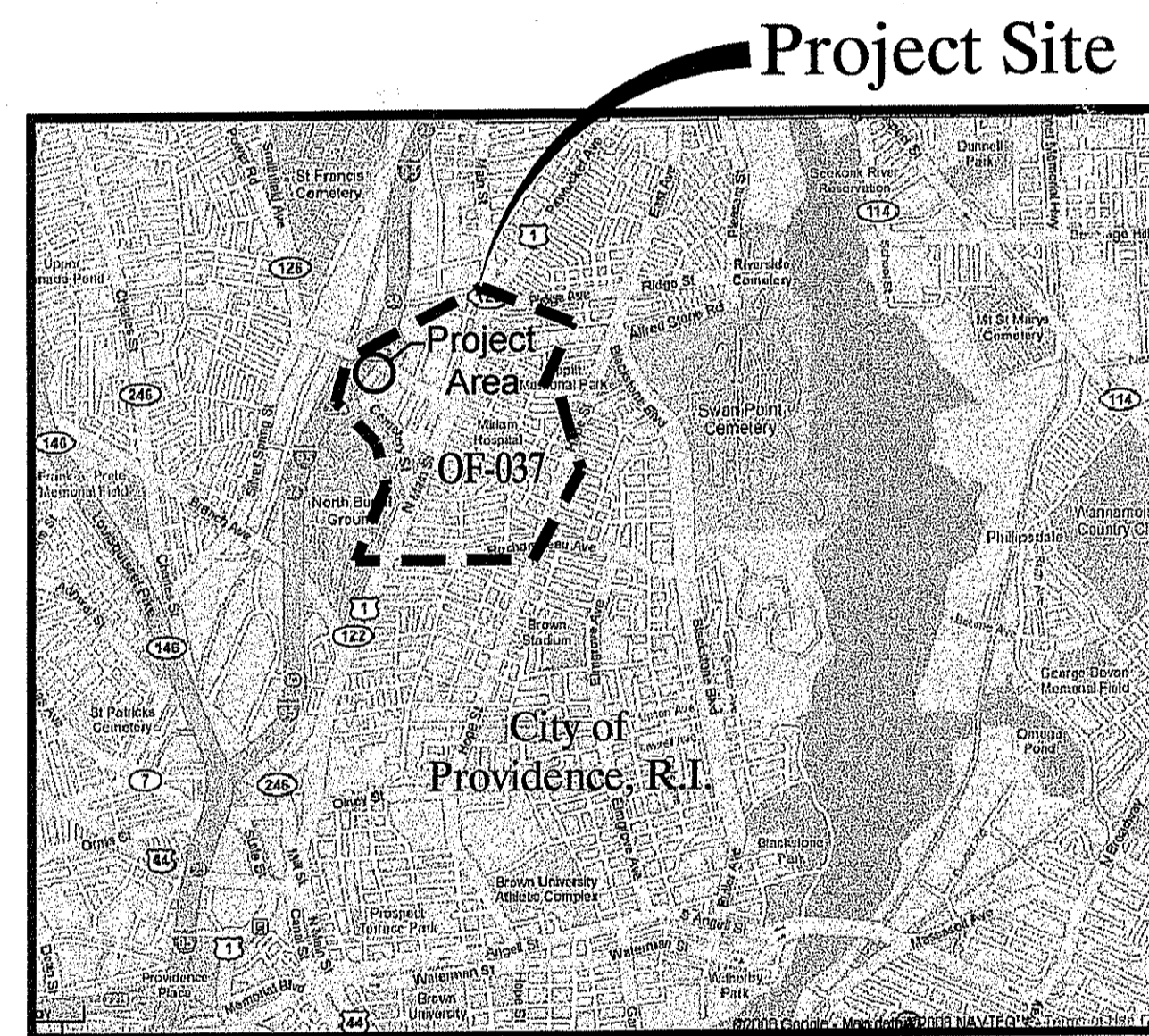
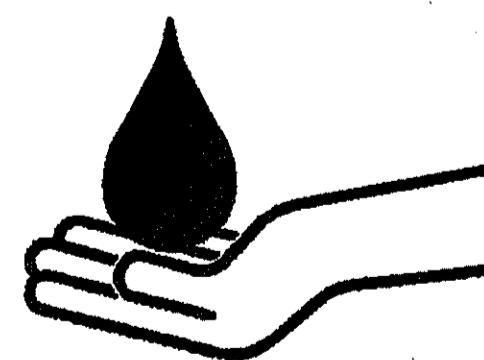


THE NARRAGANSETT BAY COMMISSION

COMBINED SEWER OVERFLOW CONTROL FACILITIES PROGRAM PHASE II SEWER SEPARATION / FLOW MODIFICATION PROVIDENCE, RI OF - 037 CONTRACT NO. 303.06C REQUEST FOR PRELIMINARY DETERMINATION MAY 2010

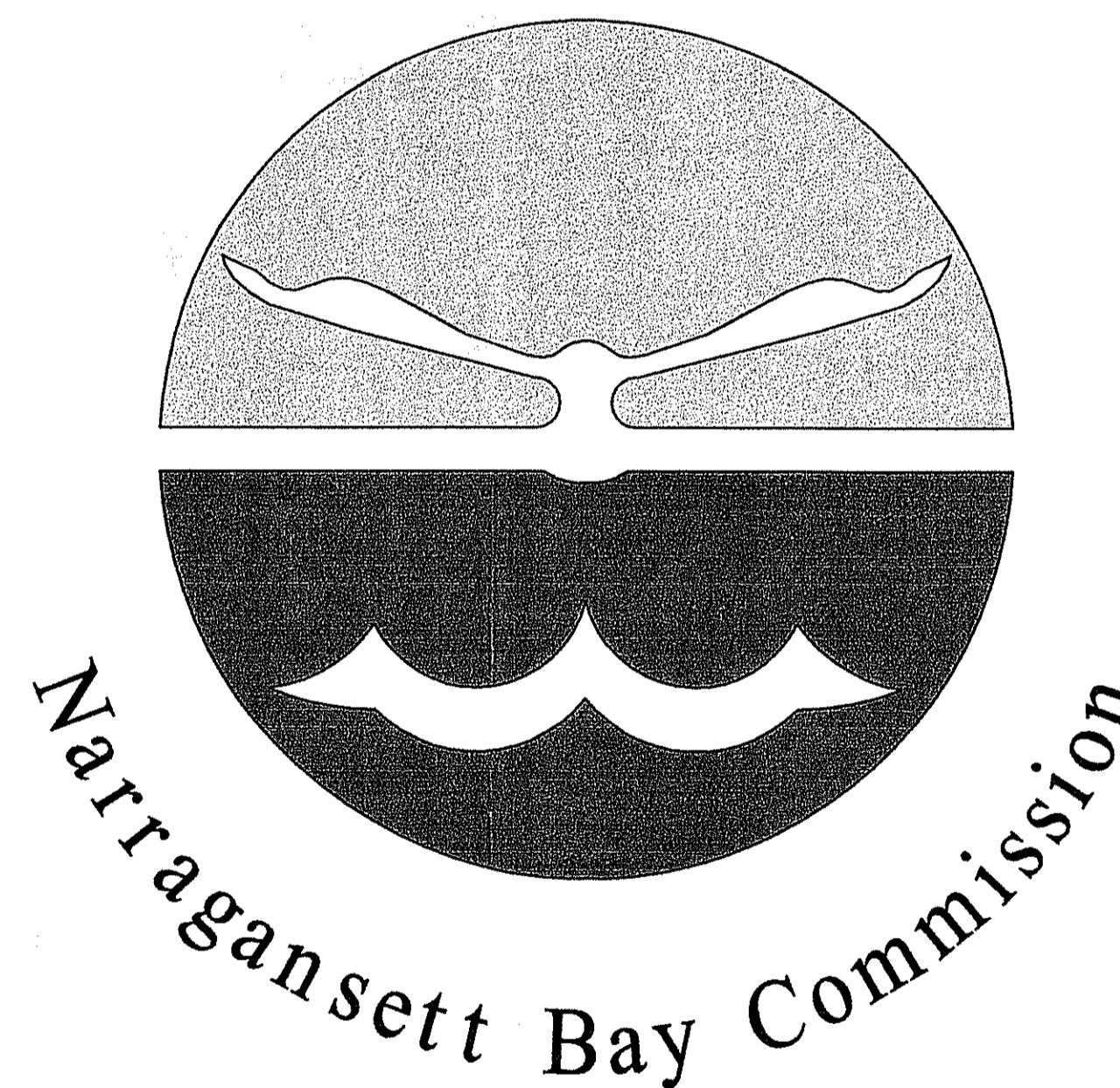


Locus Map

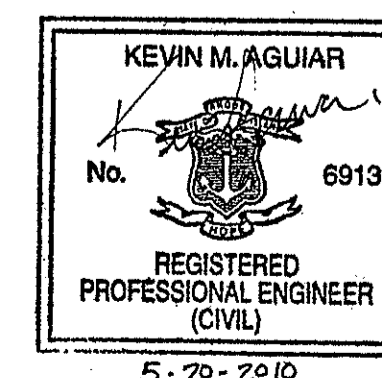


**RHODE ISLAND
CLEAN WATER FINANCE AGENCY**

JAMES M. HAGERTY _____ CHAIRMAN
ANTHONY B. SIMEONE _____ EXECUTIVE DIRECTOR

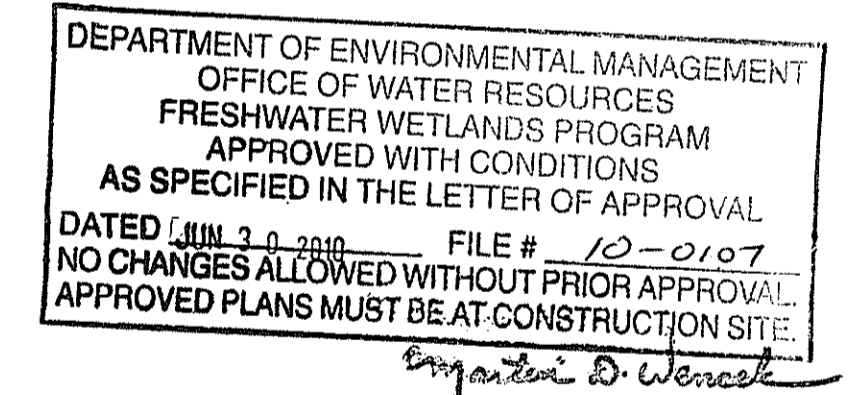


VINCENT J. MESOLELLA JR. _____ CHAIRMAN
RAYMOND J. MARSHALL, P.E. _____ EXECUTIVE DIRECTOR
PAUL E. NORDSTROM, P.E. _____ DIRECTOR OF
OPERATIONS AND
ENGINEERING
THOMAS BRUECKNER, P.E. _____ ENGINEERING
MANAGER



Index of Drawings

Drawing Number	Drawing Title
General	
1	Cover and Index of Drawings
2	Legend, Abbreviations and Designation Legends
3	General Notes
4	Existing Conditions Plan
5	Proposed Conditions Plan
6	Restoration Plan
7	Profile
8	Details



The LOUIS BERGER GROUP, Inc.
PROGRAM MANAGER



BETA Group, Inc.
Engineers • Planners • Landscape Architects • Scientists
6 Blackstone Valley Place, Lincoln, RI 02865 Ph. 401.333.2382
with offices in: Norwood, MA & Rocky Hill, CT



LEGEND

GENERAL SYMBOLS

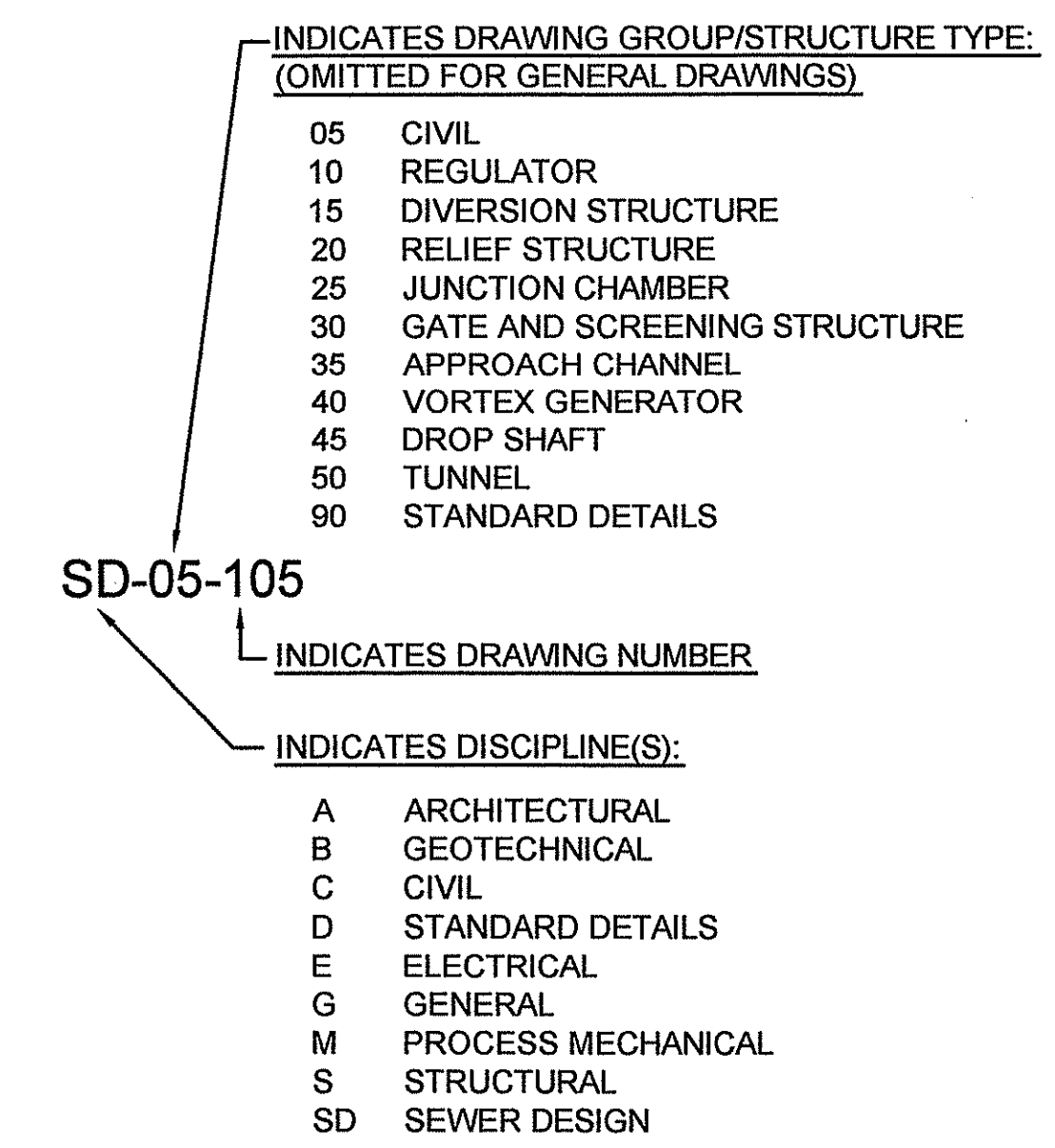
EXISTING	PROPOSED	DESCRIPTION
=====	=====	CURB (TYPE AS NOTED)
=====	=====	BERM
-----	-----	EDGE OF PAVEMENT
□ CB	⊙	CATCH BASIN (OR GUTTER INLET, DROP INLET, CATCH BASIN CURB INLET)
○ EHH	⊙	ELECTRIC HANDHOLE (NUMBER AS NOTED)
⊙	⊙	ELECTRIC MANHOLE
⊙	⊙	TELEPHONE MANHOLE (TYPE NOTED)
⊙	⊙	WATER MANHOLE (TYPE NOTED)
⊙	⊙	SEWER MANHOLE (TYPE NOTED)
⊙	⊙	DRAINAGE MANHOLE (TYPE NOTED)
○ CG	○	GAS GATE / GAS SHUT OFF
○ WG	○	WATER GATE / WATER SHUT OFF
△ HYD	△	HYDRANT
□ FA	■	FIRE ALARM BOX
⊙ LP	⊙	STREET LIGHT POLE
○ UP	○	UTILITY POLE
○	○	SIGN
○ GUY	○	GUY POLE
12" RCP (AB)	10'-12" RCP	ABANDONED UTILITY LINE (TYPE AS NOTED)
D 12" RCP	10'-8" PVC	DRAIN PIPE (SIZE AND SLOPE AS NOTED)
S 12" CS	S	SEWER MAIN (SIZE AS NOTED)
-----	-----	SEWER SERVICE LINE
E-----E	-----	ELECTRIC DUCT
G-----G	-----	GAS MAIN (SIZE AS NOTED)
GS-----GS	-----	GAS SERVICE LINE
W-----W	-----	WATER MAIN (SIZE AS NOTED)
WS-----WS	-----	WATER SERVICE LINE
T-----T	-----	TELEPHONE DUCT (SIZE AS NOTED)
□ MB	⊙	MAIL BOX
-----	-----	WOOD GUARD RAIL, STEEL BEAM GUARD, WOOD OR STEEL POSTS (TYPE AS NOTED)
-----	-----	STEEL GUARD RAIL, STEEL POSTS (TYPE NOTED)
-----	-----	STONE WALL
-----	-----	RETAINING WALL (TYPE NOTED)
□ BND	■ BND	HIGHWAY/PROPERTY BOUND (TYPE AS NOTED)
E.S.H.L.	-----	STATE HIGHWAY LAYOUT LINE (S.H.L.)
Boundary Name	-----	CITY, TOWN, COUNTY OR STATE BOUNDARY LINE
-----	-----	PROPERTY LINE
T.E.B.	T.E.B.	TEMPORARY EASEMENT LINE
P.E.B.	P.E.B.	PERMANENT EASEMENT LINE
-----	-----	CONSTRUCTION BASELINE
-----	-----	SURVEY LINE
-----	-----	TREE (SIZE AND TYPE AS NOTED)
-----	-----	HEDGE
-----	-----	FENCE (SIZE AND TYPE AS NOTED)
-----	-----	EDGE OF WETLAND W/ FLAGGED NUMBER
-----	-----	EDGE OF RIVER
-----	-----	50-FT. PERIMETER WETLAND
-----	-----	100-FT. RIVERBANK WETLAND
-----	-----	200-FT. RIVERBANK WETLAND
-----	-----	WOODED AREA / LIMIT OF CLEARING
-----	-----	SPOT GRADE
-----	-----	SAW CUT LINE
-----	-----	HAY BALES/SILT FENCE

EXISTING	PROPOSED	DESCRIPTION
-----	-----	BUILDING
-----	-----	CONTOUR MAJOR
-----	-----	CONTOUR MINOR
-----	-----	LIMIT OF GRADING

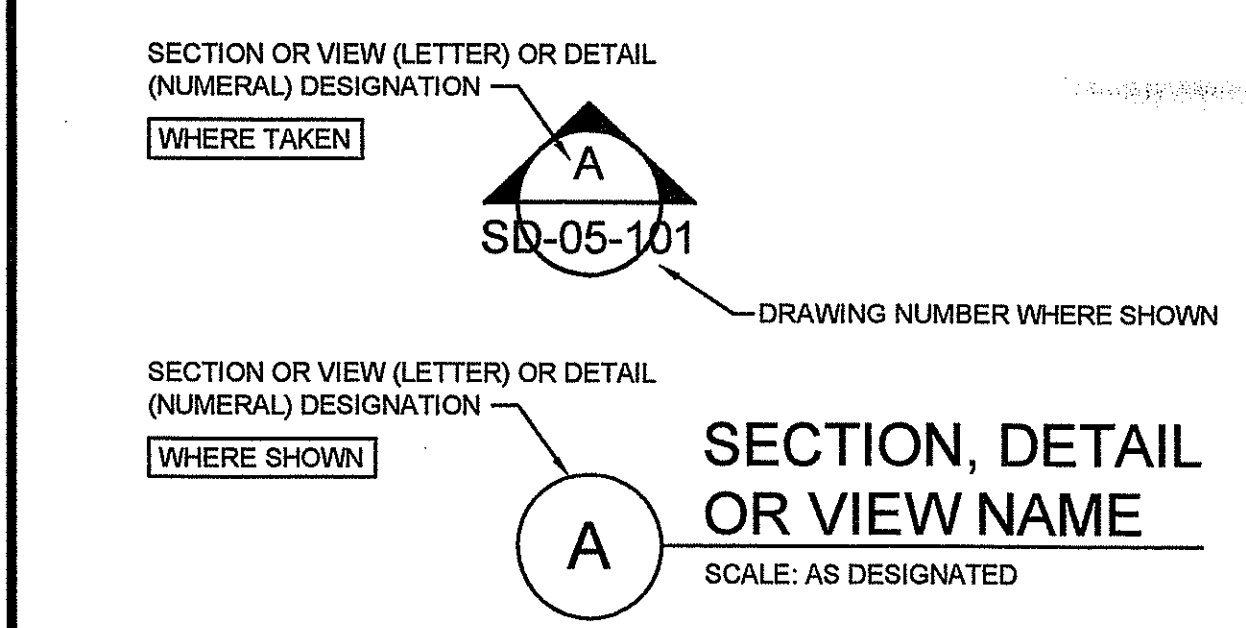
ABBREVIATIONS

GENERAL		UTILITIES	
ABAN.	ABANDON	CB	CATCH BASIN
ADJ.	ADJUST	CBCI	CATCH BASIN WITH CURB INLET
AADT	ANNUAL AVERAGE DAILY TRAFFIC	CIP	CAST IRON PIPE
APPROX.	APPROXIMATE	CIT	CHANGE IN TYPE
B	BASELINE	CL	CLASS (PIPE, CONCRETE, EXCAVATION, ETC.)
BM	BENCH MARK	COND.	CONDUIT
BIT.	BITUMINOUS	CAP	CORRUGATED ALUMINUM PIPE
BB	BITUMINOUS BERM	CMP	CORRUGATED METAL PIPE
BC	BITUMINOUS CURB	CPP	CORRUGATED PLASTIC PIPE
BOS	BOTTOM OF SLOPE	CSP	CORRUGATED STEEL PIPE
BOW	BOTTOM OF WALL	CULV.	CULVERT
BD OR BND	BOUND	CI	CURB INLET
BLDG.	BUILDING	DI	DROP INLET
CEM.	CEMENT	DIP	DUCTILE IRON PIPE
C	CENTER LINE	DMH	DRAIN MANHOLE
CLF	CHAIN LINK FENCE	EL. (OR ELEV.)	ELEVATION
CONC.	CONCRETE	FM	FORCE MAIN
CC	CONCRETE CURB	F&C	FRAME AND COVER
CONT.	CONTINUOUS	F&G	FRAME AND GRATE
CONST.	CONSTRUCTION	GIP	GALVANIZED IRON PIPE
CO.	COUNTY	GG	GAS GATE
CS	COMBINED SEWER PIPE	GI	GUTTER INLET
D	DELTA ANGLE (CENTRAL ANGLE OF HORIZ. CURVE)	HDW	HEADWALL
DWY.	DRIVEWAY	HYD.	HYDRANT
EB	EAST BOUND	INV.	INVERT ELEVATION
EP, EOP	EDGE OF PAVEMENT	LP	LIGHT POLE
EL.	ELEVATION	MH	MANHOLE
ETW	EDGE OF TRAVEL WAY	PVC	POLY-VINYL-CHLORIDE PIPE
EXIST.	EXISTING	PWW	PAVED WATER WAY
FLDSTN	FIELDSTONE	R&D	REMOVE & DISPOSE
FDN.	FOUNDATION	RCP	REINFORCED CONCRETE PIPE (CLASS III UNLESS NOTED)
GAR.	GARAGE	SMH	SEWER MANHOLE
GRAN.	GRANITE	SD	SUBDRAIN
GC	GRANITE CURB	TSV&B	TAPPING SLEEVE, VALVE AND BOX
GE	GRANITE EDGING	TS	TRAFFIC SIGNAL
GRAV.	GRAVEL	TSC	TRAFFIC SIGNAL CONDUIT
GROUN.	GROUND	UP	UTILITY POLE
HOR.	HORIZONTAL	VCP	VITRIFIED CLAY PIPE
HMA	HOT MIX ASPHALT	WG	WATER GATE
HO	HOUSE	WM	WATER METER/WATER MAIN
IP	IRON PIPE	WIP	WROUGHT IRON PIPE
JCT	JUNCTION		
LT.	LEFT		
LP	LOW POINT		
MB	MAIL BOX		
MAX.	MAXIMUM		
MIN.	MINIMUM		
NB	NORTH BOUND		
NTS	NOT TO SCALE		
OC	ON CENTER		
PVMT.	PAVEMENT		
PGL	PROFILE GRADE LINE		
PROJ.	PROJECT		
PROJ. LINE	PROPERTY LINE		
PROP.	PROPOSED		
R	RADIUS OF CURVATURE		
RR	RAILROAD		
R&D	REMOVE & DISPOSE		
REM.	REMOVE		
REMOD.	REMODEL		
RET.	RETAINING		
R&R	REMOVE AND RESET		
R&S	REMOVE AND STACK		

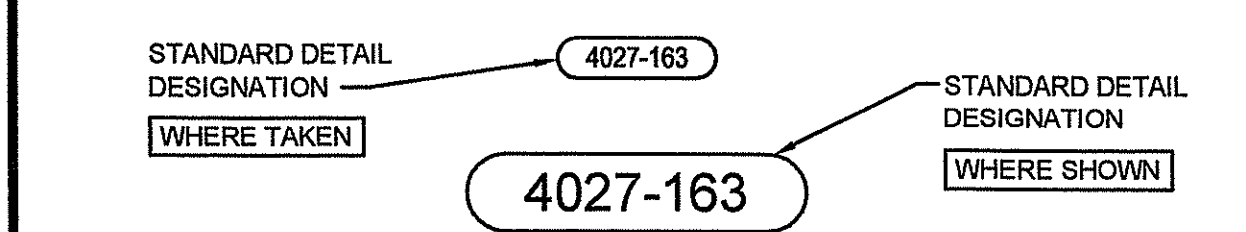
DRAWING NUMBER DESIGNATION



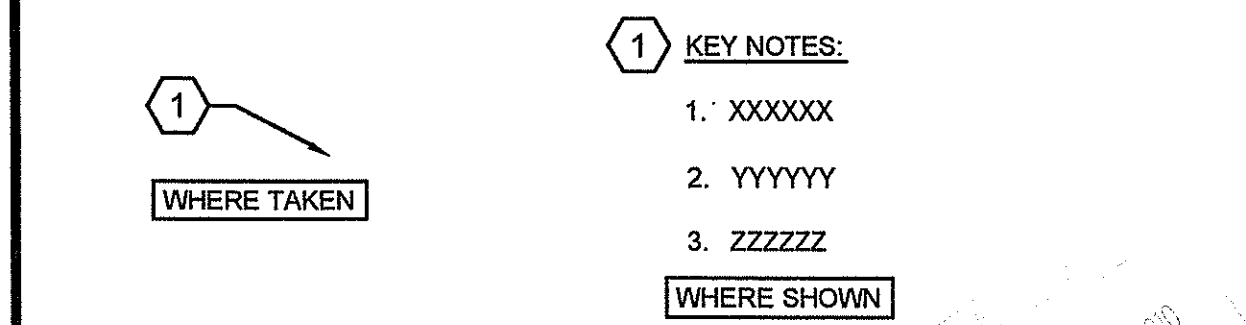
SECTION, DETAIL AND VIEW DESIGNATION



STANDARD DETAIL DESIGNATION



KEY NOTE DESIGNATION



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 3 0 2010 FILE # 10-0107
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Emmanuel D. Wenzel

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION

DRAWN BY: MJZ

DEPT CHECK: NI

PROJECT CHECK: KMA

KEVIN M. AGUIAR
No. 6913
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

REGISTERED PROFESSIONAL ENGINEER

5-20-2010

DATE

BETA Group, Inc.
Engineers • Scientists • Planners
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ph: 401.933.2382 email: BETA@BETA-INC.COM

PARE CORPORATION
ENGINEERS • ARCHITECTS • PLANNERS
9 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-931-1100

THE NARRAGANSETT BAY COMMISSION
SEWER SEPARATION / FLOW MODIFICATION
OF - 037

The LOUIS BERGER GROUP, Inc.
PROGRAM MANAGER

CONTRACT No. 303.06C OUTFALL-037
FILENAME: 3519_037_Perm_Legend.dwg

Legend, Abbreviations and Designation Legends

2 of 8

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GENERAL NOTES

- CONTRACT NO. 07-303.01D JI 1782-05 INCLUDES THE FOLLOWING COMPONENTS: NEW DRAIN PIPE, MANHOLES, AND CATCH BASINS FOR THE OF-037 AREA. ALSO INCLUDED ARE OTHER ASSOCIATED STRUCTURE COMPONENTS THAT ARE IDENTIFIED IN THESE CONTRACT DRAWINGS BUT NOT LISTED ABOVE.
- ALL SURFACE AND NEAR SURFACE WORK SHALL CONFORM TO THE RHODE ISLAND STATE BUILDING CODE AND TO THE CONTRACT DOCUMENTS. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
- CONTRACTOR SHALL REFER TO AND COORDINATE THE PROJECT REQUIREMENTS AS INDICATED ON THE GENERAL, CIVIL, AND STANDARD DETAIL DRAWINGS AND SPECIFICATIONS.
- LIMITS OF CONTRACTS ARE INDICATED ON DRAWINGS AND GENERALLY DELINEATE STRUCTURES, GRADING, TEMPORARY ROADS, DRAINAGE AND PIPING LIMITS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL STRUCTURES AND PIPING AGAINST FLOODING, FLOTATION AND OTHER DAMAGE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES DURING CONSTRUCTION. ALL DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE PROGRAM MANAGER.
- PRIOR TO CLOSING ANY ROADWAY (PARTIALLY OR COMPLETELY), THE CITY OF PROVIDENCE, RIDOT, THE PROGRAM MANAGER, STATE POLICE, MUNICIPAL POLICE AND LOCAL FIRE OFFICIALS SHALL BE NOTIFIED. PUBLIC NOTIFICATIONS AND HEARINGS WILL BE REQUIRED. EACH PROPOSED CLOSING SHALL BE REQUESTED AT LEAST 4 WEEKS PRIOR TO CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY.
- CONTRACTOR SHALL CALL "DIG SAFE" AT (888)-DIG-SAFE, AT LEAST 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO ANY EXCAVATION TO OBTAIN ACCURATE UTILITY LOCATIONS.
- ALL AREAS AND UTILITIES DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHOWN SHALL REQUIRE PRIOR AUTHORIZATION FROM THE PROGRAM MANAGER AND SHALL BE RESTORED AT NO ADDITIONAL COST TO THE NBC.
- SEWER, WATER AND OTHER UTILITIES HAVE BEEN SHOWN ON THE SITE PLANS WHERE INFORMATION IS AVAILABLE. ALL SERVICE CONNECTIONS MUST BE MAINTAINED DURING CONSTRUCTION.
- PIPING WHICH IS EXPOSED DURING EXCAVATION AND THAT IS NOT TO BE RELOCATED, ABANDONED, OR DEMOLISHED SHALL BE SUPPORTED IN PLACE, BRACED, OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL FIELD VERIFY EXISTING STRUCTURE ELEVATIONS AND LOCATIONS, AND EXISTING PIPE INVERT ELEVATIONS AND LOCATIONS PRIOR TO SUBMITTING SHOP DRAWINGS FOR CONNECTING STRUCTURES.
- THESE GENERAL NOTES ARE NOT INTENDED TO REPLACE THE SPECIFICATIONS FOR THIS CONTRACT. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS IN ADDITION TO THE GENERAL NOTES.
- OTHER CONSTRUCTION UPON THIS SITE MAY OCCUR DURING THE COURSE OF THIS CONTRACT BY OTHER CONTRACTORS. THE CONTRACTOR SHALL AT ALL TIMES COORDINATE HIS OPERATIONS WITH THOSE OF THE OTHER CONTRACTORS.
- THE CONTRACTOR SHALL CONFINED ALL ACTIVITIES FOR CONSTRUCTION PURPOSES WITHIN THE INDICATED LIMITS OF WORK AS SHOWN IN THE CONTRACT DRAWINGS. ALL SURFACES DAMAGED OUTSIDE THE INDICATED LIMITS SHALL BE REPLACED IN KIND AT CONTRACTOR'S EXPENSE.
- DUST CONTROL, USING CALCIUM CHLORIDE, SHALL BE PROVIDED FOR ALL SURFACES OF BACK FILLED AREAS, ALL EQUIPMENT ACCESS ROADWAYS AND/OR AS OTHERWISE DIRECTED BY THE OWNER/ENGINEER.

MAPPING

- BASE MAPPING AND TOPOGRAPHY SURVEY PROVIDED BY CHAS. H. SELLS, INC., 90 WORCESTER ROAD CHARLTON, MA 01507.
- COORDINATE VALUES REFER TO NORTH AMERICAN DATUM OF 1983 (NAD 83), RHODE ISLAND STATE PLANE COORDINATE SYSTEM.
- ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
- THE LOCATION, SIZE, AND MATERIAL OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES AND/OR UTILITIES SHOWN ON THESE PLANS ARE FROM THE BEST SOURCES AVAILABLE AT PRESENT AND ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES, UTILITIES OR STRUCTURES ARE SHOWN. EXACT LOCATION TO BE DETERMINED BY CONTRACTOR IN FIELD.
- EXISTING UTILITIES HAVE BEEN PLOTTED FROM THE BEST AVAILABLE DATA AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY ALL UTILITY COMPANIES (PUBLIC AND PRIVATE).
- SUPPLEMENTAL SURVEY PROVIDED BY GREEN INTERNATIONAL AFFILIATES, INC., 239 LITTLETON ROAD WESTFORD, MA 01886. THE SURVEY WAS LIMITED TO THE FOLLOWING: INVERT ELEVATIONS ON SUMMIT AVENUE, BREWSTER STREET, LAURISTON STREET, NASHUA STREET, SIXTH STREET, AND NORTH MAIN STREET. ADDITIONAL TOPOGRAPHIC INFORMATION OBTAINED ALONG SMITHFIELD AVENUE RIGHT-OF-WAY.
- PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY.
- WETLAND EDGES WERE FLAGGED BY PARE CORPORATION ON APRIL 1, 2009. THE FLAGS WERE LOCATED BY FIELD SURVEY PROVIDED BY GREEN INTERNATIONAL INC.

TEST PITS

- THE CONTRACTOR MUST NOTIFY DIG-SAFE PRIOR TO ANY EXCAVATION OR DEMOLITION WORK IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT-OF-WAY OR EASEMENT.
- PRIOR TO THE START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT TEST PITS AS SHOWN, AT LOCATIONS WHERE CONFLICTS BETWEEN EXISTING PIPING OR STRUCTURES AND PROPOSED PIPING MAY OCCUR, AND WHERE DIRECTED BY THE ENGINEER. CONDUCT TEST PITS TO FIELD VERIFY THE EXACT SIZE, MATERIAL, LOCATION, INVERT ELEVATION AND ALIGNMENT (VERTICAL AND HORIZONTAL) OF EXISTING UNDERGROUND PIPES AND STRUCTURES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN PROPOSED PIPING AND EXISTING PIPING PRIOR TO STARTING INSTALLATION OF THE PROPOSED PIPING. OTHER TEST PITS MAY BE REQUIRED DURING THE COURSE OF WORK.
- ALL DIMENSIONS AND JOB RELATED CONDITIONS ARE TO BE VERIFIED BY THE CONTRACTOR. ANY DISCREPANCIES FOUND ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER/ENGINEER AND PROPERLY RESOLVED BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. CONTINUATION WITH OTHER ASPECTS OF THE WORK SHALL PROCEED WITHOUT DELAY OR CAUSE FOR CLAIM.

EXISTING UTILITIES

- EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE PROTECTED AND SUPPORTED AT ALL TIMES BY THE CONTRACTOR. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO INTERFERE AS LITTLE AS POSSIBLE WITH EXISTING UTILITIES. PAYMENT FOR PROVIDING SAID PROTECTION AND SUPPORTS SHALL BE CONSIDERED A PART OF AND PAID FOR UNDER THE APPROPRIATE PIPE OR STRUCTURE ITEMS UNLESS OTHERWISE INDICATED AND/OR DIRECTED BY THE OWNER. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION BY REASON OF DELAY AND/OR INCONVENIENCE IN ADAPTING HIS OPERATIONS ACCORDINGLY.
- WHERE AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION, RELOCATION AND ADJUSTMENT OF WATER, GAS, ELECTRIC, TELEPHONE, CABLE TV, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES AS REQUIRED.
- SUBSURFACE UTILITY ENGINEERING (SUE) INFORMATION INDICATED ON THE PLANS WAS COMPLETED BY MAGUIRE GROUP, PROVIDENCE, RHODE ISLAND. UNLESS OTHERWISE INDICATED ON THE PLANS ALL EXISTING UTILITY INFORMATION SHALL BE CONSIDERED QUALITY LEVEL C, IN ACCORDANCE WITH ASCE 38-02 STANDARDS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

REMOVAL AND DISPOSAL

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS TO BE DISPOSED, INCLUDING BUT NOT LIMITED TO, MANHOLES, CATCH BASINS, PIPING, CONCRETE AND BITUMINOUS PAVEMENT, COBBLES, ROCK, TREES AND STUMPS ETC. ALL GRIT AND DEBRIS FROM THE EXISTING STRUCTURES TO BE DEMOLISHED SHALL BE REMOVED AND DISPOSED OF AS INDICATED IN THE SPECIFICATIONS. ALL DEMOLITION MATERIAL INCLUDING CONCRETE, PIPE, AND BRICK THAT WAS IN CONTACT WITH SEWAGE SHALL BE DISPOSED OF IN ACCORDANCE WITH RI DEM REQUIREMENTS.
- NOTIFY APPROPRIATE UTILITY COMPANY TO TURN OFF AFFECTED SERVICES PRIOR TO REMOVAL AND DISPOSAL. SEAL WATER, SEWER, DRAINAGE AND GAS UTILITIES AND SERVICES AT EXCAVATION LIMITS OR AS REQUIRED, USING PLUGS, CAPS OR SEALS AS NEEDED.
- UNDERGROUND PIPING TO BE ABANDONED AND REMAIN SHALL BE PROPERLY CAPPED UNLESS IT INTERFERES WITH NEW STRUCTURES, PIPES OR AS INDICATED, SPECIFIED AND DIRECTED BY ENGINEER.
- REMOVE AND DISPOSE OF ALL EXISTING BITUMINOUS CONCRETE AND CEMENT CONCRETE, AS REQUIRED.

SEWER AND DRAIN

- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- WHERE EXISTING MATERIALS ARE ENCOUNTERED WHICH, IN THE OPINION OF THE OWNER/ENGINEER ARE UNSUITABLE FOR BEDDING, BACK FILLING OR OTHER INTENDED USE, SUCH MATERIALS SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SUITABLE GRAVEL BORROW, CRUSHED STONE AND/OR SELECTED BORROW, AS DIRECTED BY THE OWNER/ENGINEER AND PAID FOR UNDER THE APPROPRIATE BID ITEMS.
- INVERTS AND DIRECTIONS OF PIPES AND CONDUITS ARE SHOWN FOR THE PURPOSE OF INDICATING THE BASIC PARAMETERS USED DURING THE DESIGN. HOWEVER, MINOR CHANGES IN HORIZONTAL AND VERTICAL LOCATIONS MAY BE REQUIRED DURING CONSTRUCTION AS FIELD CONDITIONS WARRANT. FINAL LOCATIONS OF OTHER PIPES AND/OR CONDUITS SHALL BE DETERMINED IN THE FIELD. ANY CHANGES SHALL BE APPROVED BY THE ENGINEER.
- WHERE PIPING IS TO BE CONNECTED TO EXISTING PIPING OR STRUCTURES, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE (REQUIRED AS A RESULT OF CUTTING THE EXISTING PIPE BACK) TO COMPLETE THE CONNECTION AS REQUIRED.
- EXISTING PIPES RETAINED, BUT WHICH MUST BE REMOVED IN ORDER TO INSTALL NEW PIPES, SHALL BE REINSTALLED OR REPLACED IN KIND.
- SHOULD ANY SEWER OR SEWER SERVICE CONNECTION NEED TO BE RELAYED, THE SEWER SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN, SERVICES OR OTHER WATER FACILITIES. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT POSSIBLE TO ACHIEVE AND MAINTAIN A 10-FOOT MINIMUM HORIZONTAL SEPARATION AS DETERMINED BY THE OWNER/ENGINEER, THE SEWER SHALL BE LAID SUCH THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER LINE. WHEN THE HORIZONTAL ALIGNMENT OR VERTICAL ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENT AS DETERMINED BY THE OWNER/ENGINEER, THE SEWER SHALL BE ENCASED IN CONCRETE (MIN. 6-INCH THICKNESS) FOR AT LEAST 10 FEET EITHER SIDE OF THE AREA NOT COMPLYING WITH THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION AS DIRECTED BY THE OWNER/ENGINEER.
- WHERE SEWERS CROSS ANY EXISTING OR PROPOSED WATER MAINS OR SERVICES, THE SEWER SHALL CROSS BENEATH THE WATER LINES AND LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18-INCHES BETWEEN THE INVERT OF THE WATER LINE AND THE CROWN OF THE SEWER. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENT, THE SEWER AND/OR WATER LINE SHALL BE ENCASED IN CONCRETE (MIN. 6-INCH THICKNESS) FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER LINE, OR AS DETERMINED AND DIRECTED BY THE OWNER/ENGINEER, OR THE WATER LINE SHALL BE RELOCATED TO COMPLY WITH THE REQUIRED MINIMUM DIMENSIONS FOR AN ACCEPTABLE SEPARATION AS STIPULATED ABOVE. RELOCATED WATER LINES SHALL BE APPROVED BY OWNER/ENGINEER AND CONSTRUCTED OF AWWA APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE AND DESIGNED FOR THE REQUIRED WATER SERVICE PRESSURE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER LINE JOINTS.
- EXISTING CATCH BASINS TO BE CONNECTED TO THE PROPOSED DRAIN SHALL BE CLEANED OF ALL SEDIMENT. SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- DRAIN CONNECTIONS FROM EXISTING CATCH BASINS TO COMBINED SEWER SHALL BE ABANDONED BY CONSTRUCTING A MASONRY PLUG (BULKHEAD) IN THE EXISTING DRAIN, AS DIRECTED BY THE ENGINEER. WHERE THE EXISTING DRAIN CONNECTION DISCHARGES TO A COMBINED SEWER MANHOLE THE MASONRY BULKHEAD SHALL ALSO BE INSTALLED AT THE COMBINED SEWER MANHOLE.
- DRAIN CONNECTION FROM EXISTING AND PROPOSED CATCH BASINS TO PROPOSED DRAIN SHALL BE 12-INCH CPP OR 15-INCH CPP. DRAIN CONNECTIONS TO BE INSTALLED AT A MINIMUM SLOPE OF 0.01 FT/FT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. FOR INSTANCES WHERE 3 FT OF COVER IS NOT AVAILABLE, 10-INCH DI PIPE SHALL BE INSTALLED AT A MINIMUM SLOPE OF 0.01 FT/FT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- SEWER AND DRAIN SERVICE CONNECTIONS ARE LOCATED FOR ESTIMATING PURPOSES ONLY, EXACT LOCATIONS TO BE DETERMINED IN FIELD.
- FOR CONSTRUCTION OF SAID SEWERS, DRAINS, AND WATER LINES THE TOE OF ROADWAY OR CURB LINE SHALL BE THE LIMIT OF DISTURBANCE FOR CONSTRUCTION OUTSIDE OF STREET RIGHT-OF-WAYS. THE LIMITS OF DISTURBANCE ARE NOTED ON THE PLANS.
- UNLESS OTHERWISE STIPULATED, ALL DRAINAGE PIPE WILL BE CLASS II REINFORCED CONCRETE PIPE (RCP) OR HDPE (CPP) AS INDICATED ON THE DRAWINGS, AND UNLESS SPECIFICALLY APPROVED BY THE ENGINEER, MANHOLES OR CATCH BASINS SHALL BE SOLID BLOCK OR PRECAST CONCRETE STRUCTURES CONFORMING TO THE LATEST RIDOT STANDARDS.

WATER

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH PROVIDENCE WATER AND EXERCISE ALL WATER VALVES THAT WILL BE AFFECTED BY THE WORK, TO INSURE PROPER SHUT DOWN OF VALVES WHEN NECESSARY.
- MINIMUM WATER PIPE COVER SHALL BE 4'-6" EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
- EXCEPT WHERE OTHERWISE NOTED, 18" MINIMUM VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN THE EXTERIOR OF WATER MAINS AND OTHER UTILITIES.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW WATER SERVICES OF THE SAME SIZE FOR EACH SERVICE IMPACTED BY THE WATER MAIN REPLACEMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL WATER SERVICES, WHETHER INDICATED OR NOT ON THE PLANS.
- THE CONTRACTOR SHALL ASSUME ONE WATER SERVICE PER PROPERTY, UNLESS OTHERWISE INDICATED ON THE PLANS.
- WATER SERVICE CONNECTIONS SHALL BE PROTECTED THROUGHOUT THE WORK. WATER SERVICE CONNECTIONS THAT ARE CUT FOR THE INSTALLATION OF THE SEWER OR DRAIN SHALL BE REPLACED FROM THE MAIN TO THE CURB, INCLUDING NEW CORPORATION AND CURB STOP. REPLACEMENT OF THE WATER SERVICE SHALL BE CONSIDERED PART OF THE WORK AND SHALL NOT BE THE BASIS FOR ANY CLAIM AGAINST THE OWNER.
- WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE WITH MECHANICAL JOINTS. ALL WATER UTILITY IMPROVEMENTS SHALL COMPLY WITH THE AMERICAN WATER WORKS ASSOCIATION STANDARDS AND THE PROVIDENCE WATER SUPPLY BOARD SPECIFICATIONS.
- PIPE REPAIR CLAMPS SHALL BE MADE OF STAINLESS STEEL AND PROVIDED WITH TYPE 304 STAINLESS STEEL BOLTS AND NUTS.
- THE COMPLETED POTABLE WATER SERVICE SHALL BE SATISFACTORILY CLEANED, CHLORINATED, AND PRESSURE TESTED PER THE PROVIDENCE WATER SUPPLY BOARD SPECIFICATIONS.
- THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT HIS/HER TEMPORARY WATER BYPASS PLAN TO THE ENGINEER FOR REVIEW AND MAKE ANY CHANGES TO THE BYPASS PLAN AS DEEMED NECESSARY BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ANY DWELLING'S/BUILDING'S WATER SERVICE AFFECTED BY THE PROPOSED WORK BE PROVIDED WITH TEMPORARY WATER SERVICE.

SITE RESTORATION

- EXCEPT WHERE NOTED BY PROPOSED CONTOUR LINES, ALL FINAL CONTOUR LINE ELEVATIONS SHALL BE THE SAME AS EXISTING CONTOUR LINE ELEVATIONS.
- JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDDED.
- ALL CURBING DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE RESET, RESTORED OR REPLACED IN KIND, IF DAMAGED, INCLUDING CEMENT CONCRETE, IN ACCORDANCE WITH THE CITY OF PROVIDENCE AND RIDOT, REGARDLESS OF ITS PROXIMITY TO THE DRAIN OR SEWER, AS DIRECTED BY THE OWNER/ENGINEER. PAYMENT SHALL BE CONSIDERED PART OF AND PAID FOR UNDER THE APPROPRIATE PIPE ITEMS AS APPLICABLE UNLESS OTHERWISE INDICATED ON PLANS.
- ALL SIDEWALK AND WHEELCHAIR RAMP AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IN CONFORMANCE TO THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS AND THE ARCHITECTURAL ACCESS BOARD (AAB) REQUIREMENTS AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL REMOVE AND RESET ALL SIGNS DISTURBED DURING CONSTRUCTION, IN CONFORMANCE WITH THE RIDOT STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS.
- ALL GRASSED AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE LOAMED AND SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS. FINAL RESTORATION SHALL BE EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION AS DETERMINED SOLELY BY THE OWNER/ENGINEER. PAYMENT SHALL BE CONSIDERED PART OF AND PAID FOR UNDER THE APPROPRIATE PIPE ITEMS AS APPLICABLE UNLESS OTHERWISE INDICATED.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

MAINTENANCE OF EXISTING FLOWS

- FLOW IN ALL SANITARY SEWERS, COMBINED SEWERS AND DRAINS SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE BYPASS EQUIPMENT AS NECESSARY TO COMPLETE WORK. SEE SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY EQUIPMENT, PIPING, FITTINGS AND APPURTENANCES NECESSARY TO COMPLETE THIS CONTRACT.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL TEMPORARY BYPASS-LINES UNTIL THE MODIFICATIONS AND CONSTRUCTION ARE COMPLETE.

EXCAVATION SUPPORT, DEWATERING

- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WELL POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
- TRENCH DEWATERING IS ANTICIPATED FOR THIS WORK AND DISCHARGE OF FINES OR SEDIMENTS IS NOT PERMITTED. SEE SPECIFICATION AND STANDARD DETAILS FOR SILTATION BASIN/SEDIMENT CONTROL TRAP INSTALLATION/USAGE.
- DISCHARGE FROM DEWATERING OPERATIONS SHALL NOT BE DIRECTLY DISCHARGED INTO THE COMBINED SEWER. ALL CONSTRUCTION DEWATERING SHALL HAVE SILT AND SEDIMENT REMOVED PRIOR TO DISCHARGE (SEE SPECIFICATIONS).

GAS MAIN RELOCATION

- THE CONTRACTOR SHALL COORDINATE WITH NATIONAL GRID FOR THE RELOCATIONS OF THE EXISTING GAS LINES.
- CONTRACTOR SHALL COORDINATE AND SCHEDULE REQUIRED GAS WORK DIRECTLY WITH THE GAS COMPANY.
- GAS COMPANY IS RESPONSIBLE FOR PROVIDING AND INSTALLING PIPE AND ASSOCIATED MATERIALS.

TELEPHONE AND FIBER OPTIC LINE RELOCATION

- THE CONTRACTOR SHALL COORDINATE DIRECTLY WITH VERIZON AND VERIZON BUSINESS FOR THE RELOCATIONS OF THE TELEPHONE OR FIBER OPTIC LINES.
- VERIZON AND VERIZON BUSINESS SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THE TELEPHONE OR FIBER OPTIC WORK AS INDICATED ON THE PLANS.

SOIL EROSION AND SEDIMENTATION CONTROL

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAY BALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. UPON PERMANENT STABILIZATION OF ALL DISTURBED SOILS, THE TEMPORARY EROSION AND/OR SEDIMENT CONTROLS SHALL BE REMOVED.
- ALL EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE E&S CONTROLS SHALL BE CLEANED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION OPERATIONS AND UNTIL ALL DISTURBED AREAS ARE STABILIZED AFTER CONSTRUCTION IS COMPLETE. E&S CONTROLS SHALL BE INSPECTED AND CLEANED AFTER ALL STORM EVENTS AND UPON THE REQUEST OF THE OWNER OR ENGINEER. CONTRACTOR SHALL MAINTAIN AN ADEQUATE SUPPLY OF HAY BALES ON SITE TO BE INSTALLED IN AREAS WHERE EXISTING E&S CONTROLS HAVE FAILED OR AS DETERMINED NECESSARY BY THE ENGINEER. NO WORK OR STORAGE OF CONSTRUCTION EQUIPMENT WILL BE PERMITTED OUTSIDE THE LIMIT OF DISTURBANCE.
- PROVIDE SOIL EROSION AND SEDIMENT CONTROL MEASURES AT PERIMETERS OF ALL EXCAVATION AREAS, DISTURBED SURFACES AND AT ALL CATCH BASINS ADJACENT TO DISTURBED AREAS. PROVIDE SILT FENCING AND HAY BALES IN ACCORDANCE WITH DIVISION 2 SPECIFICATION REQUIREMENTS AND AS SHOWN ON THE CIVIL DETAIL DRAWINGS.
- ALL MITIGATIVE FEATURES, FACILITIES AND SYSTEMS OF TREATMENT AND CONTROL THAT MAY BE INSTALLED OR USED SHALL BE PROPERLY MAINTAINED TO PREVENT HARM TO THE ADJACENT WETLAND.

TREE PRESERVATION

- PROTECT TREES WITHIN THE PUBLIC RIGHT-OF-WAY BY INSTALLING WOOD FRAMING AROUND TREES, AS INDICATED IN THE CONTRACT DRAWINGS.
- PRIOR TO CONSTRUCTION DETERMINE REQUIRED CLEARANCES AND CONTRACT LICENSED ARBORIST TO PRUNE TREES.
- BRANCHES OR LIMBS DAMAGED DURING CONSTRUCTION SHALL BE CUT BACK TO THE TRUNK OR A LATERAL BRANCH.
- MAKE EVERY EFFORT TO MAINTAIN EXCAVATION ACTIVITIES OUTSIDE LIMITS OF THE TREE CANOPY.
- ROOTS LARGER THAN 1.5" IN DIAMETER ENCOUNTERED IN EXCAVATIONS SHALL BE CUT OFF SQUARELY USING A SHARP ARBORIST SAW.
- MAINTAIN STORAGE OF EQUIPMENT AND MATERIALS OUTSIDE THE DISTANCE OF THE RADIUS OF THE TREE CANOPY.

SIDEWALK AND PAVEMENT RESTORATION

- ALL EXISTING PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE IMMEDIATELY REPAIRED WITH TEMPORARY PAVEMENT AS DETAILED.
- ALL WALKS SHALL HAVE A CROWN OR CROSS-SLOPE OF 1/8" PER FOOT MINIMUM.
- ALL PAVEMENT MARKINGS SHALL BE REPLACED IN KIND, OR IN ACCORDANCE WITH SPECIFICATIONS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 26 2010 FILE # 10-0107
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Matthew D. Weneck

APPROVED
MAY 26 2010

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION

DRAWN BY: MJZ
DEPT CHECK: NI
PROJECT CHECK: KMA

KEVIN M. AGUIAR
No. 6913
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REGISTERED PROFESSIONAL ENGINEER
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THE NARRAGANSETT BAY COMMISSION
SEWER SEPARATION / FLOW MODIFICATION
OF - 037

The LOUIS BERGER GROUP, Inc.
PROGRAM MANAGER

CONTRACT No. 303.06C
FILENAME: 3519_037 Perm Gen Notes.dwg

OUTFALL-037

General Notes

3 of 8

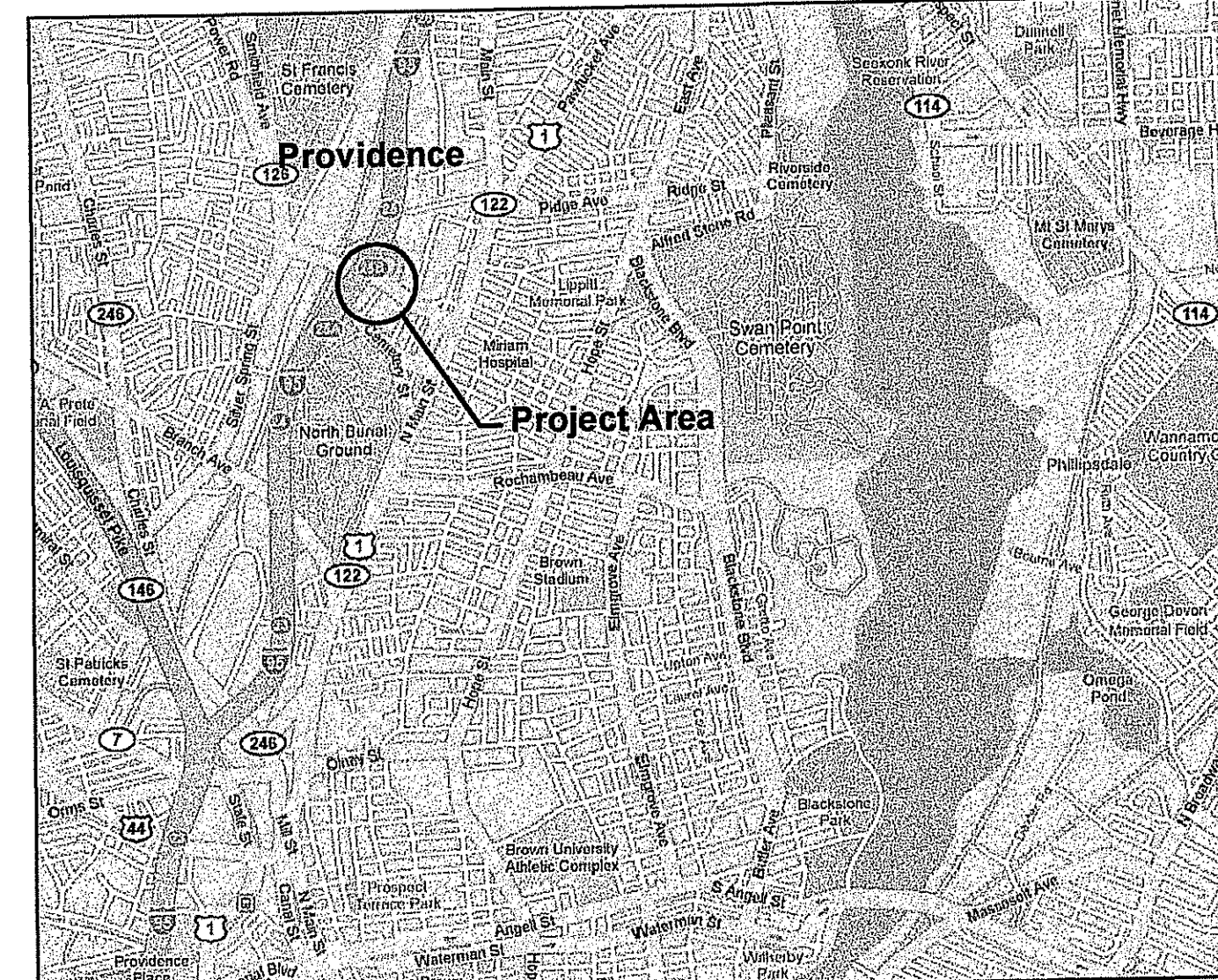
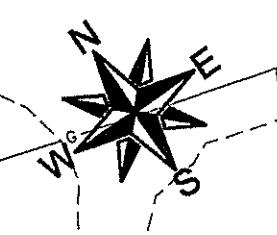
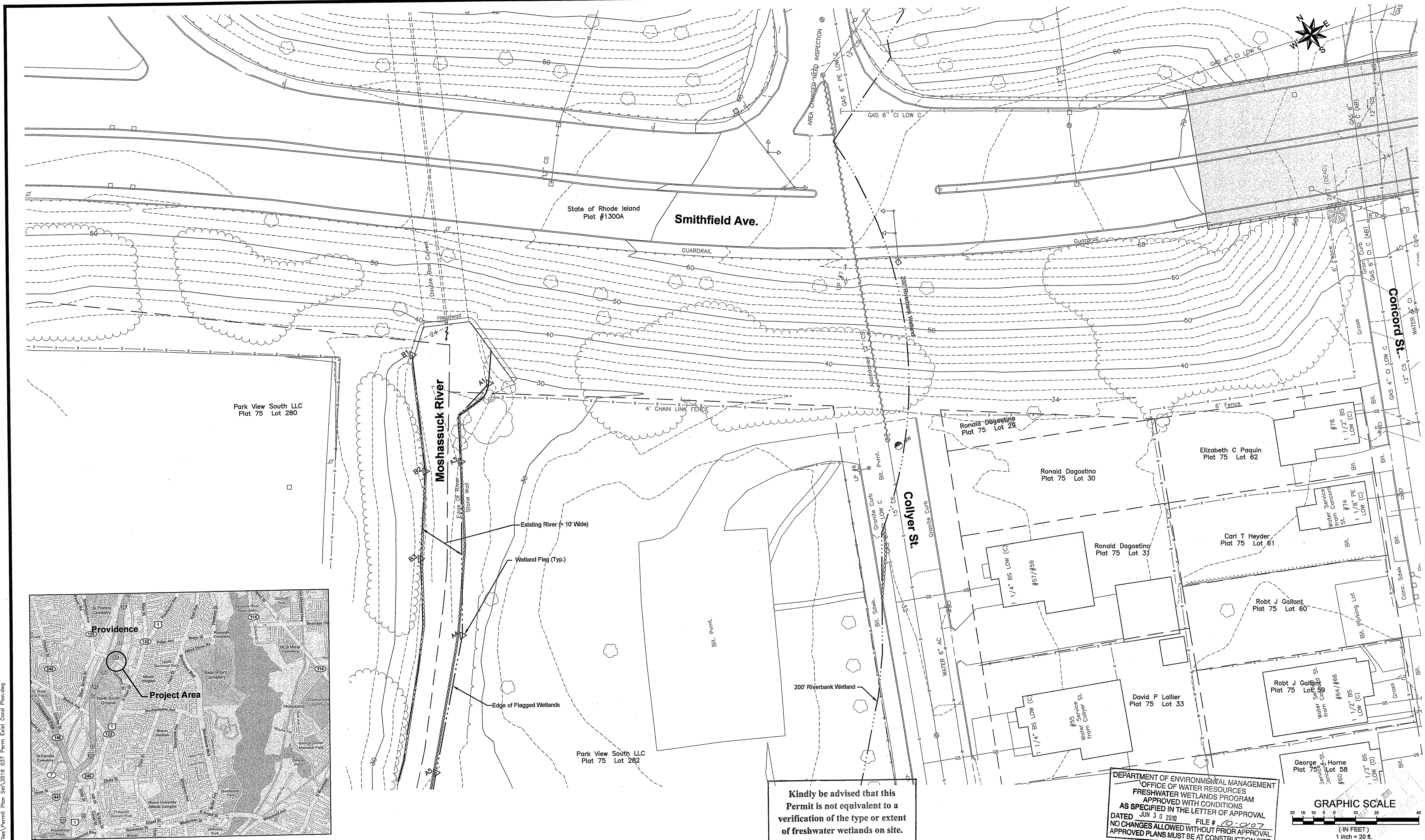
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OUTFALL-037

General Notes

3 of 8

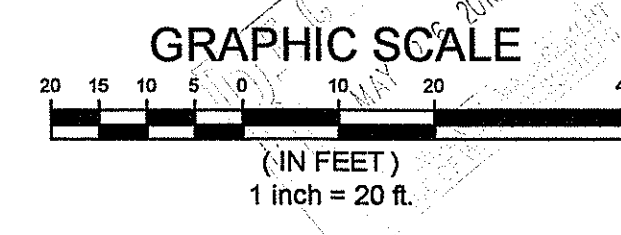
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Locus Map
Not to Scale

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
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NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
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As Shown

DRAWN BY:
MJZ
DEPT CHECK:
NI
PROJECT CHECK:
KMA

KEVIN M. AGUIAR
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Kevin Aguiar
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5-20-2010
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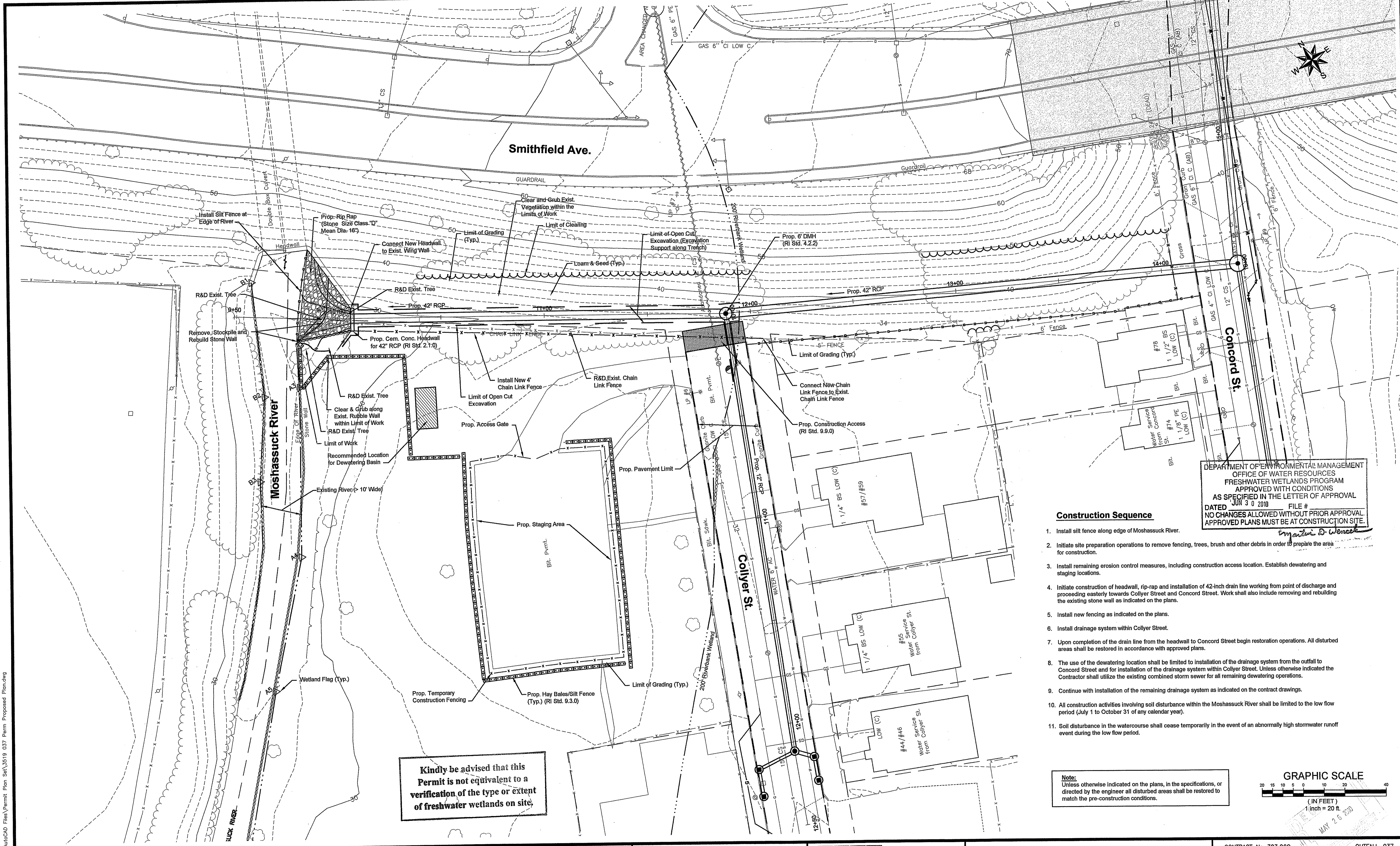
THE NARRAGANSETT BAY COMMISSION
SEWER SEPARATION / FLOW MODIFICATION
OF - 037

The LOUIS BERGER GROUP, Inc.
PROGRAM MANAGER

CONTRACT No. 303,06C QUITFALL-037
FILENAME: 3519 037 Perm Exist Cond Plan.dwg

Existing Conditions Plan

4 of 8

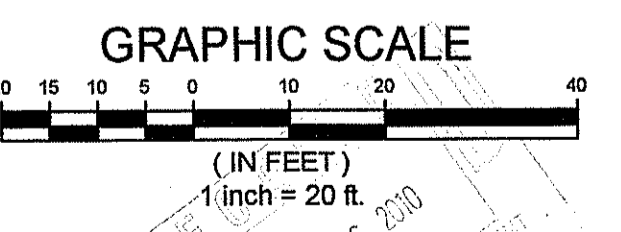


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Construction Sequence

1. Install silt fence along edge of Moshassuck River.
2. Initiate site preparation operations to remove fencing, trees, brush and other debris in order to prepare the area for construction.
3. Install remaining erosion control measures, including construction access location. Establish dewatering and staging locations.
4. Initiate construction of headwall, rip-rap and installation of 42-inch drain line working from point of discharge and proceeding easterly towards Collyer Street and Concord Street. Work shall also include removing and rebuilding the existing stone wall as indicated on the plans.
5. Install new fencing as indicated on the plans.
6. Install drainage system within Collyer Street.
7. Upon completion of the drain line from the headwall to Concord Street begin restoration operations. All disturbed areas shall be restored in accordance with approved plans.
8. The use of the dewatering location shall be limited to installation of the drainage system from the outfall to Concord Street and for installation of the drainage system within Collyer Street. Unless otherwise indicated the Contractor shall utilize the existing combined storm sewer for all remaining dewatering operations.
9. Continue with installation of the remaining drainage system as indicated on the contract drawings.
10. All construction activities involving soil disturbance within the Moshassuck River shall be limited to the low flow period (July 1 to October 31 of any calendar year).
11. Soil disturbance in the watercourse shall cease temporarily in the event of an abnormally high stormwater runoff event during the low flow period.

Note:
 Unless otherwise indicated on the plans, in the specifications, or directed by the engineer all disturbed areas shall be restored to match the pre-construction conditions.



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

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION

As Shown

DRAWN BY:
MJZ
 DEPT CHECK:
NI
 PROJECT CHECK:
KMA

KEVIN M. AGUIAR
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 REGISTERED PROFESSIONAL ENGINEER
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THE NARRAGANSETT BAY COMMISSION
 SEWER SEPARATION / FLOW MODIFICATION
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 The LOUIS BERGER GROUP, Inc.
 PROGRAM MANAGER

CONTRACT No. 303.06C
 FILENAME: 3519_037_Perm_Proposed_Plan.dwg
Proposed Conditions Plan
 5 of 8

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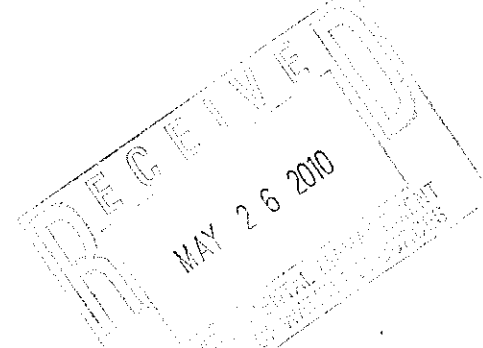
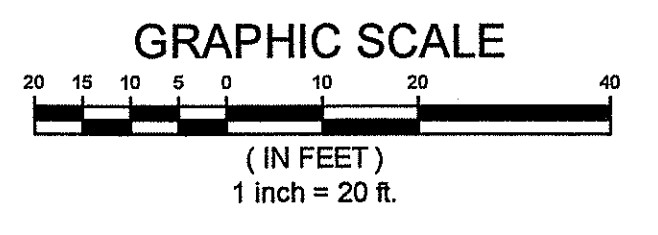


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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Kevin M. Aguiar
 Kevin M. Aguiar
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

- Restoration Plan Notes**
- All disturbed areas within the 200' Riverbank Wetland, with the exception of existing paved areas, shall receive 4-inches of loam (minimum depth) and firmed to form a good seed bed.
 - The seed mixture shall consist of a New England Erosion Control/Restoration Mix and seeded at a rate of 35 bulk pounds per acre.
 - Unless hydroseeded, the seeded area shall be dragged with a chain or tine harrow and firmed to ensure good seed to soil contact.
 - A light mulching of weed free straw and 10-10-10 fertilization shall occur.
 - The disturbed Riverbank Wetland shall be planted with Staghorn sumac (*Rhus typhina*) and northern bayberry (*Myrica pensylvanica*) spaced 6-foot on center, and Red maple (*Acer rubrum*) 10-foot on center. The shrub and tree shall consist of #2 container (gal.) and 6-7 BB, respectively.
 - The planting window is April 1 to May 15 and all shrubs shall conform to the material specification requirements of the American Standard for nursery stock (1986 or later edition).
 - Plant pits shall be dug approximately four inches wider than the stock size. Prior to placement of the plant in the planting hole, a 20-gram Agriform fertilizer tablet (20-10-5) shall be placed in the bottom of the planting hole. Backfill soil materials shall be the same as excavated for planting pits.



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DRAWN BY:
M.J.Z

DEPT CHECK:
NI

PROJECT CHECK:
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KEVIN M. AGUIAR
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THE NARRAGANSETT BAY COMMISSION
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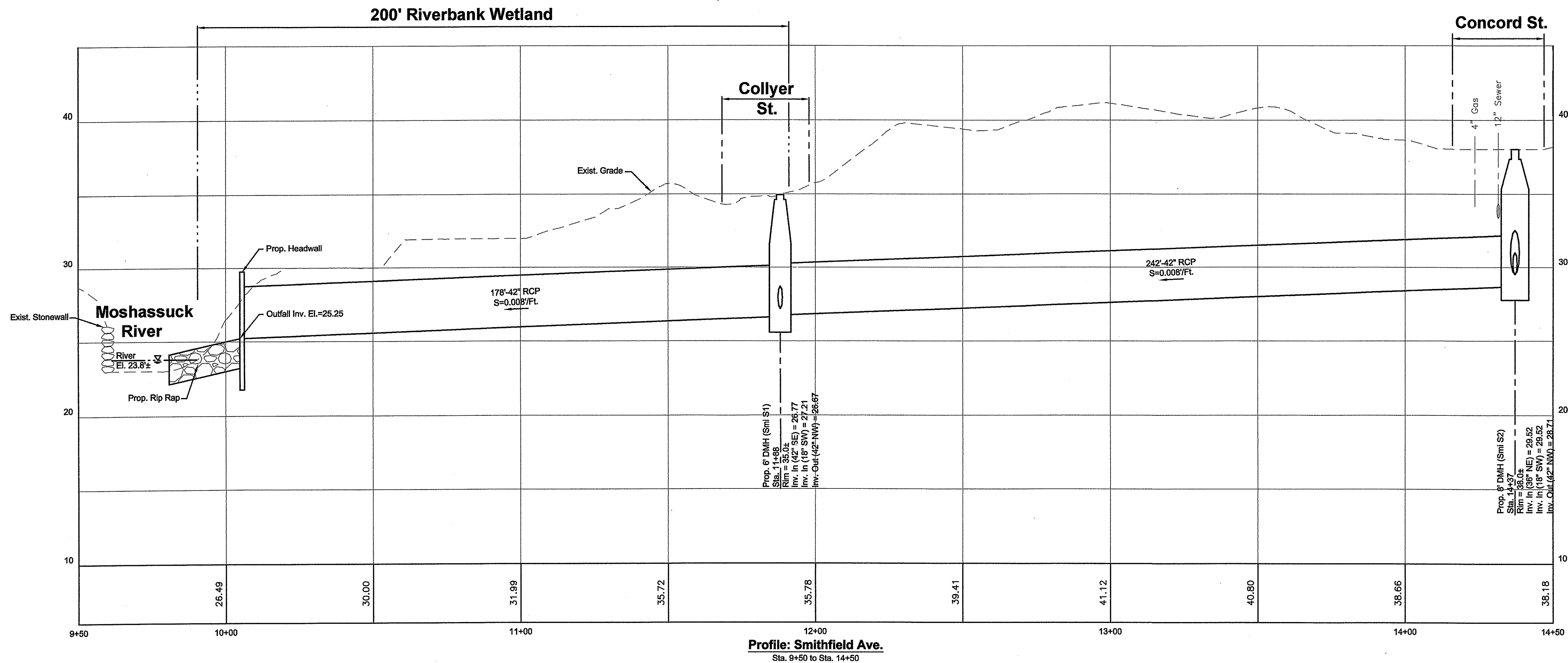
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CONTRACT No. 303.06C
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Restoration Plan

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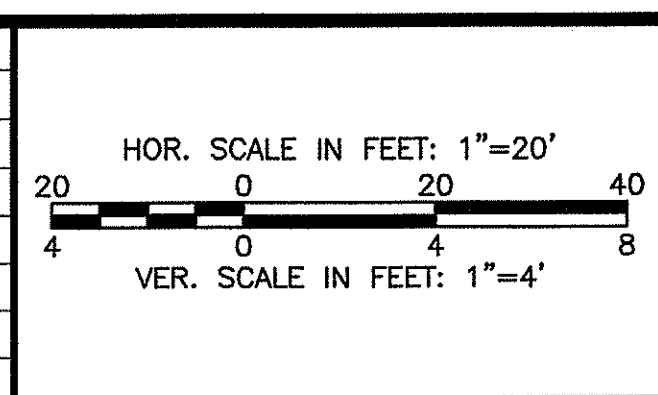
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Emmanuel D. Wenzel

RECEIVED
MAY 26 2010

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION



DRAWN BY:
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PROJECT CHECK:
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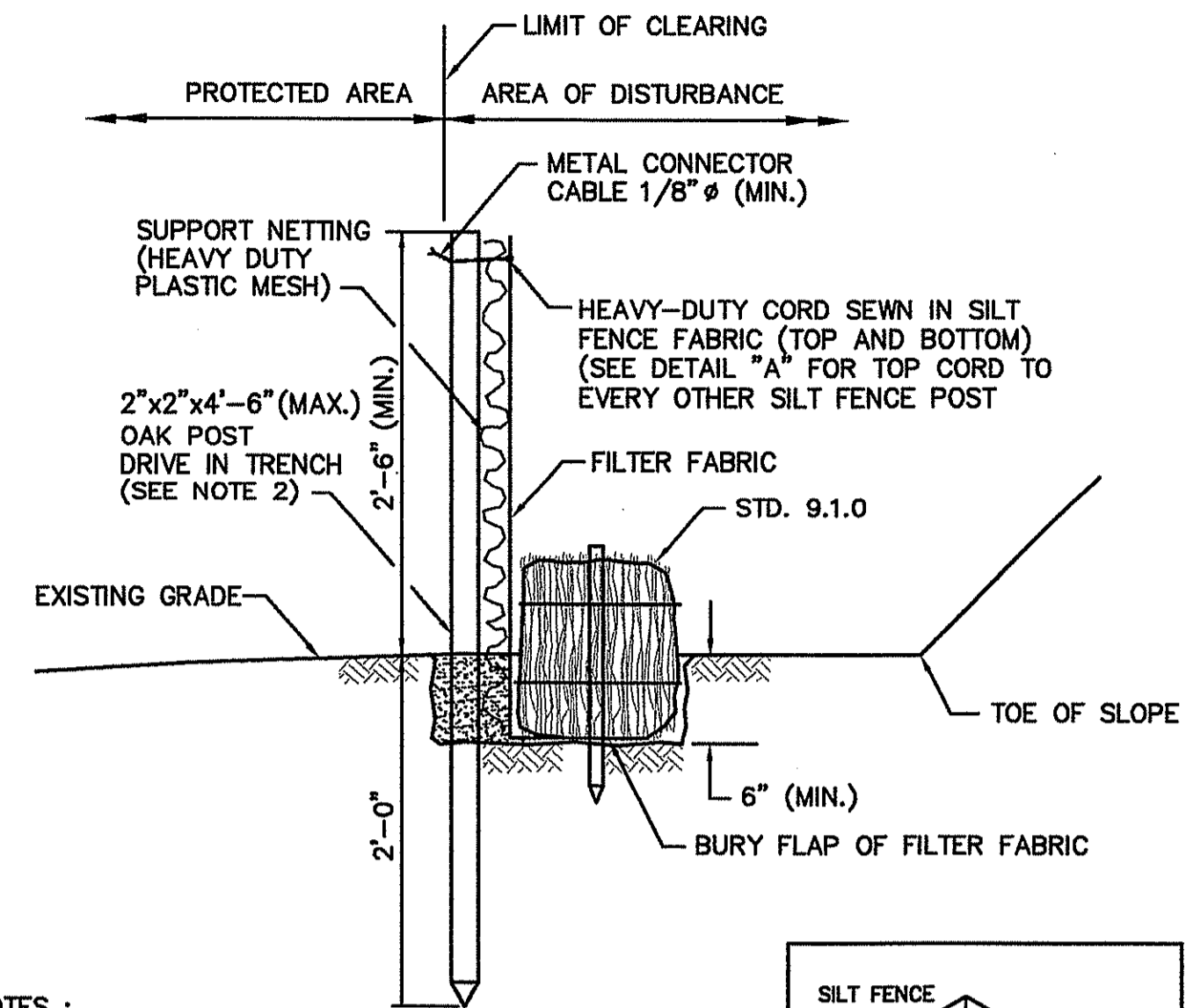
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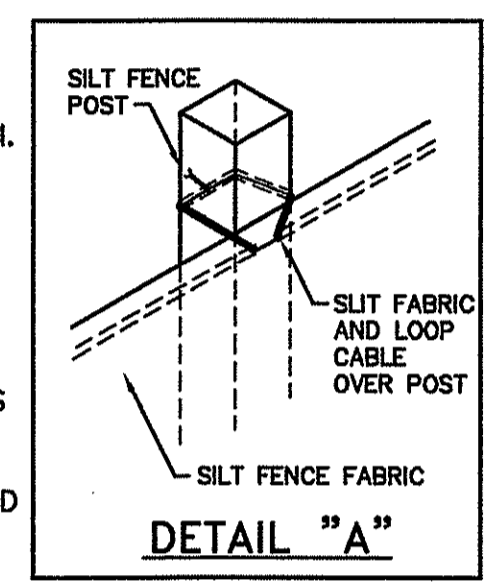
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**Smithfield Ave.
Profile**

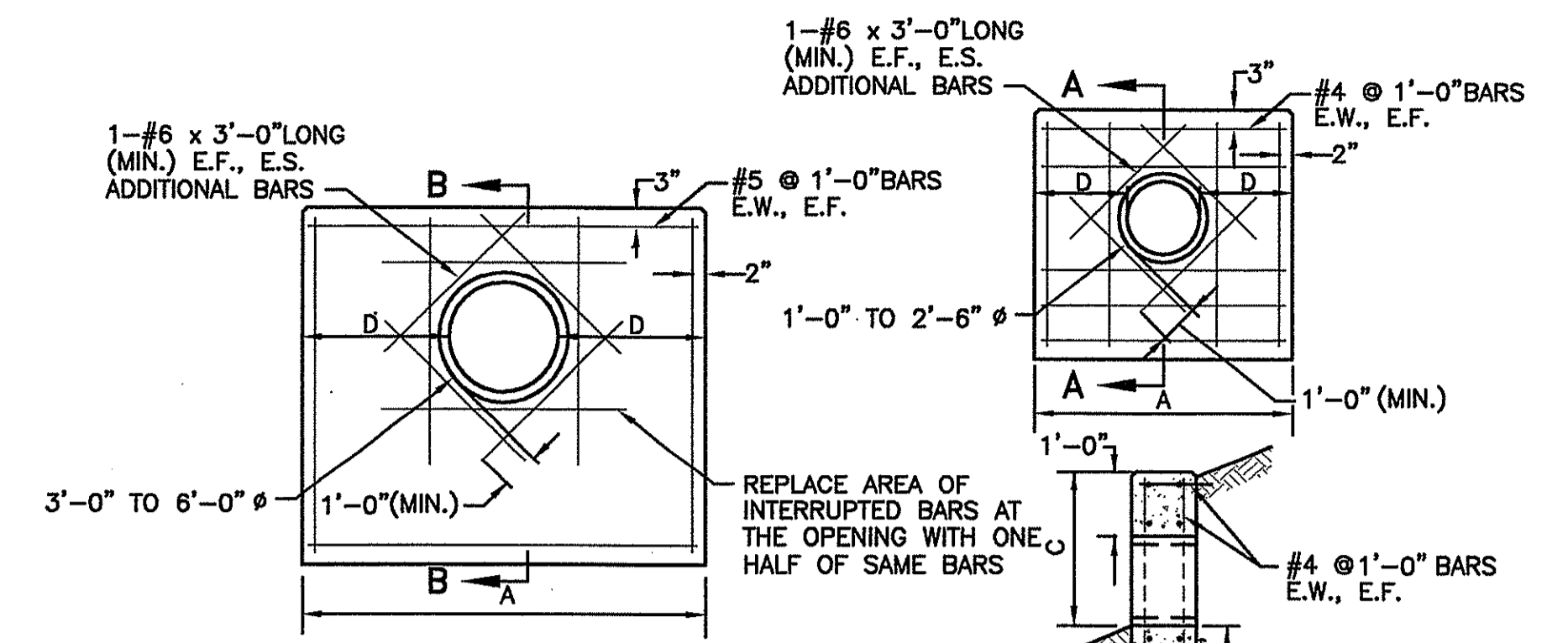
7 of 8



- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6" (MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



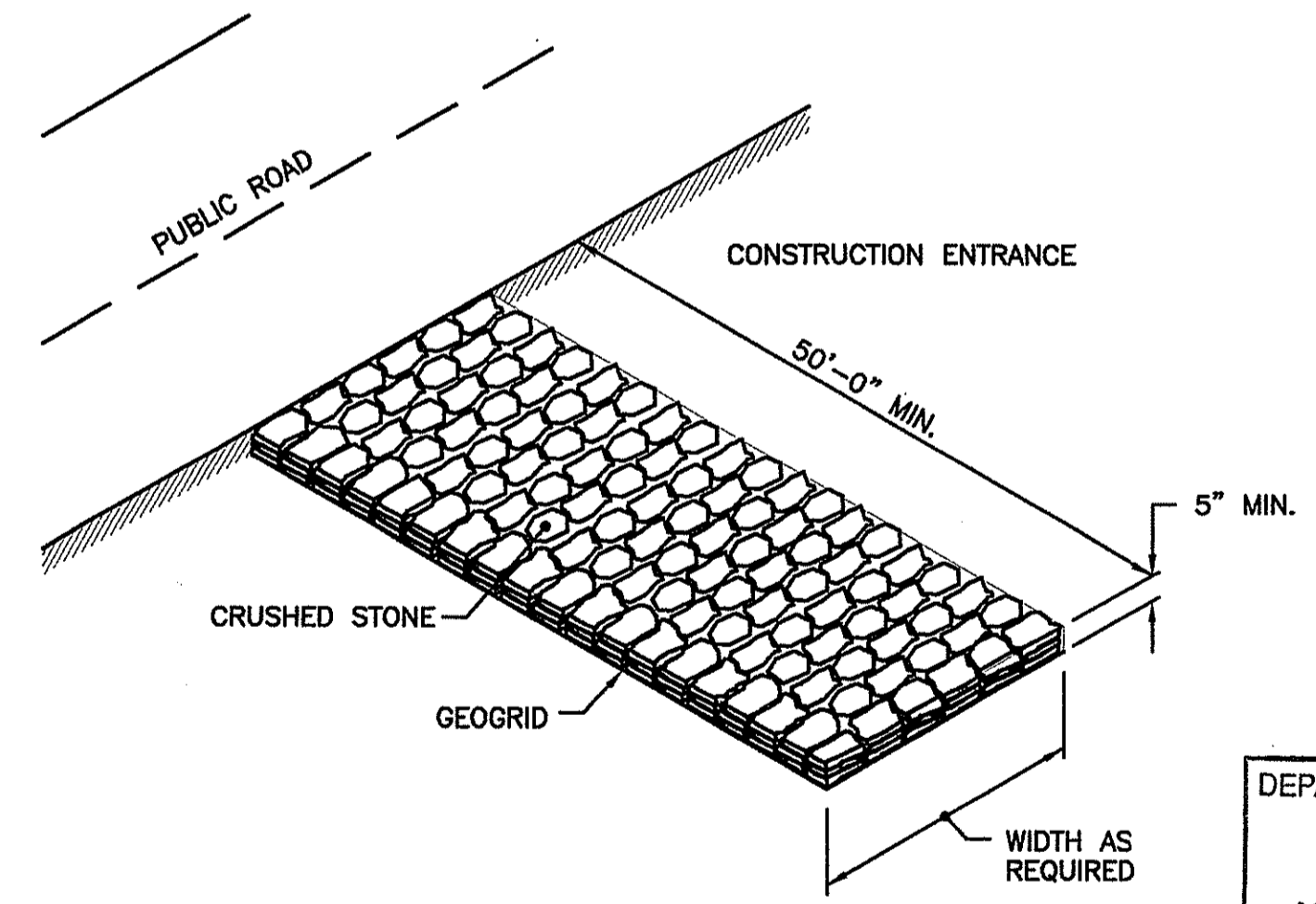
BALED HAY EROSION CHECK AND SILT FENCE COMBINED
NOT TO SCALE



DIAMETER OF PIPE	A	C	D	E	CUL. FT. CONCRETE
1'-0"	3'-0"	2'-2"	1'-0"	-	13.2
1'-3"	3'-9"	2'-5"	1'-3"	-	17.2
1'-6"	4'-6"	2'-8"	1'-6"	-	21.5
1'-9"	5'-3"	2'-11"	1'-9"	-	26.0
2'-0"	6'-0"	3'-2"	2'-0"	-	30.9
2'-3"	6'-9"	3'-6"	2'-3"	-	36.5
2'-6"	7'-6"	3'-9"	2'-6"	-	42.0
3'-0"	9'-6"	4'-0"	3'-0"	1'-5"	84.1
3'-6"	11'-0"	4'-6"	3'-6"	1'-7"	111.8
4'-0"	12'-8"	5'-0"	4'-0"	1'-9"	146.5
4'-6"	14'-4"	5'-6"	4'-6"	1'-11"	186.3
5'-0"	16'-0"	6'-0"	5'-0"	2'-1"	232.6
5'-6"	17'-8"	6'-6"	5'-6"	2'-3"	284.9
6'-0"	19'-4"	7'-0"	6'-0"	2'-5"	343.6

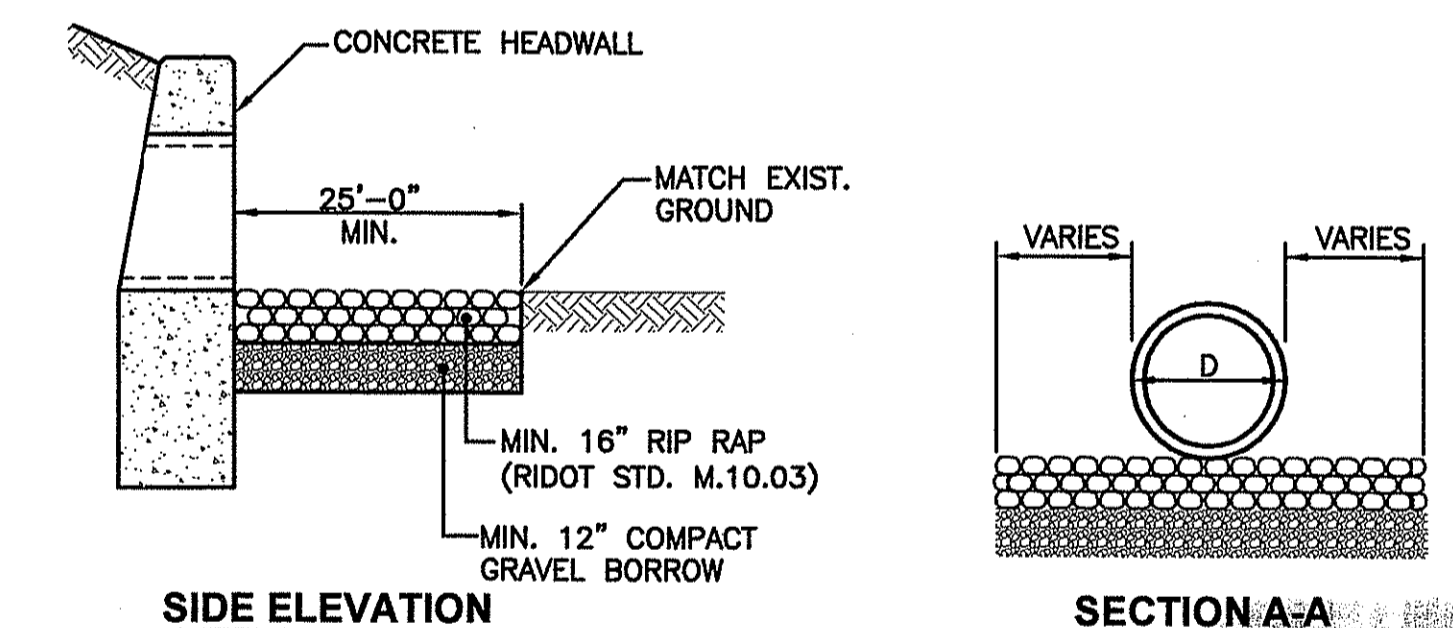
- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
 2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
 3. 1'-0" COMPACTED GRAVEL UNDER HEADWALL.
 4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

CONCRETE HEADWALLS FOR PIPE CULVERTS
NOT TO SCALE



NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

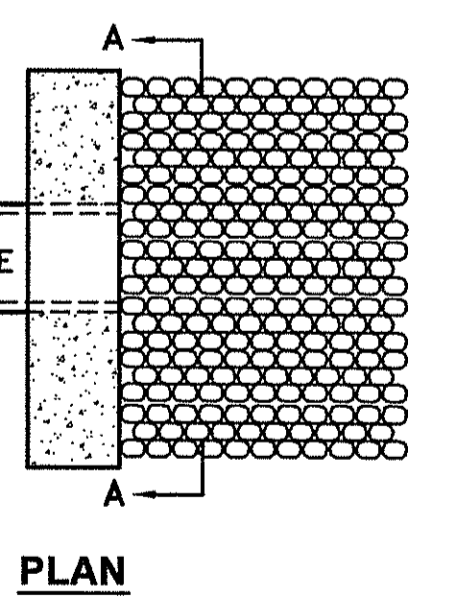
CONSTRUCTION ACCESS
NOT TO SCALE



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUN 30 2010 FILE # 10-0107
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Ernest D. Wenzel

RIP-RAP AT OUTFALL DETAIL
NOT TO SCALE



N:\3500a\3519 NBC Final Design\AutoCAD Files\Permit Plan Set\3519 037 Permit Details.dwg

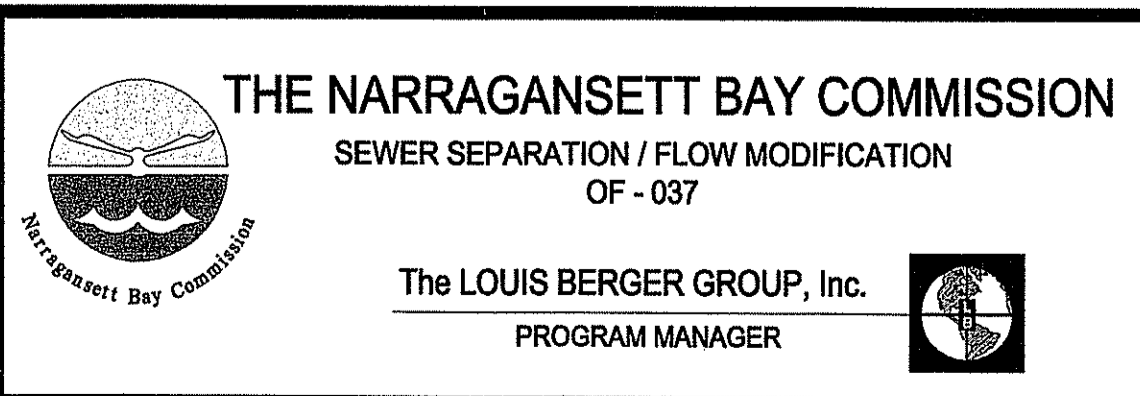
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION

As Shown

DRAWN BY:
MJZ
DEPT CHECK:
NI
PROJECT CHECK:
KMA



Kevin M. Aguiar
REGISTERED PROFESSIONAL ENGINEER
DATE: 5/20/2010



CONTRACT No. 303.06C
FILENAME: 3519 037 Permit Details.dwg
OUTFALL-037
Details
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