

# SITE PLANS FOR A PROPOSED



# Pawtucket Credit Union

AP 11 LOTS 72 & 73  
5661 POST ROAD  
EAST GREENWICH, RHODE ISLAND

ZONING DISTRICT: CH

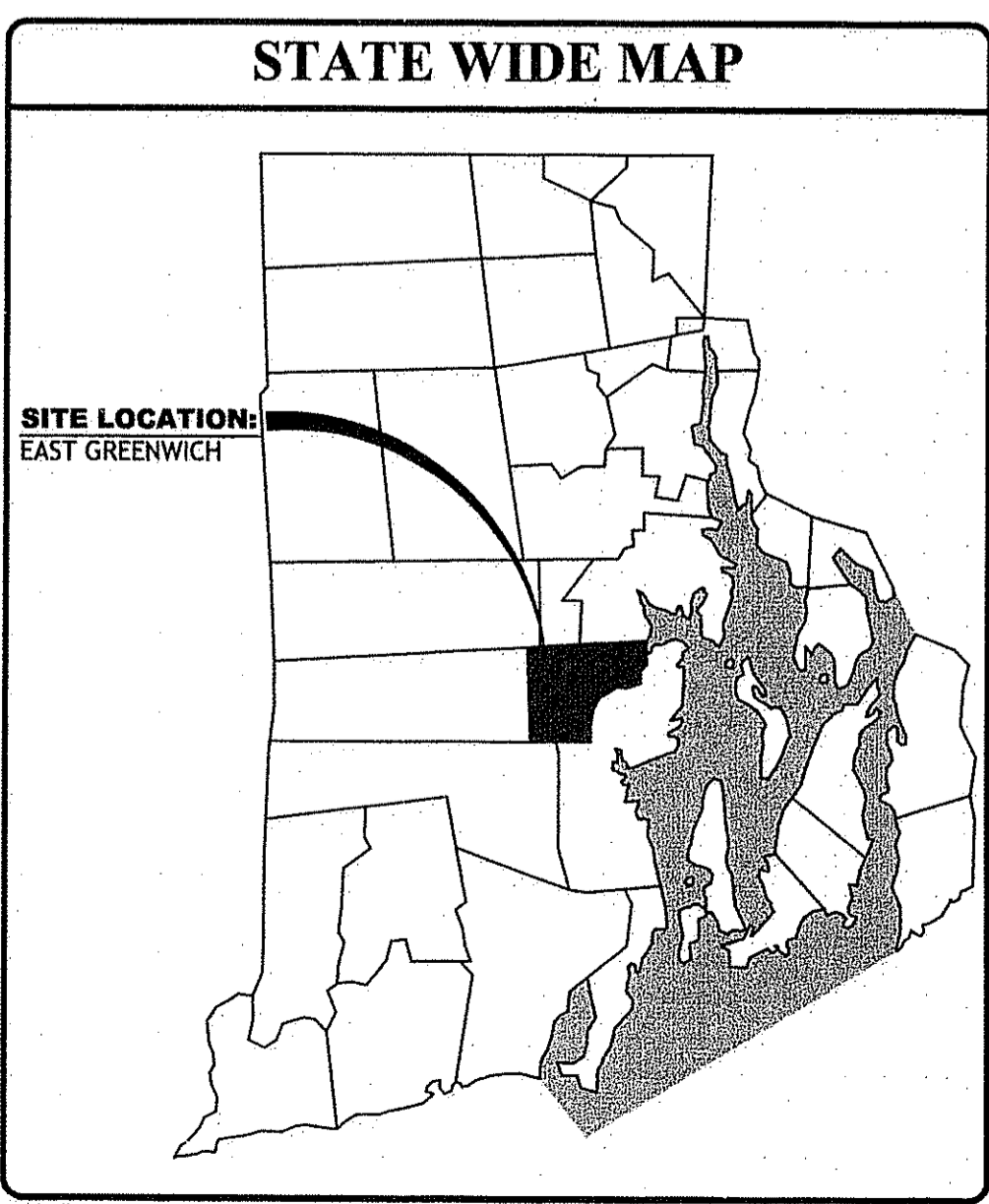
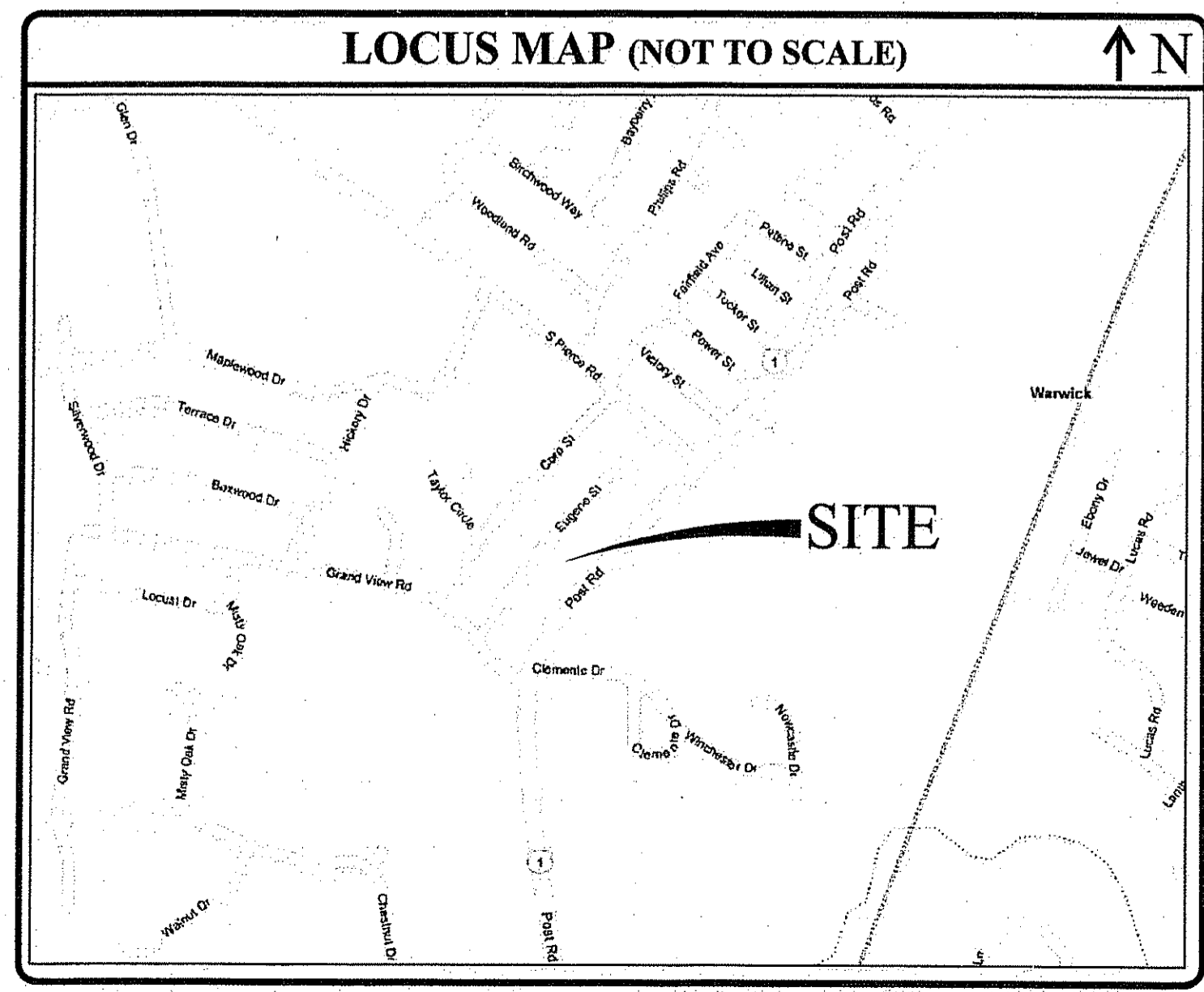
**SUBMISSION TYPE:**

- MASTER PLAN FOR A MAJOR LAND DEVELOPMENT (WAIVER REQUESTED FOR STREET TREES)
- EAST GREENWICH ZONING BOARD OF REVIEW
- RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM) - FRESHWATER WETLANDS PRELIMINARY DETERMINATION
- RHODE ISLAND DEPARTMENT OF TRANSPORTATION - PHYSICAL ALTERATION PERMIT
- EAST GREENWICH SEWER DEPARTMENT
- KENT COUNTY WATER AUTHORITY

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED AUG 25 2010 FILE # 10-0057  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

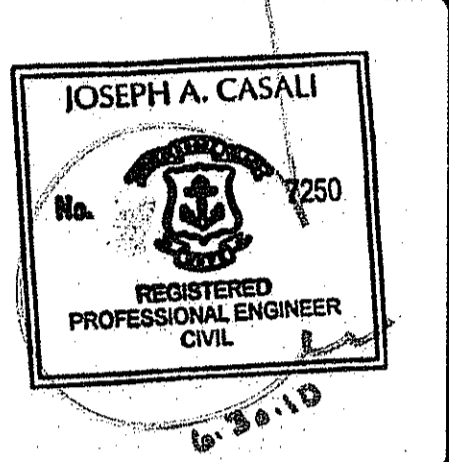
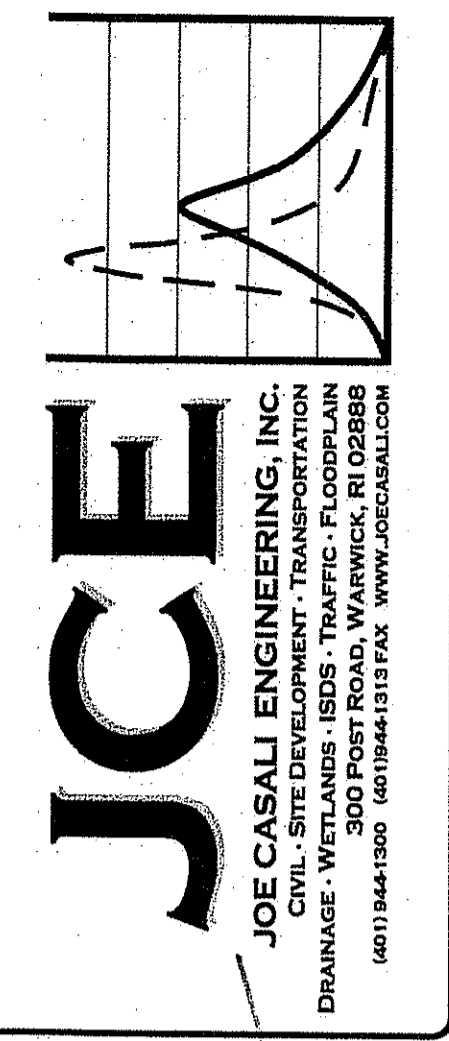
Q:\05-57 PCU\05-57 East Greenwich\ACAD\PCU-EG [PLANS]SET.dwg, Jun, 30, 2010 10:15am

PROJECT TEAM	
<b>OWNER:</b>	J & M NALBANDIAN REALTY 45 KETTLE CT. NORTH KINGSTOWN, RI 02852 PRESIDENT & SECRETARY: JACK NALBANDIAN 595 ALGONQUIN DRIVE WARWICK, RI 02888
<b>APPLICANT:</b>	PAWTUCKET CREDIT UNION 1200 CENTRAL AVENUE PAWTUCKET, RI 02860
<b>ARCHITECT:</b>	VISION 3 ARCHITECTS 225 CHAPMAN STREET PROVIDENCE, RI 02950 PHONE: 401-461-7771 FAX: 401-461-7772
<b>CIVIL:</b>	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313
<b>SURVEYOR:</b>	ALPHA ASSOCIATES 35 ROCKY HOLLOW ROAD EAST GREENWICH, RI



**INDEX OF DRAWINGS**

SHEET NO.	PLAN
1	COVER SHEET
2	GENERAL NOTES AND LEGEND
3	SURVEY & SITE PLAN
4	ADMINISTRATIVE SUBDIVISION PLAN
5	EXISTING CONDITIONS PLAN
6	SITE PREPARATION PLAN
7	SITE PLAN
8	GRADING, DRAINAGE, & UTILITY PLAN
9	LANDSCAPE PLAN
10	LANDSCAPE DETAILS
11	DETAILS I
12	DETAILS II
13	KCWA NOTES
14	BUILDING ELEVATIONS & SIGNAGE DETAILS
15	LOCATION AND AERIAL MAPS



**PAWTUCKET CREDIT UNION**  
 5661 POST ROAD  
 EAST GREENWICH, RHODE ISLAND  
 AP 11 LOTS 72 & 73

**REVISIONS:**

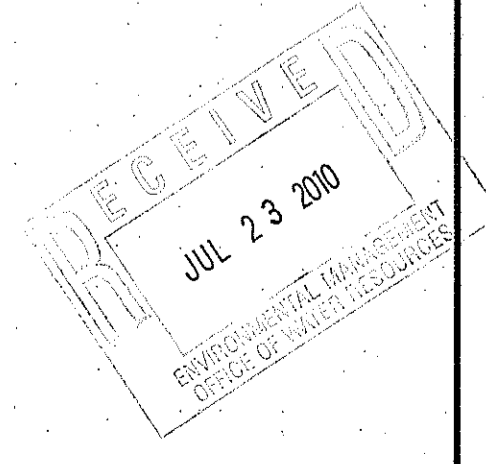
NO.	DATE	DESCRIPTION
1	2/15/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

DESIGNED BY: GEC  
DRAWN BY: WMLJR  
CHECKED BY: JAC  
DATE: 2/12/2010  
PROJECT NO: 05-57

PRELIMINARY, NOT FOR CONSTRUCTION

**COVER SHEET**

**SHEET 1 OF 15**



**GENERAL NOTES:**

- CLASS I PROPERTY LINE AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY ALPHA ASSOCIATES, 35 ROCKY HOLLOW ROAD, EAST GREENWICH RI IN NOVEMBER 2009.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- THIS SITE LIES IN ZONE A (AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED), AS SHOWN ON THE FIRM MAP FOR THE TOWN OF EAST GREENWICH, RI, COMMUNITY PANEL NO. 445397002B, EFFECTIVE DATE FEBRUARY 16, 1983.
- SOILS EXISTING ON THE SITE ARE URBAN LAND (Ur) AND NEWPORT-URBAN LAND COMPLEX (NP), ALL HYDROLOGIC SOIL GROUP C.
- SOIL EVALUATIONS WERE COMPLETED BY ECOSYSTEM SOLUTIONS IN MARCH 2010.

**SITE NOTES:**

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
- STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES.
- ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR OR A RHODE ISLAND REGISTERED PROFESSIONAL ENGINEER.
- ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
- REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ACTUAL SIZE OF THE PROPOSED BUILDING.
- WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE TOWN AT NO ADDITIONAL COST TO THE OWNER.
- ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER OR TOWN.
- THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION.
- THE TOPS OF ALL VALVE BOXES AND CURB BOXES SHALL BE FLUSH WITH GROUND OR PAVEMENT SURFACE LEVEL AND PLUMB, UNLESS OTHERWISE DIRECTED.
- ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL DRIVEWAYS AT COMPLETION OF EACH DAYS WORK.
- WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES.
- ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
- REFER TO PLUMBING PLANS FOR CONTINUATION OF ALL UTILITIES WITHIN 5' (FIVE) FEET OF THE BUILDING.
- ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2004 EDITION (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA).

**MISCELLANEOUS UTILITY NOTES:**

- PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- THE UTILITY PLAN DOES NOT DEPICT THE NECESSARY ELECTRICAL CONDUIT/WIRING TO SERVICE THE PROPOSED LIGHTING AND SIGNS, WHICH WILL BE PERFORMED BY THE CONTRACTOR FOR NO ADDITIONAL COST.
- OVERHEAD ELECTRIC AND TELEPHONE SERVICES ARE TO BE REMOVED BY THE APPROPRIATE UTILITY COMPANY AND COORDINATED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THERE OPERATIONS.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT HIS OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER OR TOWN.
- EXISTING UTILITY FRAMES AND COVERS FOR SANITARY SEWER, WATER, GAS, STORM DRAINAGE AND OTHER UTILITIES SHALL BE ADJUSTED TO GRADE AS REQUIRED IN NEW PAVING AND PAVEMENT OVERLAY AREAS.

**LAYOUT NOTE:**

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

**MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DIVIDES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR TOWN RIGHT-OF-WAY.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC, SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. 1988 EDITION, INCLUDING REVISION 3, SEPTEMBER 3, 1993 AND SUBSEQUENT ADDENDA.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

**DRAINAGE SYSTEM NOTES:**

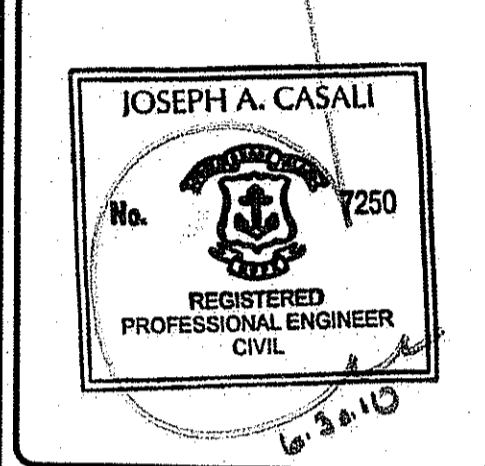
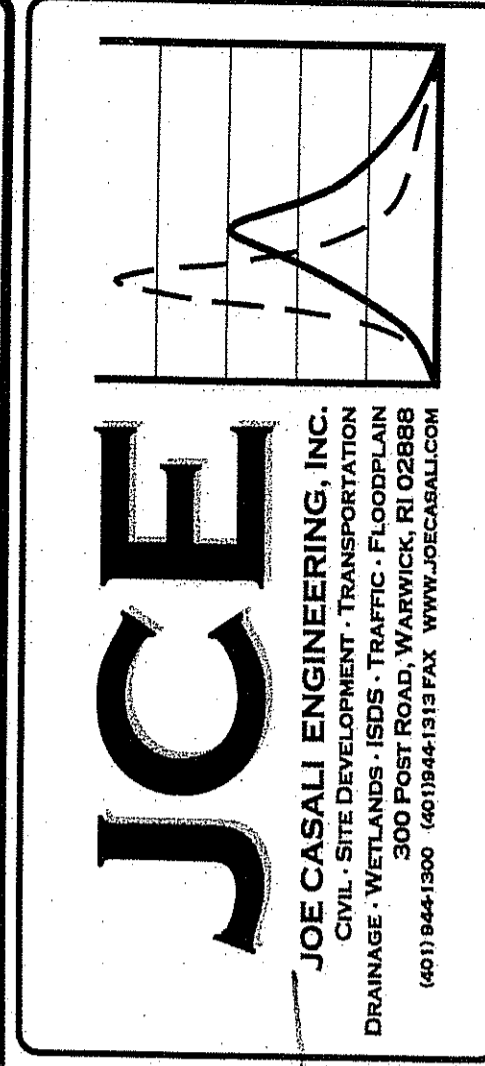
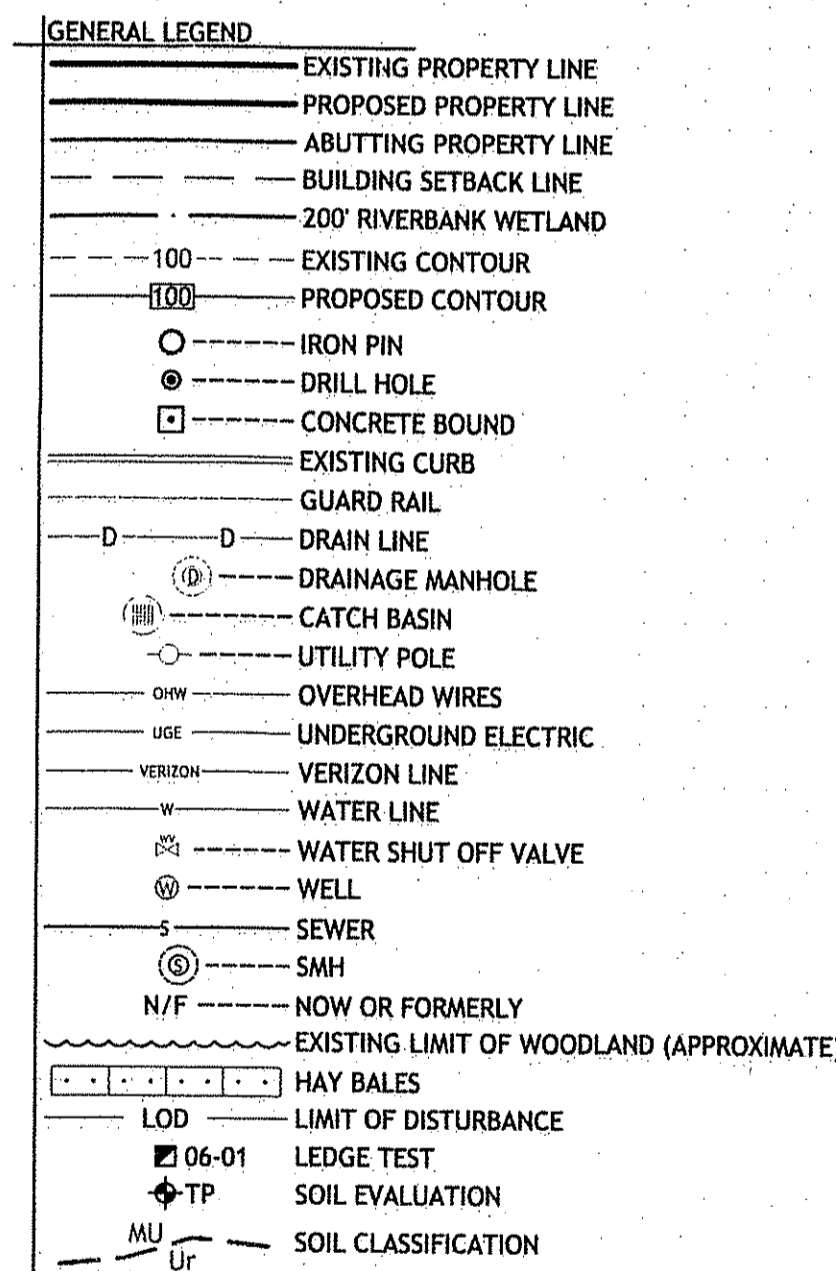
- THE PROPOSED DRAINAGE LINES SHALL BE ADS N-12 HPDE PIPE OR AN APPROVED EQUAL.
- ALL RIM ELEVATIONS SHOWN ARE APPROXIMATE AND ARE TO BE SET FLUSH WITH FINAL GRADES.
- THE DESIGN ENGINEER MUST SUBMIT AN AS BUILT PLAN AND A CERTIFICATION TO TOWN ENGINEER THAT THE CONSTRUCTION IS IN COMPLIANCE WITH THE DESIGN PLANS FOR ALL ELEMENTS OF THE STORM OR DRAINAGE SYSTEM PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

**SOIL EROSION AND SEDIMENTATION CONTROL NOTES:**

- THE SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
- THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
- ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED HAYBALES (R.I. STD. 9.8.0) DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) AND STAKED HAYBALE WITH SILT FENCE SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
- ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE HAYBALES SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY HAYBALES AS NEEDED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY-BALES BECOMES FILLED WITH SEDIMENTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL 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 RESIDENT 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 (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
- ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", DATED 1993.

**MP MAINTENANCE SCHEDULE:**

- ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
  - MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS TO INCLUDE INSPECTION, CLEANING AND REPAIRS ALL PIPES, INTAKE AND DISCHARGE STRUCTURES, CATCH BASIN SUMPS, AND MANHOLES.
  - INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES, AND MAINTENANCE OF THESE STRUCTURES IF NECESSARY. INSPECTIONS SHALL BE PERFORMED FOLLOWING ALL RAIN EVENTS OF 1/2 INCH RAINFALL OR MORE IN A 24-HOUR PERIOD, OR BI-MONTHLY IF NO RAINFALL EVENT OCCURS.
- UPON COMPLETION OF THE PROJECT CONSTRUCTION, AND PRIOR TO VACATING THE SITE, THE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION AND CLEANING OF THE DRAINAGE SYSTEM AND ALL ASSOCIATED STRUCTURES.
- AFTER THE COMPLETION OF THE ENTIRE PROJECT TO THE SATISFACTION OF THE OWNER OR ENGINEER, ALL MAINTENANCE OF THE DRAINAGE SYSTEM SHALL THEN BE THE RESPONSIBILITY OF PAWTUCKET CREDIT UNION OR THEIR APPROVED AGENTS.
- AFTER THE COMPLETION OF PROJECT CONSTRUCTION AND THE FINAL STABILIZATION OF THE ENTIRE SITE, THE INSPECTION AND MAINTENANCE OF ALL STORMWATER FACILITIES MUST BE PERFORMED AS FOLLOWS:
  - ANY REQUIRED REPAIR AND REPLACEMENT OF DRAINAGE STRUCTURES OR FACILITIES SHALL BE DONE PROMPTLY TO ENSURE PROPER FUNCTIONING OF THE SYSTEM.
  - THE FLOOD COMPENSATION AREA SHALL BE INSPECTED AT LEAST ONCE PER YEAR AND ANY SEDIMENT OR DEBRIS WITHIN THE AREA SHALL BE REMOVED.
  - ALL DESIGN, CLEANING, AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL FOLLOW AT LEAST THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION MINIMUM STANDARDS, SECTION 212 AND SECTION 708. WHERE APPROPRIATE, PROCEDURES REGARDING THE DRAINAGE DESIGN, AND THE INSPECTION AND MAINTENANCE OF THE STORMWATER DRAINAGE SYSTEM SHALL BE FOLLOWED AS OUTLINED IN THE "RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL" (RIDEM/RICRMC, SEPTEMBER 1, 1993).



**PAWTUCKET CREDIT UNION**  
 5661 POST ROAD  
 EAST GREENWICH, RHODE ISLAND  
 AP 11 LOTS 72 & 73

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED AUG 25 2010 FILE # 10-DD57  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DESIGNED BY: GEC  
 DRAWN BY: WMLJR  
 CHECKED BY: JAC  
 DATE: 2/12/2010  
 PROJECT NO: 05-571

**REVISIONS:**

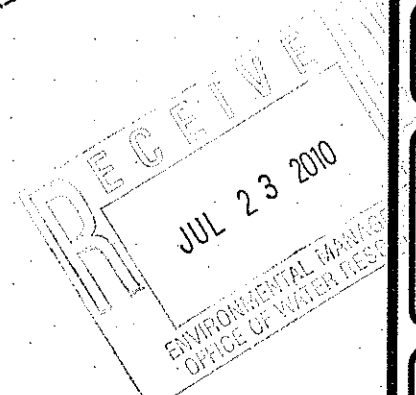
NO.	DATE	DESCRIPTION
1	3/15/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	5/11/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

PRELIMINARY, NOT FOR CONSTRUCTION

**GENERAL NOTES & LEGEND**

**SHEET 2 OF 15**

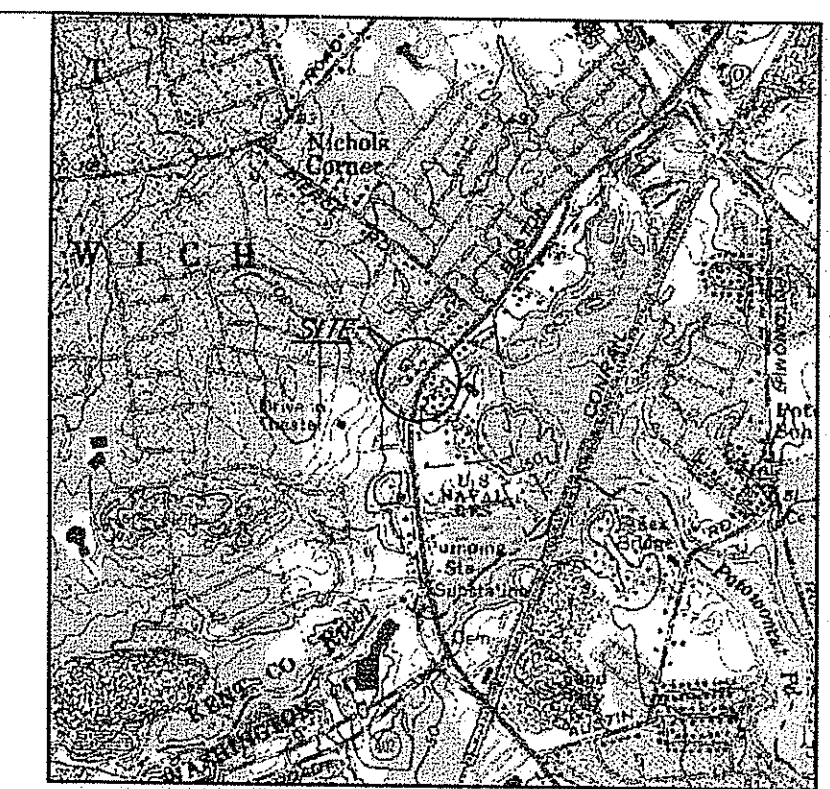
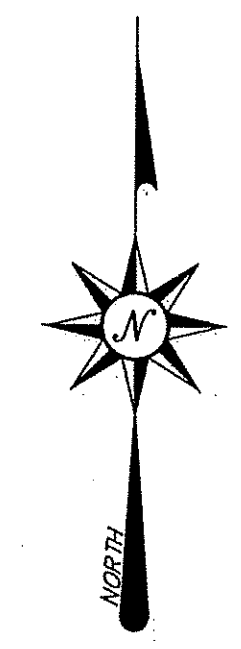
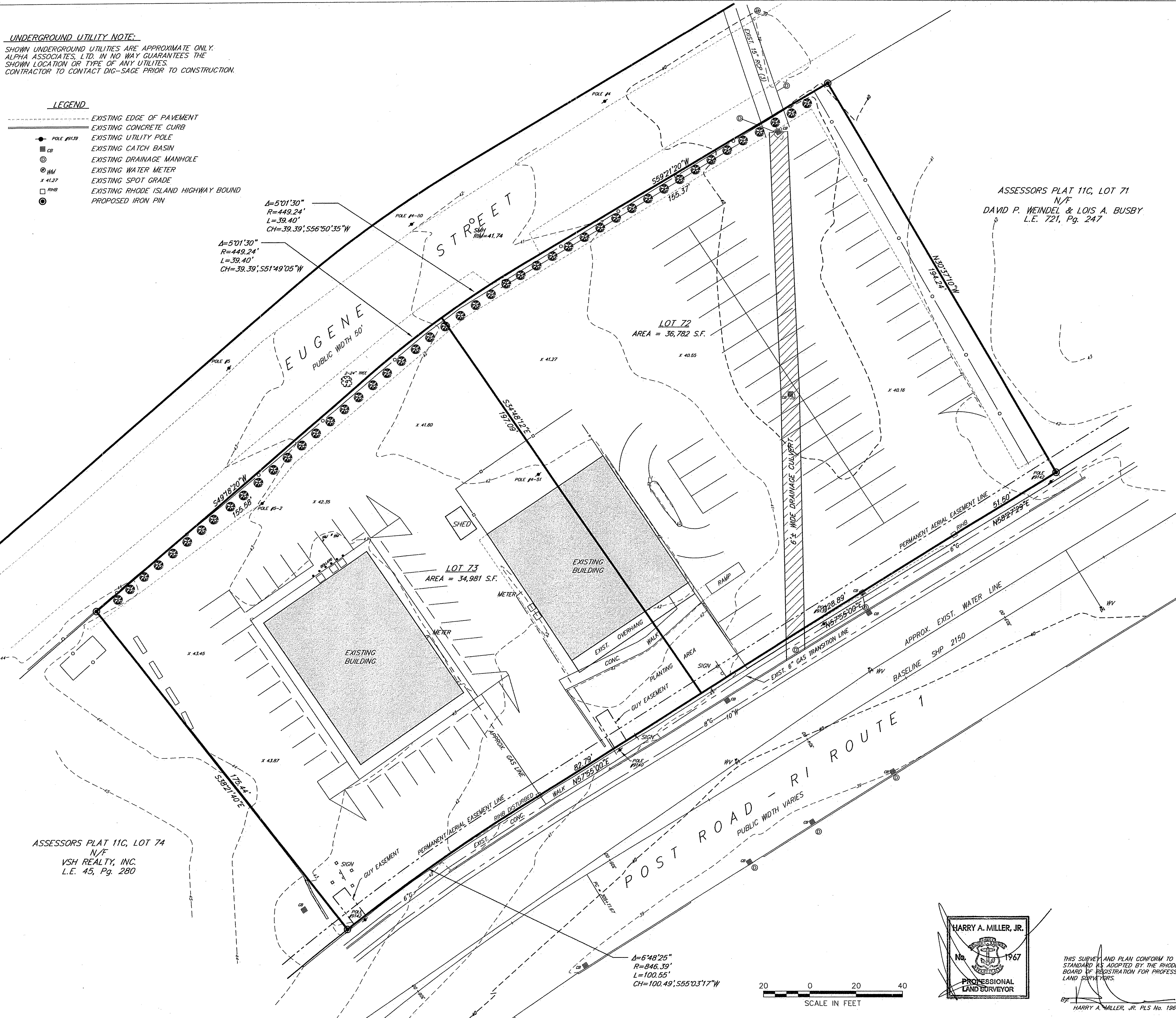
Q:\05-57 PCU\05-571 East Greenwich\CAD\PCU-EG (PLANSET).dwg Jun 30, 2010 10:15am



**UNDERGROUND UTILITY NOTE:**  
 SHOWN UNDERGROUND UTILITIES ARE APPROXIMATE ONLY.  
 ALPHA ASSOCIATES, LTD. IN NO WAY GUARANTEES THE  
 SHOWN LOCATION OR TYPE OF ANY UTILITIES.  
 CONTRACTOR TO CONTACT DIG-SAGE PRIOR TO CONSTRUCTION.

**LEGEND**

- EXISTING EDGE OF PAVEMENT
- EXISTING CONCRETE CURB
- POLE #1-10 EXISTING UTILITY POLE
- CB EXISTING CATCH BASIN
- WM EXISTING DRAINAGE MANHOLE
- WM EXISTING WATER METER
- x 41.27 EXISTING SPOT GRADE
- RH80 EXISTING RHODE ISLAND HIGHWAY BOUND
- PROPOSED IRON PIN



**LOCUS**  
 SCALE: 1"=2000'

**PARCEL OWNER**  
 J & M NALBANDIAN REALTY  
 45 KETTLE CT.  
 NORTH KINGSTOWN, RI 02852

**PROJECT SURVEYOR**  
 HARRY MILLER  
 ALPHA ASSOCIATES, LTD.  
 35 ROCKY HOLLOW ROAD  
 EAST GREENWICH, RI 02818  
 T. 401.884.8506  
 F. 401.884.7747

**PARCEL ZONING**  
 ZONE CH  
 MIN. LOT SIZE: 30,000 S.F.  
 MIN. FRONTAGE: 150'  
 FRONT YARD 50'  
 SIDE YARD 40'  
 REAR YARD 40'  
 MAX. STRUCTURE HEIGHT: 35'  
 MAX. LOT COVERAGE (STRUCTURE) 25%

**PARCEL AREA**  
 LOT 72 = 36,782 S.F.  
 LOT 73 = 34,981 S.F.

**LOT COVERAGE CALCULATIONS**

LOT 72 - EXIST. BUILDING	1,505± S.F.	
EXIST. PARKING LOT	30,871± S.F.	
TOTAL	32,376± S.F.	98.86%
LOT 73 - EXIST. BUILDINGS	6,562± S.F.	
EXIST. PARKING LOT	23,541± S.F.	
TOTAL	30,103± S.F.	98.83%

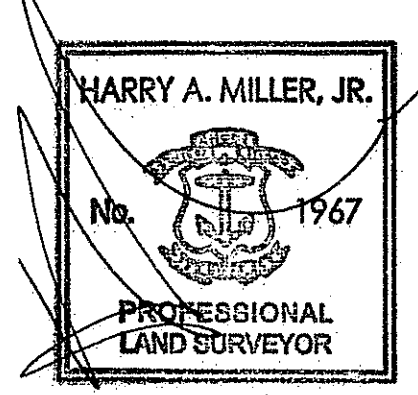
**FLOOD NOTE:**  
 SITE FALLS WITHIN ZONES A2 (EL. 43), PER FEMA  
 FIRM COMMUNITY 445397, PANEL 0002, B.  
 REVISED: 2/16/83.

- REFERENCES:**
- STATE HIGHWAY PLAT (SHP) 2150
  - RECORDED PLAT 108B: SPRINGBROOK PLAT...
  - "PLAN OF RELOCATION OF GRAND VIEW ROAD..."

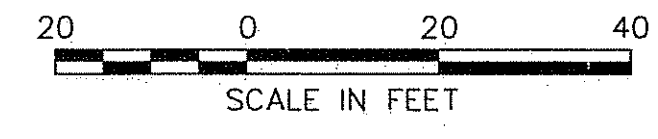
ASSESSORS PLAT 11C, LOT 74  
 N/F  
 VSH REALTY, INC.  
 L.E. 45, Pg. 280

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED AUG 25 2010 FILE # 10-0057  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

**SURVEY & SITE PLAN**  
 ASSESSORS PLAT 11C, LOTS 72 & 73  
 EAST GREENWICH, RHODE ISLAND  
 PREPARED FOR: J & M NALBANDIAN REALTY  
 PREPARED BY: ALPHA ASSOCIATES, LTD.  
 35 ROCKY HOLLOW ROAD  
 EAST GREENWICH, RI 02818  
 T. 401.884.8506 F. 401.884.7747  
 SCALE: 1"=20' NOVEMBER, 2009 SHEET 1 OF 1 (REV. 3/11/10)

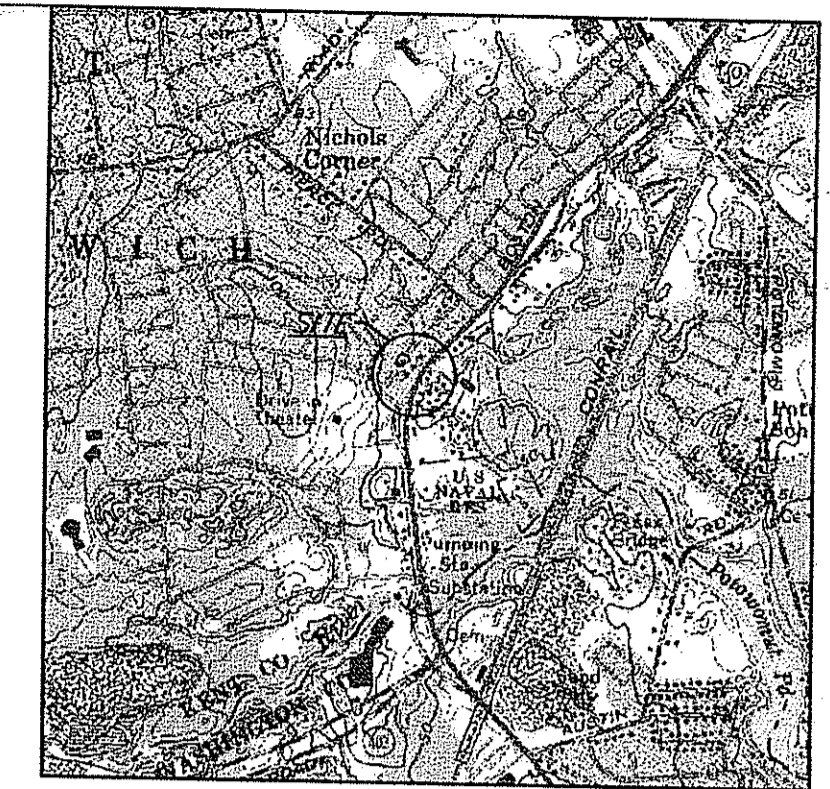
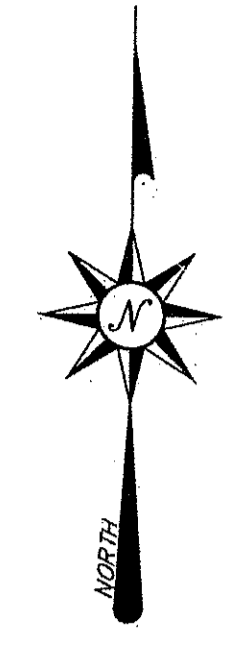


THIS SURVEY AND PLAN CONFORM TO A CLASS 'Y' & 'M'  
 STANDARD AS ADOPTED BY THE RHODE ISLAND  
 BOARD OF REGISTRATION FOR PROFESSIONAL  
 LAND SURVEYORS.  
 HARRY A. MILLER, JR. PLS No. 1967 DATE: 2/11/10



**UNDERGROUND UTILITY NOTE:**  
 SHOWN UNDERGROUND UTILITIES ARE APPROXIMATE ONLY.  
 ALPHA ASSOCIATES, LTD. IN NO WAY GUARANTEES THE  
 SHOWN LOCATION OR TYPE OF ANY UTILITIES.  
 CONTRACTOR TO CONTACT DIG-SAGE PRIOR TO CONSTRUCTION.

APPROVED BY THE TOWN OF EAST GREENWICH  
 ADMINISTRATIVE OFFICER  
 \_\_\_\_\_  
 TITLE \_\_\_\_\_ DATE \_\_\_\_\_



LOCUS  
 SCALE: 1"=2000'

ASSESSORS PLAT 11C, LOT 71  
 N/F  
 DAVID P. WEINDEL & LOIS A. BUSBY  
 L.E. 721, Pg. 247

**PARCEL OWNER**  
 J & M NALBANDIAN REALTY  
 45 KETLE CT.  
 NORTH KINGSTOWN, RI 02852

**PROJECT SURVEYOR**  
 HARRY MILLER  
 ALPHA ASSOCIATES, LTD.  
 35 ROCKY HOLLOW ROAD  
 EAST GREENWICH, RI 02818  
 T.401.884.8506  
 F.401.884.7747

**PARCEL ZONING**  
 ZONE CH  
 MIN. LOT SIZE: 30,000 S.F.  
 MIN. FRONTAGE: 150'  
 FRONT YARD 50'  
 SIDE YARD 40'  
 REAR YARD 40'  
 MAX. STRUCTURE HEIGHT: 35'  
 MAX. LOT COVERAGE (STRUCTURE) 25%

**PARCEL AREA**  
 LOT 72 = 36,782 S.F.  
 LOT 73 = 34,981 S.F.  
 OVERALL AREA: 71,763 S.F.

**FLOOD NOTE:**  
 SITE FALLS WITHIN ZONES A2 (EL. 4.3), PER FEMA  
 FIRM COMMUNITY 445397, PANEL 0002, B.  
 REVISED: 2/16/83.

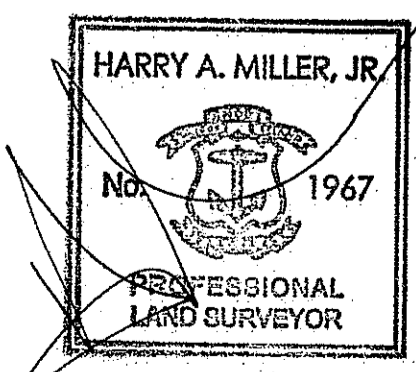
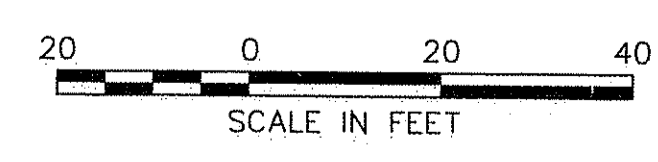
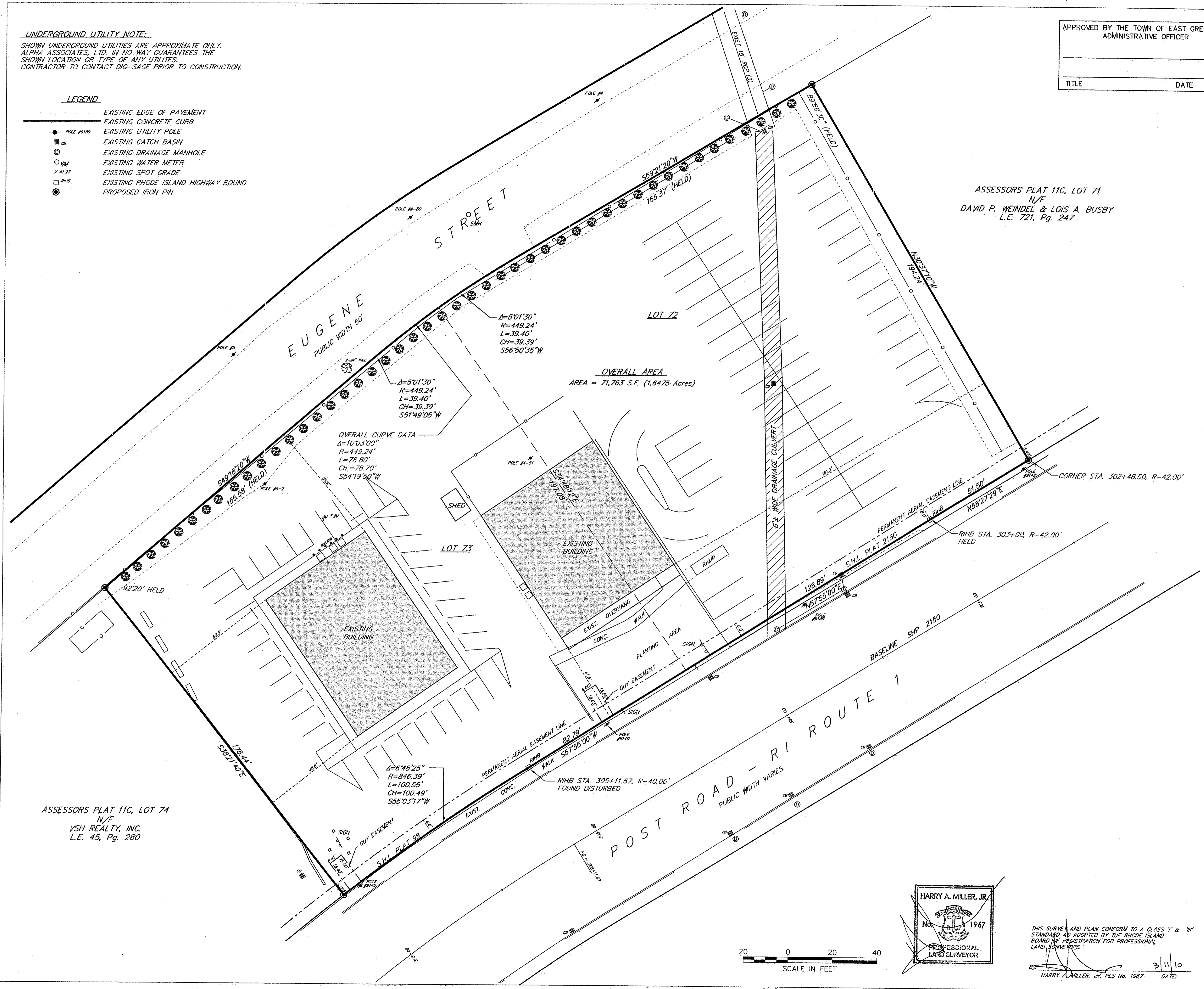
- REFERENCES:**
1. STATE HIGHWAY PLAT (SHP) 2150
  2. RECORDED PLAT 108B: SPRINGBROOK PLAT...
  3. "PLAN OF RELOCATION OF GRAND VIEW ROAD..."
  4. STATE HIGHWAY PLAT 98
  5. L.E. 175, Pg. 641; SUBJECT PARCEL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED AUG 25 2010 FILE # 10-0057  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

THIS PLAN SHALL BE INDEXED UNDER  
 ABUTTING STREETS:  
 POST ROAD  
 EUGENE STREET

ADMINISTRATIVE SUBDIVISION  
 ASSESSORS PLAT 11C, LOTS 72 & 73  
 EAST GREENWICH, RHODE ISLAND  
 PREPARED FOR: J & M NALBANDIAN REALTY  
 PREPARED BY: ALPHA ASSOCIATES, LTD.  
 35 ROCKY HOLLOW ROAD  
 EAST GREENWICH, RI 02818  
 T.401.884.8506 F.401.884.7747  
 SCALE: 1"=20' MARCH, 2010 SHEET 1 OF 1

- LEGEND**
- EXISTING EDGE OF PAVEMENT
  - EXISTING CONCRETE CURB
  - POLE #1130 EXISTING UTILITY POLE
  - CB EXISTING CATCH BASIN
  - ⊙ EXISTING DRAINAGE MANHOLE
  - WM EXISTING WATER METER
  - x 41.27 EXISTING SPOT GRADE
  - RH98 EXISTING RHODE ISLAND HIGHWAY BOUND
  - ⊙ PROPOSED IRON PIN



THIS SURVEY AND PLAN CONFORM TO A CLASS 1' & 1/4" STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.  
 HARRY A. MILLER, JR. PLS No. 1967 DATE: 3/11/10

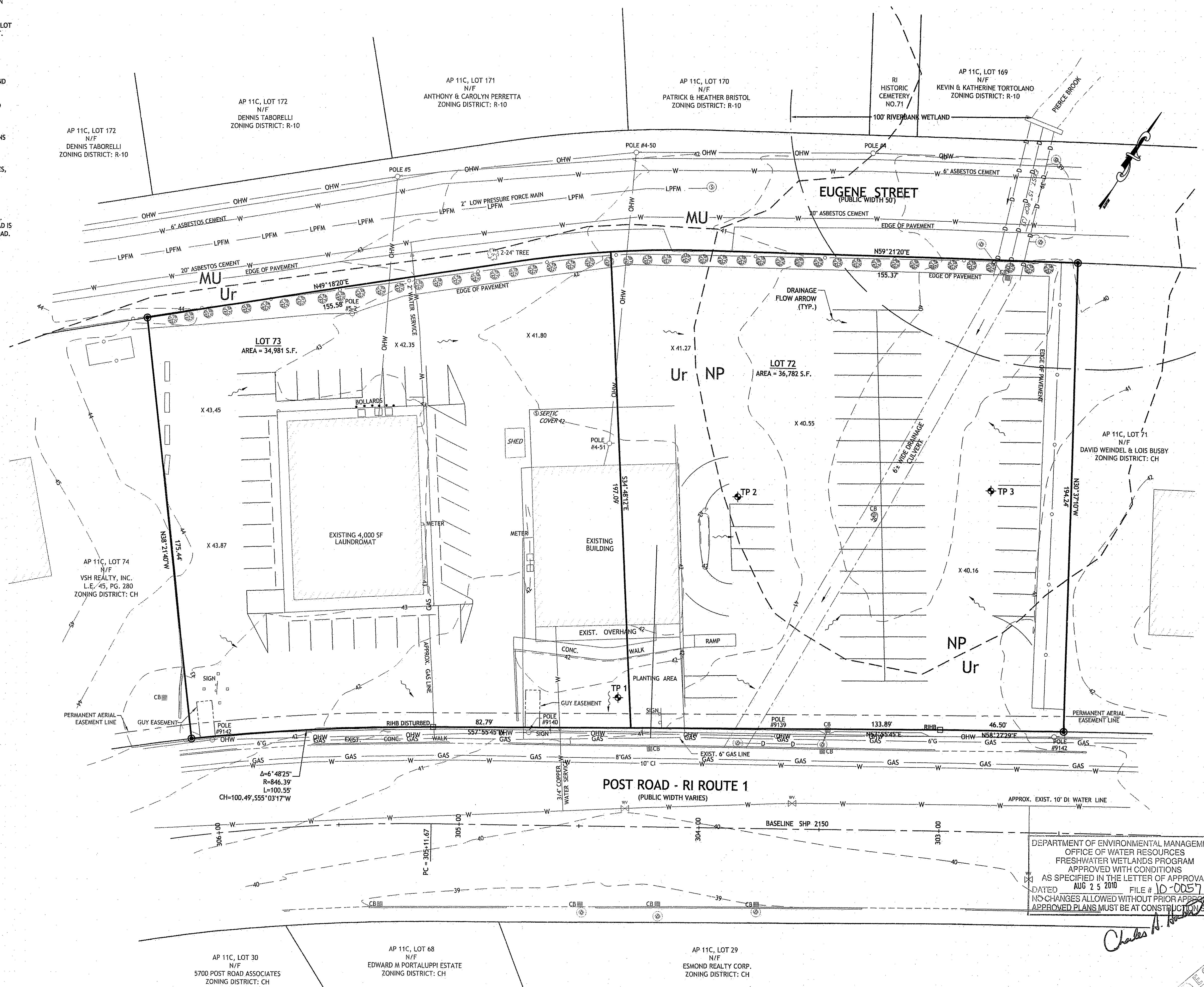
- GENERAL NOTES:**
- PROPERTIES THAT ARE NORTH OF SITE AND ADJACENT TO EUGENE STREET ARE IN ZONING DISTRICT R-10.
  - PROPERTIES THAT ARE SOUTH OF THE SITE AND ADJACENT TO POST ROAD ARE IN ZONING DISTRICT CH.
  - THE SITE IS CURRENTLY USED FOR COMMERCIAL BUSINESSES. THE BUILDING ON LOT 73 IS A LAUNDROMAT AND THE BUILDING ON LOT 72 & 73 IS CURRENTLY VACANT.
  - THE SURROUNDING AREA AROUND THE SITE (WITHIN 1/2 MILE RADIUS) IS COMPRISED OF RESIDENTIAL AND COMMERCIAL USES. (REFER TO LOCATION AND AERIAL MAPS)
  - SOILS CURRENTLY ON THE SITE ARE URBAN LAND (Ur) AND NEWPORT-URBAN LAND COMPLEX (NP) BOTH ARE HYDROLOGIC GROUP C.
  - SLOPES ON THE SITE ARE RELATIVELY FLAT RANGING FROM (1 TO 2% IN WEST TO EAST DIRECTION)
  - DRAINAGE PATTERNS ON THE SITE CONSIST OF SHEET FLOW EASTERLY TO THE CATCH BASIN ON LOT 72 OR SHEET FLOW SOUTH-EASTERLY TO THE CATCH BASIN IN POST ROAD.
  - THIS SITE DOES NOT CONTAIN ANY PONDS, GROUNDWATER RECHARGE AREAS, GROUNDWATER RESERVOIRS, WELLHEAD PROTECTION AREAS, COASTAL FEATURES, NATURAL HERITAGE AREAS, SCENIC CORRIDORS, STONE WALLS OR HISTORIC FEATURES.
  - THERE ARE NO AREAS OF ACTIVE AGRICULTURAL USE IN THIS SITE.
  - EUGENE STREET IS A TWO WAY, UNSTRIPPED LOCAL ROAD WITH MINIMAL TRAFFIC. THERE IS NO CONNECTION FROM OUR PROPERTY TO EUGENE STREET. POST ROAD IS A 4-LANE, TWO WAY HIGHWAY. ACCESS/EGRESS FROM THIS SITE IS VIA POST ROAD.

ZONING CRITERIA	REQUIRED
ZONING DISTRICT	CH
MINIMUM LOT AREA	30,000 SF
MINIMUM LOT FRONTAGE	150 FT
MINIMUM FRONT YARD SETBACK	50 FT
MINIMUM SIDE YARD SETBACK	40 FT
MINIMUM REAR YARD SETBACK	40 FT
MAXIMUM LOT COVERAGE	70%
MAXIMUM BUILDING HEIGHT	35 FT

SOIL AREA CALCULATIONS	
SOIL TYPE	AREA (SF)
NP	23,275.70
Ur	48,487.30

TEST HOLE DATA		
TP ID	GROUND ELEV.	GWT ELEV.
1	41.8	31.8
2	41.4	34.4
3	40.6	34.3

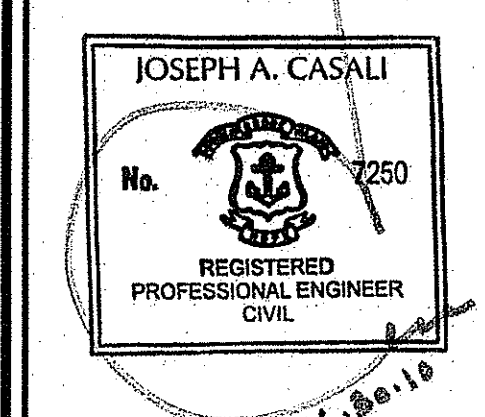
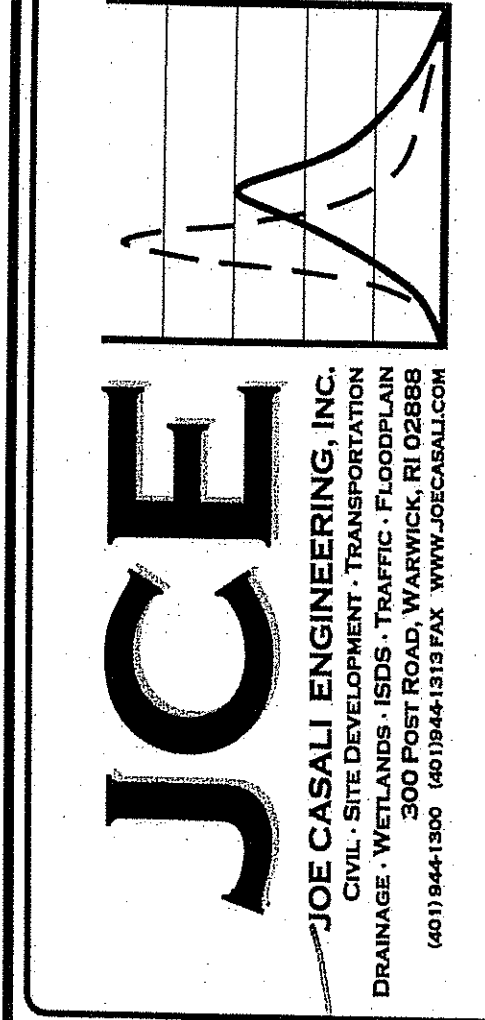
NOTE:  
SOIL EVALUATIONS COMPLETED BY ECOSYSTEMS SOLUTIONS, INC.  
ON MARCH 11, 2010.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED AUG 25 2010 FILE # 10-0057  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles A. Casali*

SCALE (FEET)  
0 10 20 40 80  
1 INCH = 20 FT



**PAWTUCKET CREDIT UNION**  
5661 POST ROAD  
EAST GREENWICH, RHODE ISLAND  
AP 11 LOTS 72 & 73

**REVISIONS:**

NO.	DATE	DESCRIPTION
1	3/19/10	MASTER PLAN SUBMISSION, RIDOT, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDOT COMMENTS
3	6/30/10	RIDOT COMMENT

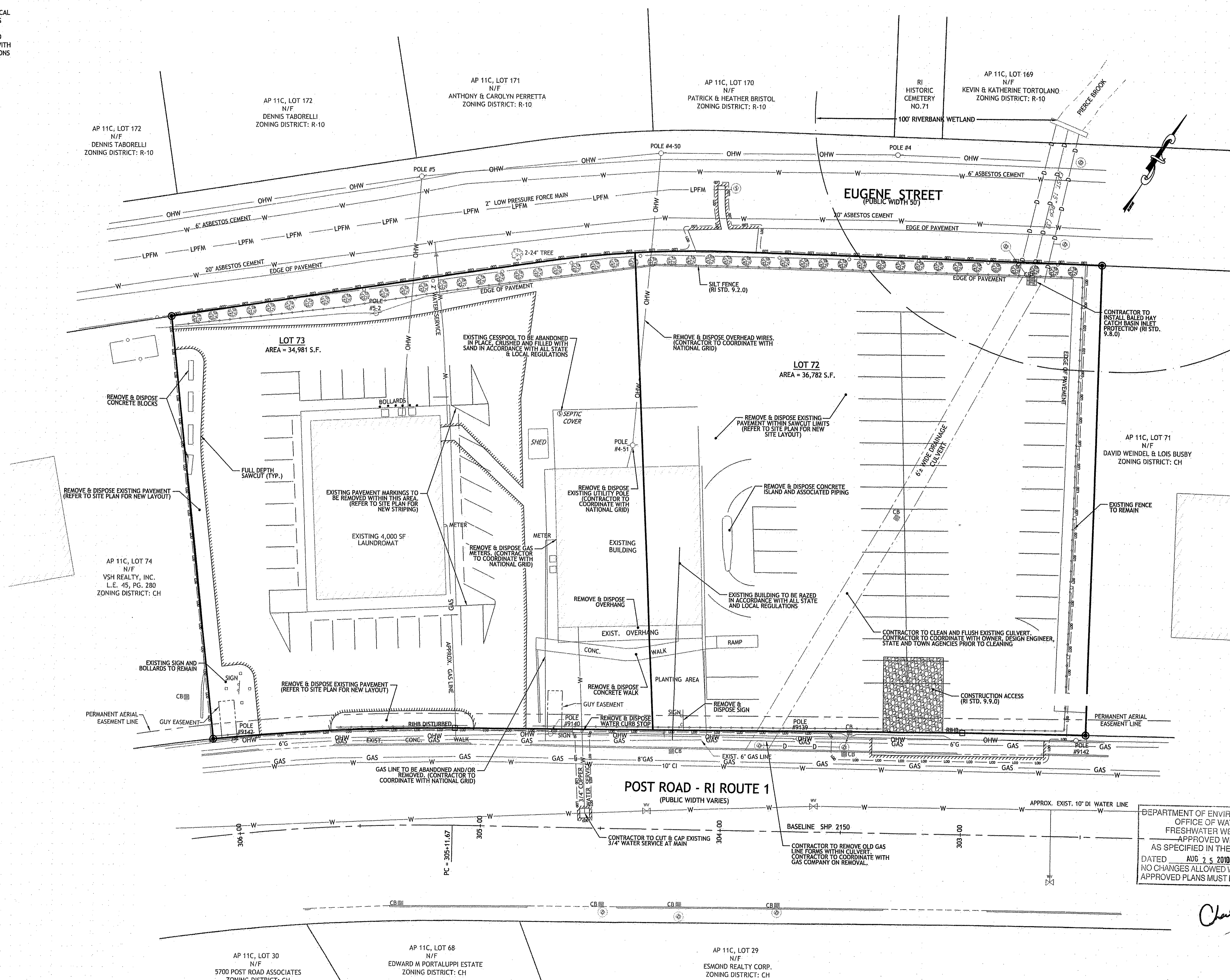
DESIGNED BY: GBC  
DRAWN BY: WMLJR  
CHECKED BY: JAC  
DATE: 2/12/2010  
PROJECT NO: 05-571

PRELIMINARY, NOT FOR CONSTRUCTION  
**EXISTING CONDITIONS PLAN**

**SHEET 5 OF 15**

Q:\05-57\PCU\05-571 East Greenwich\CAD\PCU-LEG [PLANSET].dwg Jun. 30. 2010 10:16am

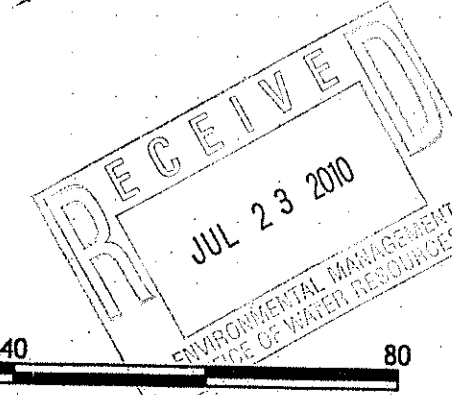
- NOTES:**
1. CONTRACTOR SHALL COORDINATE WITH KENT COUNTY WATER AUTHORITY (KCWA) ON THE REMOVAL/ABANDONMENT OF WATER SERVICES
  2. CONTRACTOR SHALL COORDINATE WITH NATIONAL GRID FOR ALL GAS AND ELECTRICAL REMOVAL AND/OR ABANDONMENT OF LINES
  3. CONTRACTOR SHALL LEGALLY REMOVE AND DISPOSE ALL MATERIALS IN ACCORDANCE WITH ALL FEDERAL STATE AND LOCAL REGULATIONS



LOCATION OF EXISTING UTILITIES SHOWN, ARE FROM GATE LOCATION AND EXISTING DOCUMENTATION AND MAY NOT BE ACCURATE. EXACT LOCATION TO BE DONE BY THE APPROPRIATE UTILITY COMPANY OR MUNICIPALITY PRIOR TO ANY EXCAVATION CALL DIGSAFE AT: 1-888-DIG-SAFE 1-888-344-7233



SCALE (FEET)  
0 10 20 40 80  
1 INCH = 20 FT



**PAWTUCKET CREDIT UNION**  
5661 POST ROAD  
EAST GREENWICH, RHODE ISLAND  
AP 11 LOTS 72 & 73

**REVISIONS:**

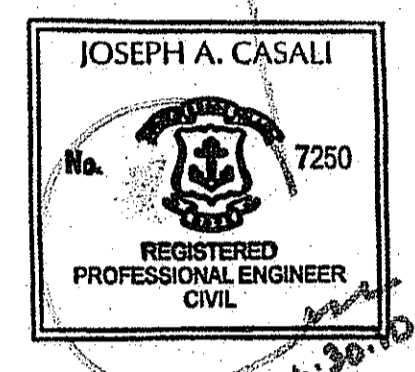
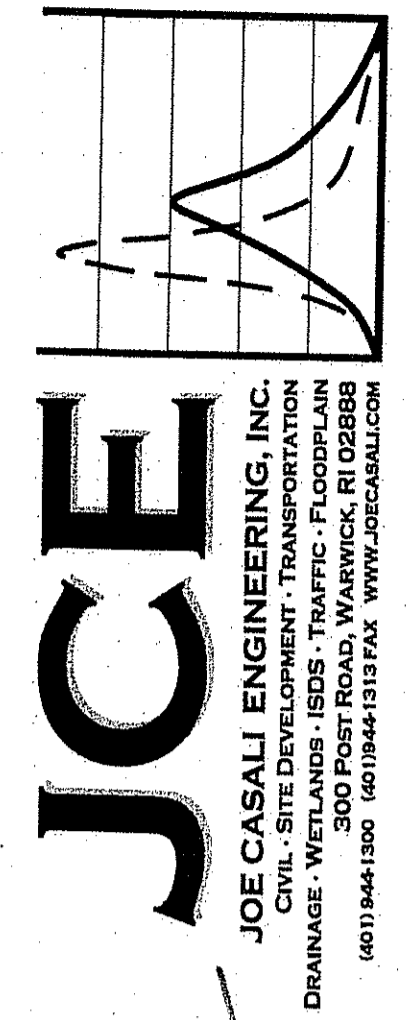
NO.	DATE	DESCRIPTION
1	3/15/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/11/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

DESIGNED BY: GEC  
DRAWN BY: WMLJR  
CHECKED BY: JAC  
DATE: 2/12/2010  
PROJECT NO: 05-571

PRELIMINARY, NOT FOR CONSTRUCTION

**SITE PREPARATION PLAN**

**SHEET 6 OF 15**



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED AUG 25 2010 FILE # 10-0057  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles A. Hester*

Q:\05-571 PC\05-571 East Greenwich\CAD\PCU-EG (PLANSET).dwg Jun. 30. 2010 10:16am

**NOTES:**

1. THERE ARE NO AREAS RESERVED FOR FUTURE DEVELOPMENT.
2. THERE IS NO OPEN SPACE PROPOSED AS PART OF THIS PROJECT.
3. THIS PROJECT IS TO BE COMPLETED IN ONE PHASE.
4. TOTAL SQUARE FOOTAGE OF COMMERCIAL LOT AREA IS 71,763 SF.

**ZONING NOTES:**

**1. ZONING TABLE**

ZONING CRITERIA	ALL USES	DRIVE-THRU USES	PROPOSED
ZONING DISTRICT	CH	CH	CH
MINIMUM LOT AREA	30,000 SF	40,000 SF	71,763 SF
MINIMUM LOT FRONTAGE	150-FT	100-FT	363.73-FT
MAXIMUM LOT COVERAGE (STRUCTURE ONLY)	35%	35%	10.78%
MAXIMUM LOT COVERAGE (PAVEMENT & STRUCTURE)	70% (50,234 SF)	70% (50,234 SF)	69.9% (50,201SF)
MINIMUM FRONT YARD DEPTH	50-FT	20-FT	50-FT
MINIMUM SIDE YARD DEPTH	40-FT	10-FT	44-FT
MINIMUM REAR YARD DEPTH	40-FT	20-FT	NA
MAXIMUM BUILDING HEIGHT	35-FT	35-FT	43-FT

**2. PARKING CALCULATIONS**

- a.) FOR A BANK USE: ONE CAR SPACE FOR EVERY 200 SF OF FLOOR AREA  
 $(4,500 / 200) = 23$  SPACES  
 REQUIRED PARKING SPACES : 23 SPACES (1 HANDICAP REQUIRED)
- b.) FOR THE LAUNDROMAT: ONE SPACE PER EVERY 3 WASHERS OR DRYERS  
 $(56 \text{ WASHERS}/3) = 19$  SPACES  
 REQUIRED SPACES: 19 SPACES (1 HANDICAP REQUIRED)
- c.) TOTAL SPACES REQUIRED  
 REQUIRED PARKING SPACES = BANK + LAUNDROMAT  
 $= 23 + 19$   
 $= 42$  REQUIRED PARKING SPACES
- PARKING SPACES PROVIDED = 32 (BANK) + 36 (LAUNDROMAT) = 68 SPACES\*

\* PARKING IN THE FRONT YARD SETBACKS CAN NOT BE INCLUDED IN THE REQUIRED PARKING.

PARKING SPACES MEETING REQUIREMENT = 42 SPACES

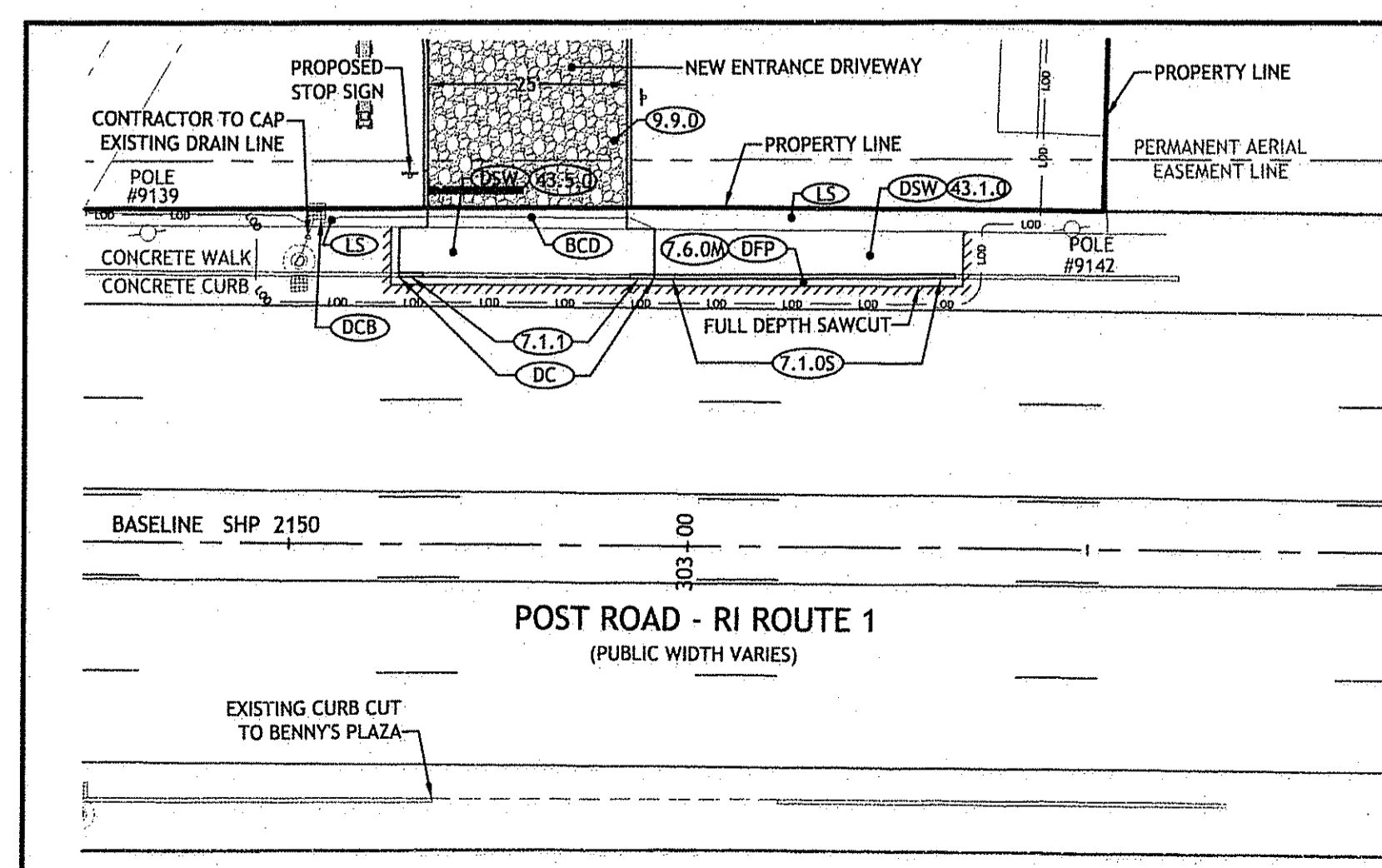
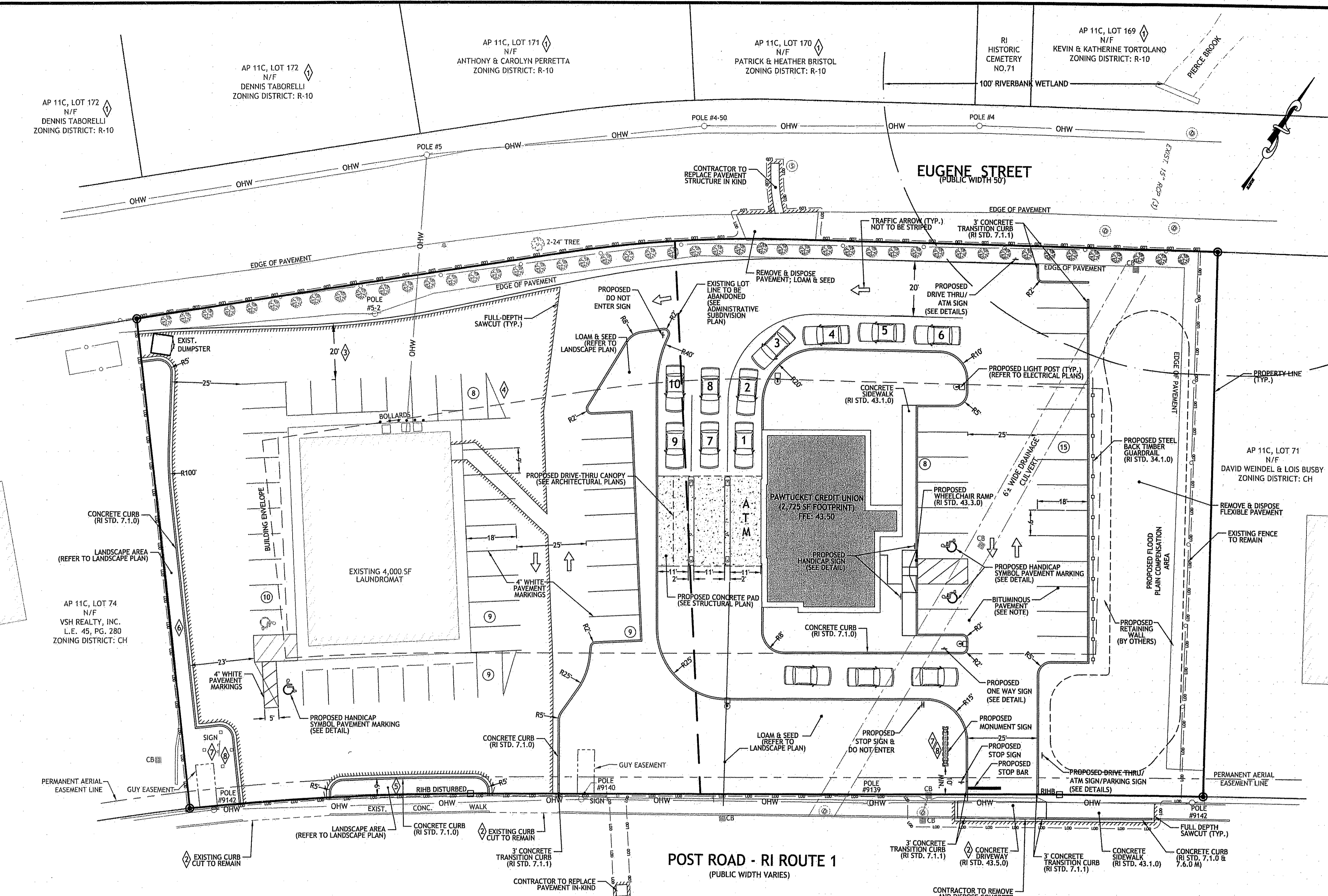
**MINIMUM BUILDABLE AREA (MBA)**

MBA FOR A CH ZONE IS: 7,000 SF  
 PROPOSED MBA:  
 BUILDING ENVELOPE: 27,243 SF  
 WETLANDS: 8,962 SF  
 DRAINAGE CULVERT: 646 SF  
 $17,635 \text{ SF} > 7,000 \text{ SF} \rightarrow \text{OK}$

**PAVEMENT STRUCTURE:**

- 1 1/2" BITUMINOUS SURFACE COURSE TYPE I-1
- 1 1/2" BITUMINOUS BINDER COURSE
- 12" GRAVEL BORROW SUBBASE

Ordinance Section	Requirement	Proposed	Relief Requested	Condition
Art. III, Section 2, Subsection 2.4 - Distance from a residential district	100 ft	40ft	60 ft	Existing Non-Conforming Condition
Art. III, Section 2, Subsection 2.11 - Curb Cut Requirements	1 curb cut	3 curb cuts	2 curb cuts	Existing Non-Conforming Condition (there are 3 existing curb cuts)
Article VI, Section 6, Subsection 6.1 - Dimensional Requirements (Aisle Width for 90° Parking)	25	20	5 ft	Existing Non-Conforming Condition
Article VI, Section 8, Subsection 8.3.1 - Islands (Terminal End Islands)	At the end of each parking row	None	For no Terminal End Sections	Existing Non-Conforming Condition
Article VI, Section 8, Subsection 8.4.1 - Required Setback/Buffers (Front yard setback)	10 feet	5 feet	5 feet	Existing Non-Conforming Condition
Article VI, Section 8, Subsection 8.4.2 - Required Setback/Buffers (Side yard Setback)	40 feet	5 feet	35 feet	Existing Non-Conforming Condition
Article VII, Section 2, Subsection 2.1 - Freestanding Sign (More than one freestanding sign on site the total visible sign area cannot exceed 40 sf)	40 sf	45+34 = 79	39 sf	Existing Non-Conforming Condition (The existing two signs for the Laundromat and vacant building have a total visible sign area of 67 sf)
Article VII, Section 3, Subsection 3.1 - Maximum Sign Area (in a CH zone the maximum visible sign area shall not exceed 140 sf)	140 sf	208 sf	68 sf	Variances created due to proposed development



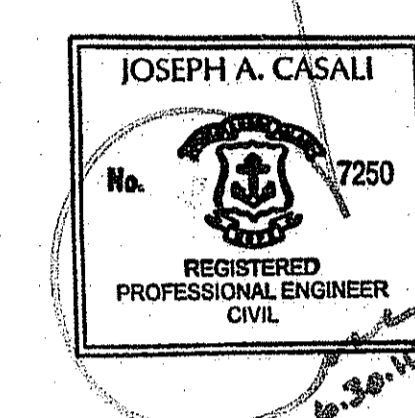
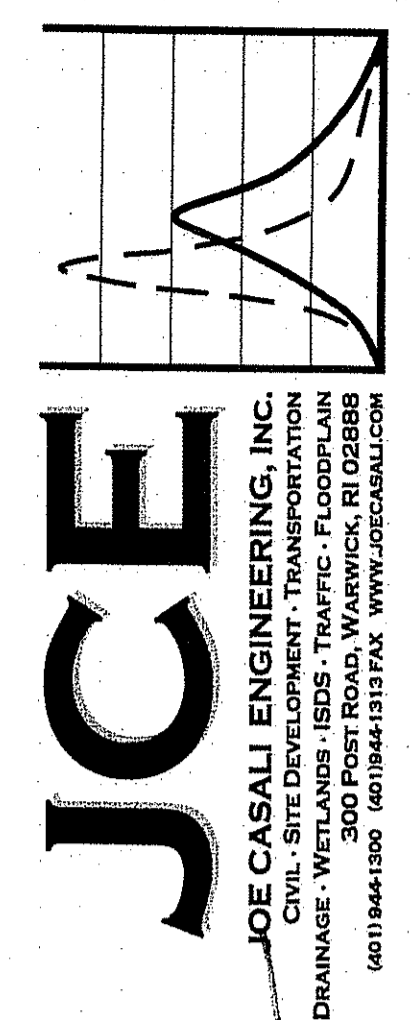
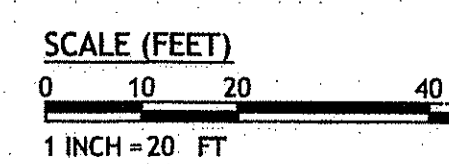
**RHODE ISLAND STANDARDS**

- (BCD) BITUMINOUS CONCRETE DRIVEWAY
- 1 1/2" BITUMINOUS SURFACE COURSE TYPE I-1
- 1 1/2" BITUMINOUS BINDER COURSE
- 12" GRAVEL BORROW SUBBASE
- (DC) REMOVE AND DISPOSE CURB (ALL TYPES)
- (DCB) REMOVE AND DISPOSE CATCH BASIN
- (DFP) REMOVE AND DISPOSE FLEXIBLE PAVEMENT
- (DSW) REMOVE AND DISPOSE SIDEWALK (ALL TYPES)
- (LS) 6" LOAM AND SEED
- (7.1.05) PRECAST CONCRETE CURB - STRAIGHT
- (7.1.1) 3'-0" PRECAST CONCRETE TRANSITION CURB
- (7.6.0M) CURB SETTING DETAIL
- (9.9.0) CONSTRUCTION ACCESS
- (43.1.0) CEMENT CONCRETE SIDEWALKS
- (43.5.0) CEMENT CONCRETE DRIVEWAYS

- NOTES:**
1. ALL WORK WITHIN THE STATE'S RIGHT-OF-WAY SHALL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION INCLUDING ALL REVISIONS AND STANDARD DETAILS, JUNE 15, 1998 AS AMENDED BY REVISION.
  2. UTILITY WORK PROPOSED IN POST ROAD WILL NEED TO BE PERMITTED THROUGH A UTILITY PHYSICAL ALTERATION PERMIT (PUP) WITH RIDOT'S MAINTENANCE DIVISION.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED AUG 25 2010 FILE # 10-0054  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles J...*



**PAWTUCKET CREDIT UNION**  
 5661 POST ROAD  
 EAST GREENWICH, RHODE ISLAND  
 AP 11 LOTS 72 & 73

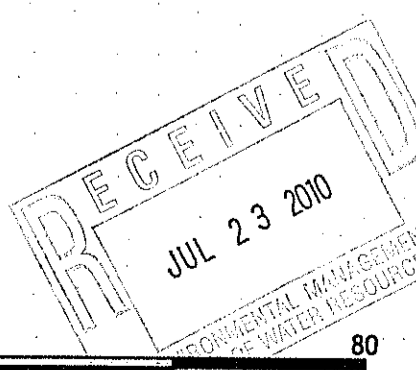
**REVISIONS:**

NO.	DATE	DESCRIPTION
1	3/15/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

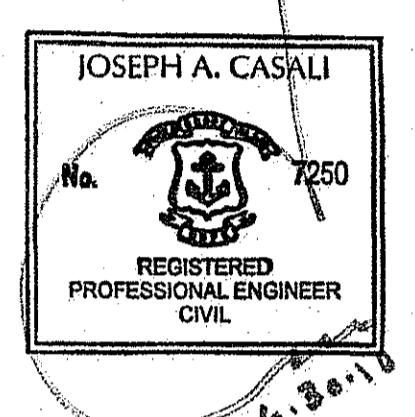
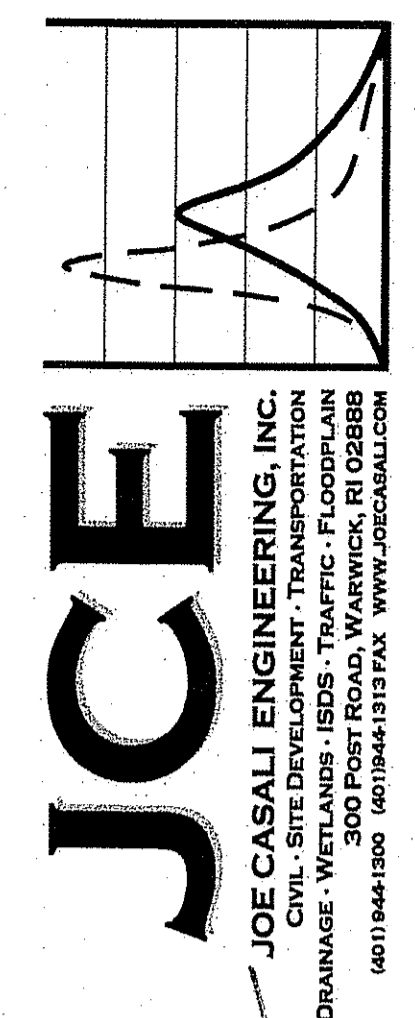
DESIGNED BY: GEC  
 DRAWN BY: WMLJR  
 CHECKED BY: JAC  
 DATE: 2/12/2010  
 PROJECT NO: 05-571

PRELIMINARY, NOT FOR CONSTRUCTION

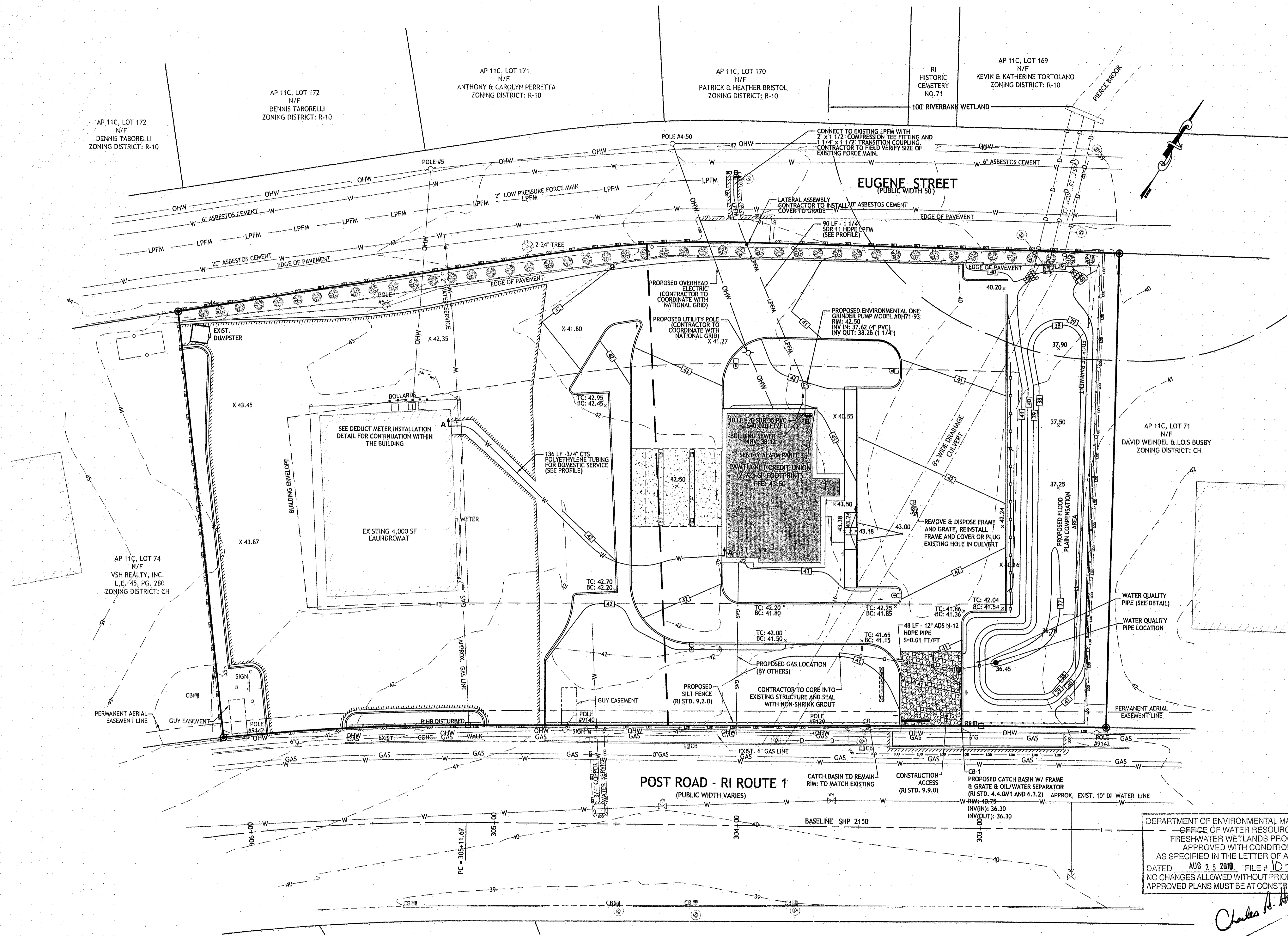
**SITE PLAN**  
**SHEET 7 OF 15**



Q:\05-571 PCU\05-571 East Greenwich\ACAD\PCU-EG [PLANSET].dwg Jun 30, 2010 10:16am



**PAWTUCKET CREDIT UNION**  
**5661 POST ROAD**  
**EAST GREENWICH, RHODE ISLAND**  
**AP 11 LOTS 72 & 73**



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS  
 AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED AUG 25 2010 FILE # 10-0054  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles A....*

REVISIONS:

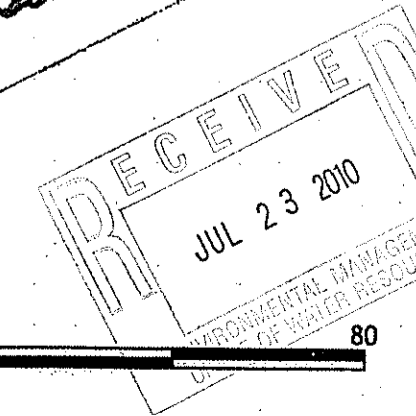
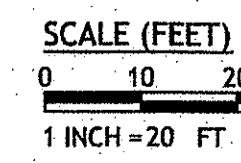
NO.	DATE	DESCRIPTION
1	3/15/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

DESIGNED BY: GEC  
 DRAWN BY: WMLJR  
 CHECKED BY: JAC  
 DATE: 2/12/2010  
 PROJECT NO: 05-571

PRELIMINARY, NOT FOR CONSTRUCTION

**GRADING, DRAINAGE & UTILITY PLAN**

**SHEET 8 OF 15**



Q:\05-571 PCU\05-571 East Greenwich\ACAD\PCU-EG [PLANSET].dwg Jun. 30, 2010 10:16am

**PLANT SCHEDULE**

DECIDUOUS TREES CODE QTY BOTANICAL NAME / COMMON NAME CONT CAL SIZE

ARA1	2	Acer rubrum 'Armstrong' / Armstrong Red Maple	B & B	2.5" Cal	
AROC	3	Acer rubrum 'October Glory' TM / October Glory Maple	B & B	2.5" Cal	
FPS	5	Fraxinus pennsylvanica 'Summit' / Summit Ash	B & B	2.5" Cal	
LT2	2	Liriodendron tulipifera / Tulip Tree	B & B	2.5" Cal	

EVERGREEN TREES CODE QTY BOTANICAL NAME / COMMON NAME CONT CAL SIZE

TT3	49	Thuja occidentalis 'Techny' / Techny Arborvitae	B & B	3' - 4' HT.	
-----	----	---	-------	-------------	--

FLOWERING TREES CODE QTY BOTANICAL NAME / COMMON NAME CONT CAL SIZE

MLM	5	Magnolia loebneri 'Merrill' / Dr. Merrill Magnolia	B & B	1.25" - 1.5"	
PCCS	3	Pyrus calleryana 'Cleveland Select'	B & B	1.25" Cal	

SHRUBS CODE QTY BOTANICAL NAME / COMMON NAME CONT

CARS1	10	Clethra alnifolia 'Ruby Spice' / Ruby Spice Clethra	5 gal
HNB3	3	Hydrangea macrophylla 'Nikko Blue' / Nikko Blue Hydrangea	2 gal
HFS	10	Hypericum frondosum 'Sunburst' / Sunburst Hypericum	3 gal
ICH1	5	Ilex crenata 'Helleri' / Heller Japanese Holly	5 gal
IGD2	10	Ilex glabra 'Densa' / Inkberry Holly	3 gal
IGS	1	Ilex glabra 'Shamrock'	5 gal
JSB	14	Juniperus sabina 'Buffalo' / Buffalo Juniper	3 gal
LA2	4	Leucothoe axillaris / Coastal Leucothoe	3 gal
RXC	10	Rhododendron x 'Yaku Crete' / Crete Rhododendron	5 gal
TMD	11	Taxus media 'Densiflora' / Dense Yew	5 gal

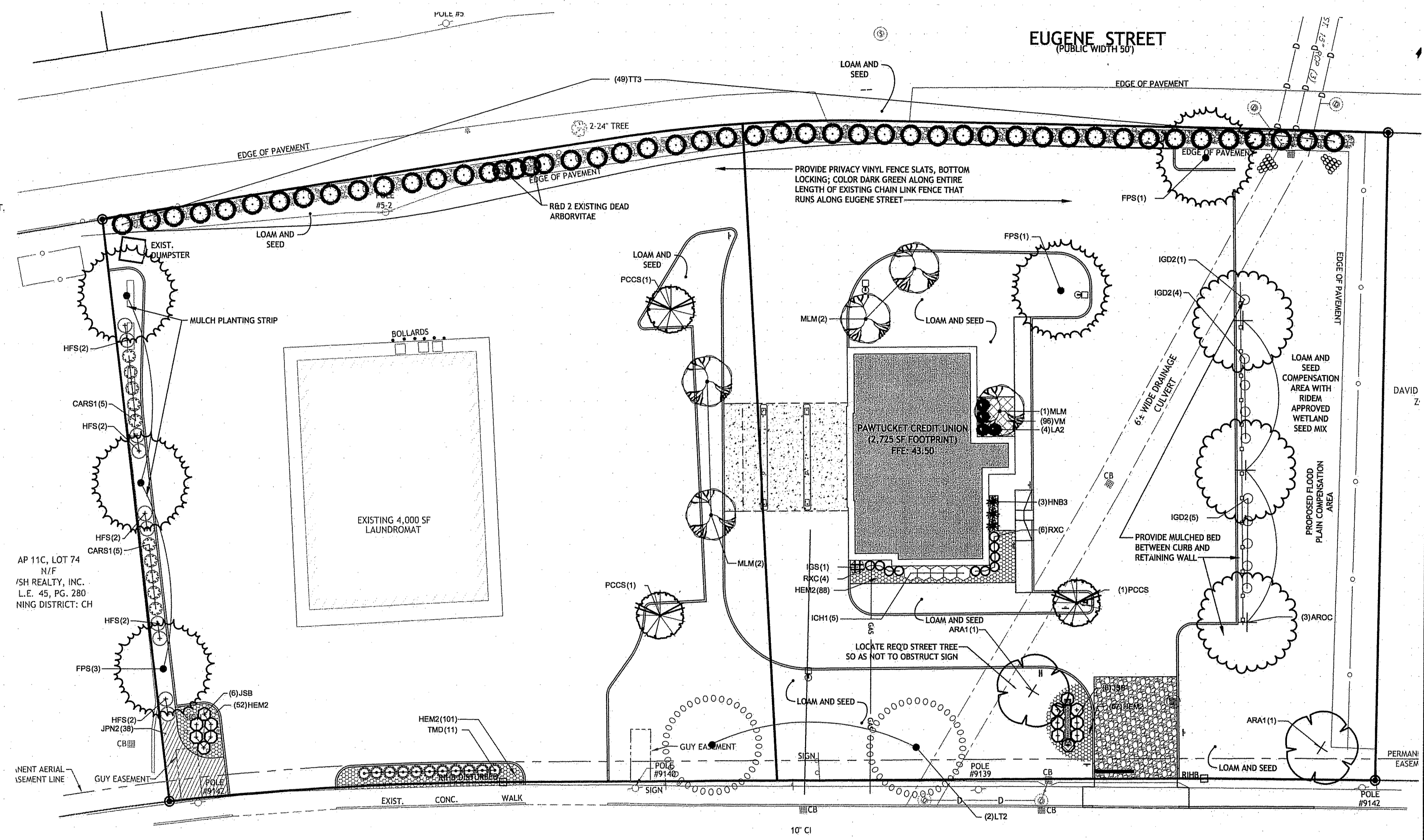
GROUND COVERS CODE QTY BOTANICAL NAME / COMMON NAME CONT

JPN2	38	Juniperus procumbens 'Nana' / Japanese Garden Juniper	12" - 18" @ 36" oc
VM	96	Vinca minor / Common Periwinkle	flat @ 12" oc

PERENNIALS CODE QTY BOTANICAL NAME / COMMON NAME CONT

HEM2	308	Hemerocallis hybrid 'Stella de Oro' / Stella de Oro Daylily	bulb @ 18" oc
------	-----	---	---------------

NOTE: SEE SHEET 10 FOR EAST GREENWICH LANDSCAPE ORDINANCE REQUIREMENTS



**LANDSCAPE PLAN**

1" = 20'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED AUG 25 2010 FILE # 10-0257  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Charles A. [Signature]*

**JCE**  
JOE CASALI ENGINEERING, INC.  
CIVIL, SITE DEVELOPMENT, TRANSPORTATION  
DRAINAGE, WETLANDS, IBDS, TRAFFIC, FLOODPLAIN  
300 POST ROAD, WARWICK, RI 02888  
(401) 844-1322

**PAWTUCKET CREDIT UNION**  
5661 POST ROAD  
EAST GREENWICH, RHODE ISLAND  
AP 11 LOTS 72 & 73

REVISIONS:

NO.	DATE	DESCRIPTION
1	3/15/10	MASTER PLAN SUBMISSION RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

DESIGNED BY: GEC  
DRAWN BY: WMLJR  
CHECKED BY: JAC  
DATE: 2/12/2010  
PROJECT NO: 05-571

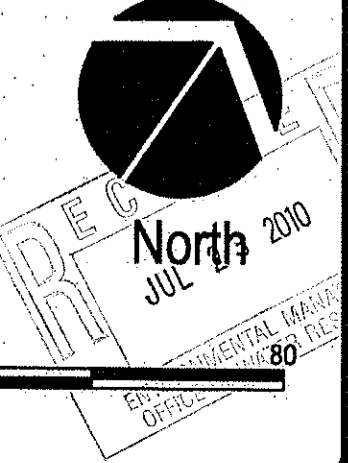
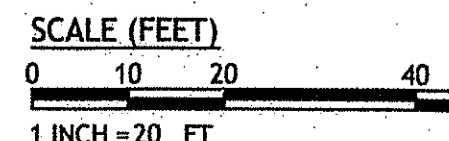
PRELIMINARY, NOT FOR CONSTRUCTION

**LANDSCAPE PLAN**

**SHEET 9 OF 15**



LANDSCAPE ARCHITECT:  
**DIANE C. SOULE & ASSOCIATES, ASLA**  
LANDSCAPE ARCHITECTURE • GRAPHICS • DESIGN  
Smithfield, Rhode Island 401.231.0736 e-mail: diane@DCSA.ws  
www.dianesouleandassociates.com



Q:\05-57 PCU05-571 East Greenwich\ACAD\PCU-EG [PLANSET].dwg Jun. 30, 2010 10:16am

TOWN OF EAST GREENWICH CODE OF ORDINANCES Development and Subdivision Review Regulations

**PARKING LOT LANDSCAPING - PCU CREDIT UNION & LAUNDROMAT COMBINED**

Description	Required	Provided
Landscaped area	15% for parking lots with more than 50 spaces (15% of 66,267 sq ft = 9,940 sq ft)	Yes (13,590 sq ft)
Islands	Terminal islands at end of rows	No
Island width	6 feet wide	No
# of trees per parking stalls	1 tree planted for each 15 spaces (70 spaces or 5 trees)	Yes (7 trees)
# of trees per gross sq ft of paved area	1 tree / 2,000 sq ft (41,616 sq ft / 2,000 sq ft = 21 trees)	Yes (21 trees)
Tree height	10 feet minimum	Yes
Tree species	No one tree species may account for more than 1/2 of trees planted	Yes

(Appendix A Town of East Greenwich Specifications & standards for Tree Preservation and Planting in New Subdivisions)

**LANDSCAPING - PCU CREDIT UNION & LAUNDROMAT COMBINED**

Description	Required	Provided
Street tree location	Between 2.5 feet and 5 feet along edge of ROW	Yes (5 ft bed provided)
Tree spacing	40 to 50 feet on center	No
Tree size at installation	2 1/2 inch to 3 inch caliper	Yes

**SIGNS (ARTICLE VII 260-28 G)**

Description	Required	Provided
Landscaping under freestanding or monument signs	Planting 2 feet radially from supports	Yes

TOWN OF EAST GREENWICH CODE OF ORDINANCES Development and Subdivision Review Regulations

**PARKING LOT LANDSCAPING - LAUNDROMAT**

Description	Required	Provided
Landscaped area	10% for parking lots with less than 50 spaces (10% of 29,490 sq ft = 2,949 sq ft)	Yes (3,690 sq ft)
Islands	Terminal islands at end of rows	No
Island width	6 feet wide	No
# of trees per parking stalls	1 tree planted for each 15 spaces (36 spaces or 3 trees)	Yes (3 trees)
# of trees per gross sq ft of paved area	1 tree / 2,000 sq ft (34,996sq ft / 2,000 sq ft = 18 trees)	No (6 trees)
Tree height	6 feet minimum	Yes
Tree species	No one tree species may account for more than 1/2 of trees planted	No (not met due to few # of trees)

(Appendix A Town of East Greenwich Specifications & standards for Tree Preservation and Planting in New Subdivisions)

**LANDSCAPING - LAUNDROMAT**

Description	Required	Provided
Street tree location	Between 2.5 feet and 5 feet along edge of ROW	5 ft bed provided; no trees
Tree spacing	40 to 50 feet on center	No (no trees provided)
Tree size at installation	2 1/2 inch to 3 inch caliper	Yes

**SIGNS (ARTICLE VII 260-28 G)**

Description	Required	Provided
Landscaping under freestanding or monument signs	Planting 2 feet radially from supports	Yes

TOWN OF EAST GREENWICH CODE OF ORDINANCES Development and Subdivision Review Regulations

**PARKING LOT LANDSCAPING - PCU CREDIT UNION**

Description	Required	Provided
Landscaped area	10% for parking lots with less than 50 spaces (10% of 36,777 sq ft = 3,677 sq ft)	Yes (9,900 sq ft)
Islands	Terminal islands at end of rows	Yes
Island width	6 feet wide	Yes
# of trees per parking stalls	1 tree planted for each 15 spaces (36 spaces or 3 trees)	Yes (4 trees)
# of trees per gross sq ft of paved area	1 tree / 2,000 sq ft (20,880 sq ft / 2,000 sq ft = 11 trees)	Yes (13 trees)
Tree height	6 feet minimum	Yes
Tree species	No one tree species may account for more than 1/2 of trees planted	Yes

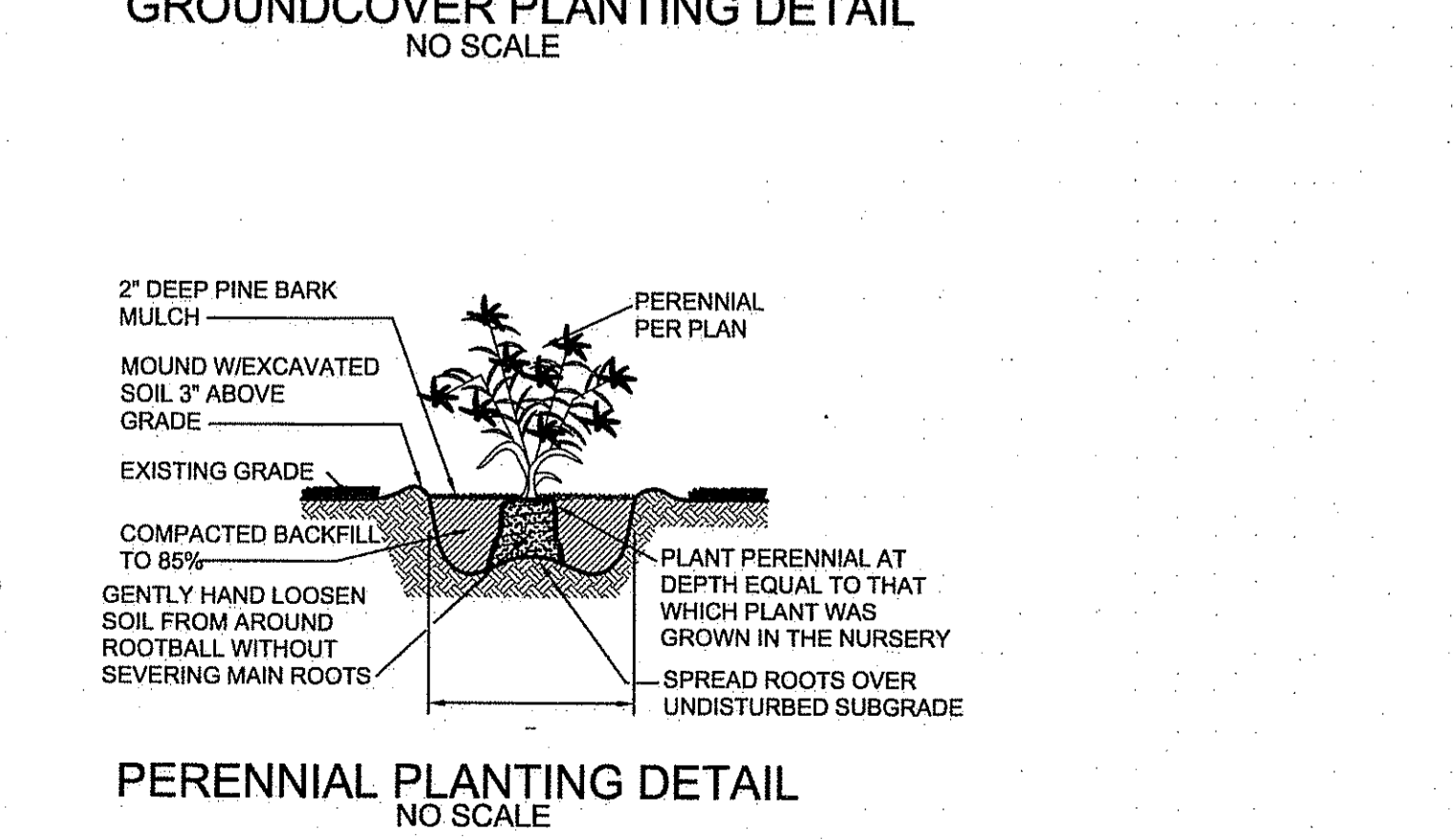
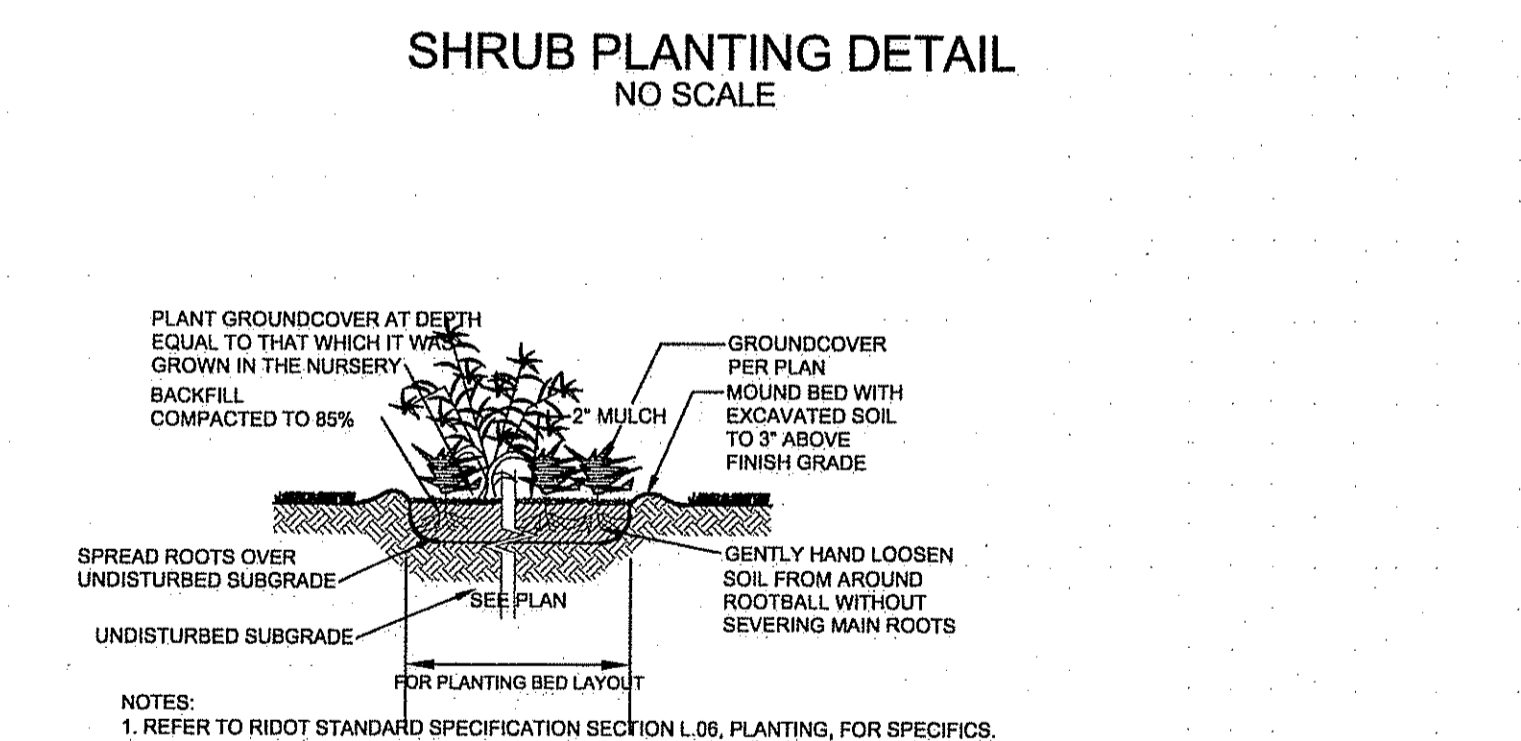
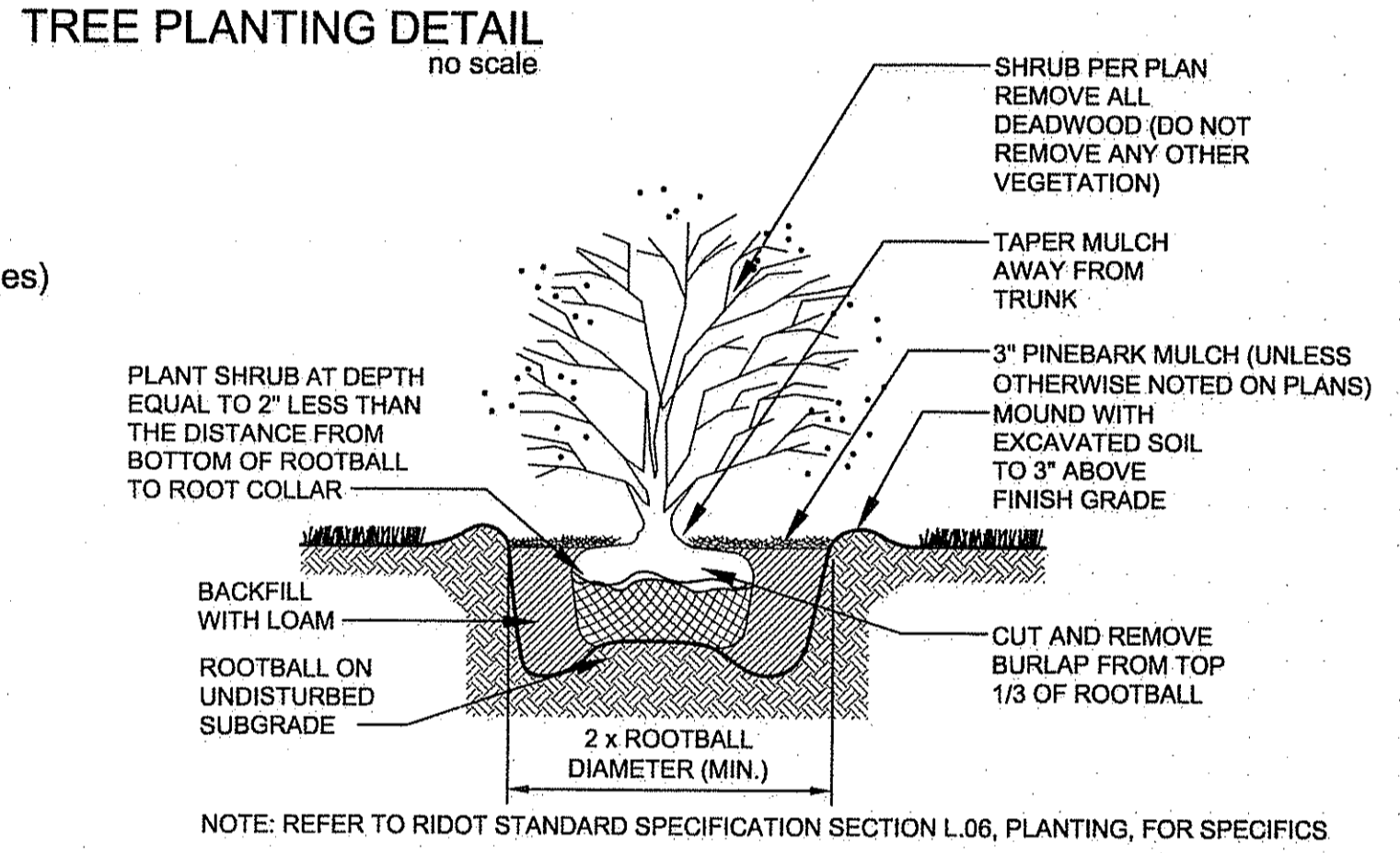
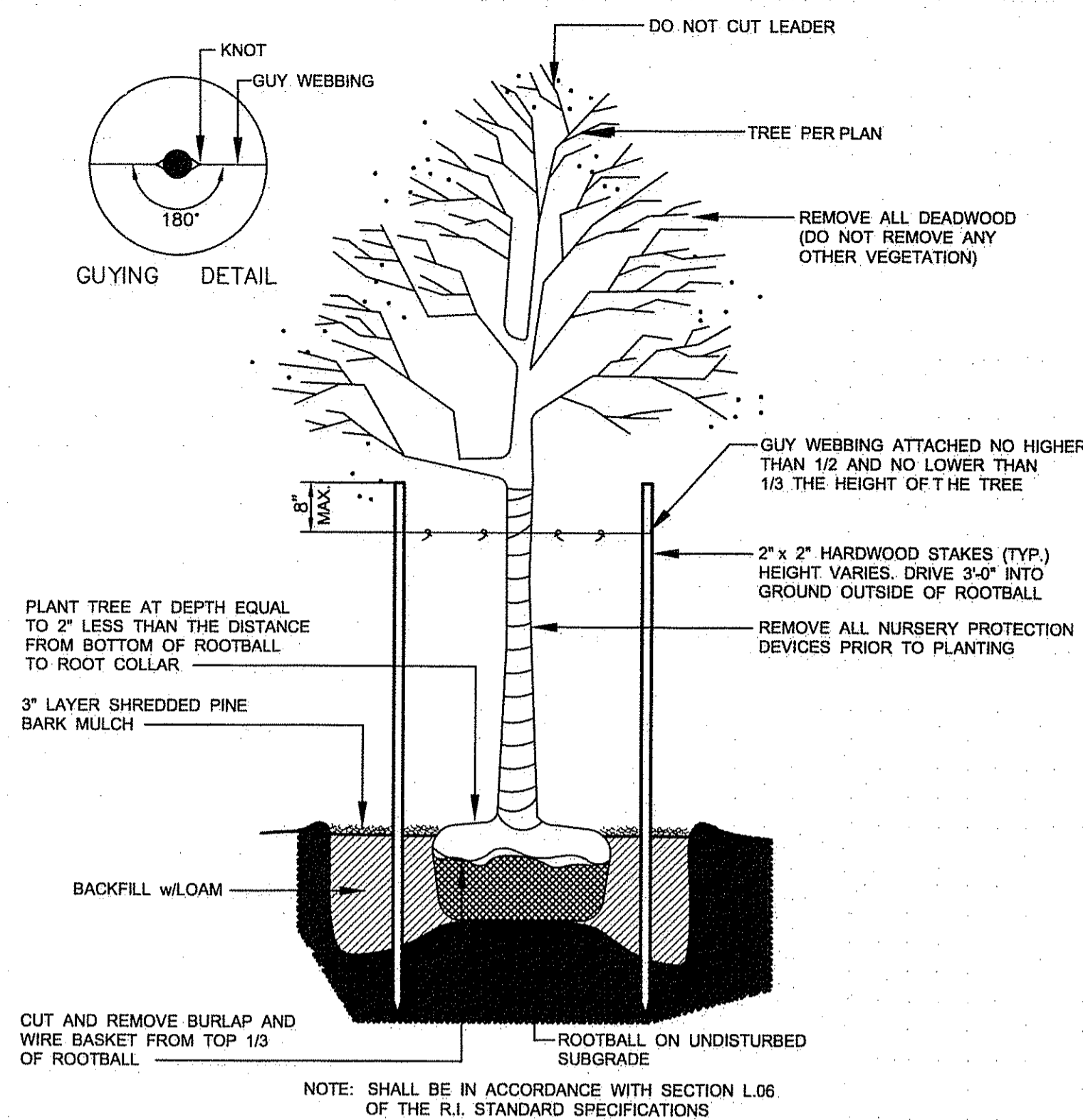
(Appendix A Town of East Greenwich Specifications & standards for Tree Preservation and Planting in New Subdivisions)

**LANDSCAPING - PCU CREDIT UNION**

Description	Required	Provided
Street tree location	Between 2.5 feet and 5 feet along edge of ROW	Yes
Tree spacing	40 to 50 feet on center	Yes
Tree size at installation	2 1/2 inch to 3 inch caliper	Yes

**SIGNS (ARTICLE VII 260-28 G)**

Description	Required	Provided
Landscaping under freestanding or monument signs	Planting 2 feet radially from supports	Yes



**PLANTING NOTES**

- Plant material shall be furnished and installed as indicated; including all labor, materials, plants, equipment, incidentals and clean-up.
- The contractor shall be responsible for planting at correct grades and alignment. Layout to be approved by Owner's Representative prior to installation.
- Plants shall be typical of their species and variety; have normal growth habits; well developed branches, densely foliated, vigorous root systems and be free from defects and injuries.
- All plant material shall be guaranteed by the contractor to be in vigorous growing condition. Provisions shall be made for a growth guarantee of at least one year from date of acceptance for trees and shrubs. Replacements shall be made at the beginning of the first succeeding planting season. All replacements shall have a guarantee equal to that stated above.
- Contractor shall report any soil or drainage conditions considered detrimental to the growth of plant material.
- In so far as it is practical, plant material shall be planted on the day of delivery. In the event this is not possible, the Contractor shall protect stock not planted. Plants shall not remain unplanted for longer than a three day period after delivery. Any plants not installed during this period will be rejected.
- Quality and size of plants, spread of roots, and size of balls shall be in accordance with ANSI 260 (REV. 1980) "American standard for Nursery Stock" as published by the American Association of Nurserymen, Inc.
- All plants shall be in amended topsoil that is thoroughly watered and tamped as back filling progresses. Planting mix to be as shown on planting details. Large planting areas to incorporate fertilizer and soil conditioners.
- Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be handled from the bottom of the ball only.
- Planting operations shall be performed during periods within the planting season when weather and soil conditions are suitable and in accordance with accepted local practice. Plants shall not be installed in topsoil that is in a muddy or frozen condition. All plant material shall be sprayed with "wilt-pruf" or equal per manufacturer's instructions.
- No plant except groundcovers, shall be planted less than two feet from existing structures and sidewalks.
- Set all plants plumb and straight. Set at such a level that a normal or natural relationship to the crown of the plant with the ground surface will be established. Locate plant in the center of the pit.
- All injured roots shall be pruned utilizing clean, sharp tools to make clean ends before planting. It is advisable to prune approximately 1/3 of the root growth of large trees (2" caliper and over) by the removal of superfluous branches, those which cross, those which run parallel, etc. Main leader of trees will not be cut back. Long side branches, however, must be shorten.
- Each tree and shrub shall be pruned in accordance with standard horticultural practice to preserve natural character of plant. Pruning shall be done with clean, sharp tools.
- Trees shall be supported immediately after planting. All trees six (6) inches and over in caliper shall be guyed. Smaller trees shall be staked, Guying wires and stakes shall be installed as indicated. The landscape contractor shall remove staking, guying and tree wrap at the end of the one year maintenance and guarantee period.
- The trunks of all trees shall be wrapped as soon as possible after planting according to standard procedures and as indicated.
- All planting beds shall be mulched with a three (3) inch layer of shredded pine bark mulch.
- New planting areas and sod shall be adequately irrigated or watered to establish the proposed plants and lawn.
- Prior to the issuance of any Certificate of Occupancy, the proposed landscape as shown on the approved Landscape Plan must be installed, inspected and approved by the Owner's Representative or City/Town Landscape Architect if applicable. The inspector shall take into account seasonal considerations in this regard as follows. The planting of trees, shrubs, vines or groundcovers as required by or associated with a subdivision or Site Plan approval by the Planning Board or Zoning Board of Appeals shall be installed during the following planting seasons:

PLANTS	March 15 to October 15
LAWNS	March 15 to June 15 September 15 to October 15

Furthermore, the following tree varieties shall not be planted during the fall planting season due to the hazards associated with planting these trees in this season. If grown in containers, this list shall not apply.

- |                         |                   |
|-------------------------|-------------------|
| Acer rubrum             | Populus varieties |
| Betula varieties        | Prunus varieties  |
| Carpinus varieties      | Pyrus varieties   |
| Crataegus varieties     | Quercus varieties |
| Koeleruteria            | Salix varieties   |
| Liquidambar varieties   | Tilia tomentosa   |
| Liriodendron tulipifera | Zelkova varieties |
| Platanus acerfolia      |                   |

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED AUG 25 2010 FILE # 10-0057  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION

Any plantings installed in conflict with this requirement must receive the written approval of the Landscape Architect prior to planting. Failure to comply with this requirement will require removal of the planting in question. This requirement does not apply to seeding or sodding or plantings specifically for soil stabilization purposes. The planting associated with any lot given a Certificate of Occupancy outside of these periods shall be provided during the previous or next appropriate season.

20. All disturbed areas to be treated with four (4) inches of topsoil and seeded in accordance with permanent stabilization methods indicated on Soil Erosion Sediment Control sheet.

PAWTUCKET CREDIT UNION

5661 POST ROAD  
EAST GREENWICH, RHODE ISLAND  
AP 11 LOTS 72 & 73

REVISIONS:

NO.	DATE	DESCRIPTION
1	3/15/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SEWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

DESIGNED BY: GEC  
DRAWN BY: WMLJR  
CHECKED BY: JAC  
DATE: 2/12/2010  
PROJECT NO: 05-571

PRELIMINARY, NOT FOR CONSTRUCTION

**LANDSCAPE DETAILS**

**SHEET 10 OF 15**



LANDSCAPE ARCHITECT:  
**DIANE C. SOULE & ASSOCIATES, A.S.A.**  
LANDSCAPE ARCHITECTURE • GRAPHICS • DESIGN  
Smithfield, Rhode Island 401.231.0736 e-mail: diane@DCSA.ws  
www.dianesouleandassociates.com

Q:\05-57 PCU\05-571 East Greenwich\ACAD\PCU-EG (PLANSET).dwg, Jun. 30, 2010 10:17am





KENT COUNTY WATER NOTES

3.1.2 INSPECTION:

- 3.1.2.1 INSPECTION OF ALL INSTALLATIONS SHALL BE CONDUCTED TO ENSURE COMPLIANCE WITH THE RULES AND REGULATIONS OF THE KENT COUNTY WATER AUTHORITY. KENT COUNTY WATER AUTHORITY EMPLOYEES SHALL BE GIVEN FULL ACCESS TO THE PROJECT AT ALL TIMES FOR INSPECTION OR OBSERVATION OF CONSTRUCTION IN PROGRESS AS DESCRIBED BY THE AUTOMATICALLY GENERATED RECORD DRAWINGS OF THE SYSTEM AS PER THE APPROVED DESIGN DRAWINGS OR KENT COUNTY WATER AUTHORITY'S RULES AND REGULATIONS WILL CAUSE IMMEDIATE CESSATION OF ALL CONSTRUCTION WORK. INSPECTION FEES MUST BE PAID IN FULL PRIOR TO COMMENCING INSTALLATION WORK.
3.1.2.2 THE OWNER OR DEVELOPER IS SOLELY RESPONSIBLE TO CONTROL THEIR CONTRACTOR IN THE PROGRESSION OF WORK TO ENSURE THE WATER INFRASTRUCTURE INSTALLATION IS ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN THE KENT COUNTY WATER AUTHORITY REGULATIONS AND APPROVED DESIGN. ANY PART OF THE INSTALLATION FOUND TO BE NONCOMPLIANT SHALL BE IMMEDIATELY CORRECTED AT THE OWNER'S COST TO THE SATISFACTION OF KENT COUNTY WATER AUTHORITY.
3.1.2.3 THE FULL TIME RESIDENT CONSTRUCTION OBSERVATION MAY BE REQUIRED AT THE DISCRETION OF THE GENERAL MANAGER/CHIEF ENGINEER BASED ON CONDITIONS OF THE DESIGN, SITE OR COMPLEXITY OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PAY ALL COSTS ASSOCIATED WITH FULL TIME CONSTRUCTION OBSERVATION OR SERVICES AS DEPOSIT REFLECTING THE ESTIMATED COST OF THE FULL TIME CONSTRUCTION OBSERVATION SERVICES SHALL BE PAID IN FULL PRIOR TO COMMENCING ANY WORK ON THE WATER INFRASTRUCTURE INSTALLATION.
3.1.2.4 THE OWNER OR DEVELOPER IS SOLELY RESPONSIBLE TO CONTROL THEIR CONTRACTOR IN THE PROGRESSION OF WORK TO ENSURE THE WATER INFRASTRUCTURE INSTALLATION IS ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN THE KENT COUNTY WATER AUTHORITY REGULATIONS AND APPROVED DESIGN. ANY PART OF THE INSTALLATION FOUND TO BE NONCOMPLIANT SHALL BE IMMEDIATELY CORRECTED AT THE OWNER'S COST TO THE SATISFACTION OF THE KENT COUNTY WATER AUTHORITY.
3.1.2.5 DESIGN DRAWINGS ANNOTATED WITH CONSTRUCTION RECORD INFORMATION CONCURRENT WITH CONSTRUCTION PROGRESS SHALL BE MAINTAINED AT THE JOB SITE AND SHALL BE AVAILABLE FOR THE INSPECTOR OF THE KENT COUNTY WATER AUTHORITY TO VIEW AT ANY TIME. DRAWINGS AND RECORDS SHALL BE LEGIBLY MARKED AND RECORD ACTUAL DESCRIPTIONS OF INSTALLATION SPECIFICATIONS, CHANGES, MODIFICATIONS, PRODUCT DATA, MEASUREMENTS, AND DETAILS NOT SHOWN ON THE ORIGINAL DRAWING SUBMITTALS. FAILURE TO HAVE THESE DOCUMENTS AVAILABLE FOR REVIEW OR FAILURE TO HAVE THE PROPER DOCUMENTS PREPARED OR UPDATED WILL CAUSE IMMEDIATE CESSATION OF ALL CONSTRUCTION WORK AND DISCONNECTION FROM THE KENT COUNTY WATER SYSTEM UNTIL SUCH TIME AS POSITIVE ACTION TO COMPLY WITH THOSE REQUIREMENTS HAS BEEN TAKEN TO SATISFY THE AUTHORITY.

3.21 INSTALLATION METHODS:

- 3.2.1.1 TRENCHES FOR ALL WATER CONVEYANCES, MAINS, PIPES OR LINES SHALL BE IN ACCORDANCE WITH THE DUCTILE IRON PIPE RESEARCH ASSOCIATION'S INSTALLATION MANUAL AND ANSI/AWWA C600 AND ALL OTHER REQUIREMENTS OF THE KENT COUNTY WATER AUTHORITY.
3.2.1.2 WATER MAINS AND SERVICES SHALL BE INSTALLED WITH A MINIMUM COVER OF 5 FEET TO THE CROWN OF THE PIPE IN AN AMERICAN WATER WORKS ASSOCIATION TYPE 5 TRENCH. WHERE UNSUITABLE MATERIAL IS FOUND AT OR BELOW THE GRADE OF THE PLACE OF PIPE OR FITTING, THE UNSUITABLE MATERIAL SHALL BE REMOVED TO THE REQUIRED WIDTH AND DEPTH AND REPLACED WITH THOROUGHLY COMPACTED BANK RUN GRAVEL ABOVE THE CROWN OF THE PIPE. MATERIAL SHALL BE DEPOSITED ACROSS THE FULL WIDTH OF THE TRENCH TO THE FULL DEPTH OF THE TRENCH. THE TRENCH SHALL BE COMPACTED TO 95% STANDARD PROCTOR. THE FINISH 12" SHALL BE PROCESSED GRAVEL COMPACTED TO TWO (2) EQUAL COEFFICIENTS TO 95% STANDARD PROCTOR.
3.2.1.3 TRENCH LENGTHS SHALL BE FITTED MECHANICALLY. PIPE CONNECTIONS PROPERLY SIZED TO FIT THE PROPOSED WATER MAIN. MANHOLES SHALL BE VERTICAL ON JOINTS BETWEEN ALL BARRELS, TOP SLAB, BASES, AND ENTRANCES SLAB JOINTS SHALL BE SEALED USING A FLEXIBLE BUTYL RESIN SEALANT CONFORMING TO FEDERAL AND ASTM D-998 OR EQUAL. THE JOINTS SHALL BE COMPLETELY COVERED AND AT A DEAD END SECTIONS.
3.2.1.4 VALVES SHALL BE INSTALLED AT ALL INTERSECTIONS IN A CONFIGURATION THAT ALLOWS FOR ISOLATION IN ALL DIRECTIONS. ON LONG LENGTHS OF MAIN, VALVES SHALL BE INSTALLED AT A MINIMUM OF 100 FEET FROM EACH END AND AT A DEAD END SECTIONS.
3.2.1.5 PIPE MAY BE DEFLECTED IN ORDER TO MAKE MINOR ADJUSTMENTS IN THE ALIGNMENT. ALL DEFLECTIONS SHALL BE A MAXIMUM OF 75% OF THE MANUFACTURER'S SAFE ALLOWABLE DEFLECTION PER PIPE LENGTH AS INDICATED IN THE FOLLOWING TABLES. IT IS REQUIRED THAT BENDS IN THE PIPE BE ACCOMPLISHED BY FITTINGS WHEREVER POSSIBLE.

Table with 4 columns: ALLOWABLE DEFLECTION FOR 18-FOOT LENGTHS OF PIPE, SIZE OF PIPE (IN), PUSH-ON JOINT (IN), MECH. JOINT (IN). Rows include 4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 30, 36, 42, 48, 54, 60, 72, 84, 96, 108, 120, 144, 180, 216, 240, 300, 360, 420, 480, 540, 600, 720, 840, 960, 1080, 1200, 1440, 1800, 2160, 2400, 3000, 3600, 4200, 4800, 5400, 6000, 7200, 8400, 9600, 10800, 12000.

- 3.2.1.12 WHENEVER PIPE REQUIRES CUTTING TO FIT THE LINE, THE WORK SHALL BE DONE ONLY BY EXPERIENCED (STATE OF RHODE ISLAND LICENSED CONTRACTOR) OR PLUMBER, AND IN SUCH A MANNER AS TO LEAVE A SMOOTH END AT RIGHT ANGLES TO THE AXIS OF THE PIPE AND ON PIPE THAT IS CENTER ROUNDED DESIGNED SPECIFICALLY FOR FIELD CUTTING, THE CUT ENDS SHALL BE SEVELED TO CONFORM TO THE MANUFACTURED SPOOT END. PARTICULAR CARE SHALL BE EXERCISED TO PREVENT DAMAGING THE LINING WHEN CUTTING GROUND LINED CAST IRON PIPE. JOINTING OF PIPE OR FITTINGS SHALL BE MADE ONLY BY PERSONS THOROUGHLY SKILLED IN THIS WORK. FOR PIPE DIAMETERS 16" AND LARGER, PIPE CUTTING SHALL BE DONE BY MACHINE.
3.2.1.13 BLOCKING UNDER THE PIPE SHALL NOT BE PERMITTED EXCEPT UNDER A CONCRETE OR METAL BRIDGE OR OVER A CONCRETE OR METAL BRIDGE.
3.2.1.14 METALIZED DETECTABLE CABLE WITH OR WITHOUT OR GREAT DUCTILE IRON COATING AND PRINTED WITH "CAUTION WATER LINE BURIED BELOW" SHALL BE UTILIZED OVER ALL MAINS. SET TO A DEPTH FROM FINISHED GRADE OF NO MORE THAN 1'-0".
3.2.1.15 A TEMPORARY PATCH SHALL BE INSTALLED OVER THE FRESHLY BACKFILLED TRENCH IN AN EXISTING STREET OR SIDEWALK USING HOT BITUMINOUS CONCRETE. IT SHALL BE AT LEAST 3" THICK CONSISTING OF EQUAL THICKNESS LAYERS OF MODIFIED BINDER AND TYPE 1 WEARING COURSE. AFTER 60 DAYS, THE TEMPORARY PATCH SHALL BE REMOVED AND REPLACED WITH A PERMANENT PATCH.
3.2.1.16 ALL MAINS AND SERVICES SHALL BE INSTALLED WITH A FULL SIZE LINE VALVE FOLLOWED BY A FULL LENGTH OF PIPE WITH AN ADDITIONAL 3-FOOT SECTION OF PIPE AND END WITH A (M) CAP, THRUST BLOCK AND 2-INCH STYLE BOLT UP ASSEMBLY.
3.2.1.17 WATER DISTRIBUTION MAINS SHALL BE DESIGNED IN A GRID OR LOOP TYPE SYSTEM TO PREVENT THE OCCURRENCE OF DEAD END LINES. WHEN THE POTENTIAL FOR DEAD END LINES DEVELOPS, THE CONTRACTOR SHALL MAKE SURE THAT THE MAIN THROUGH THE DEVELOPMENT TO THE NEXT EXISTING DISTRIBUTION LINE MEASURES IS REQUIRED TO REDUCE THE SIGNIFICANT LOSS OF WATER AND LABOR HOURS EXPENDED DURING MULTIPLE ATTEMPTS TO SUFFICIENTLY CLEAN THE NEW MAINS TO MEET THE WATER QUALITY STANDARD SET BY THE US EPA PRIMARY DRINKING WATER REGULATIONS.
3.2.1.18 ADEQUATE TEMPORARY PROVISIONS SHALL BE MADE TO CARE FOR THE MAINS INTERFERED WITH BY THE WORK. ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT SEWAGE OR OTHER CONTAMINATING MATTER FROM ENTERING THE WATER MAIN. ANY BROKEN OR DAMAGED UTILITY CONNECTION OR SERVICES (WATER, SEWER, GAS, TELEPHONE, ELECTRIC, ETC.) SHALL BE REPAIRED AT THE EXPENSE OF THE PARTY RESPONSIBLE FOR THE DAMAGE.
3.2.1.19 UNDERGROUND STRUCTURES SHALL BE THOROUGHLY SUPPORTED OR OTHERWISE SUPPORTED TO MAINTAIN UNINTERRUPTED SERVICE.
3.2.1.20 PIPE THAT IS REMOVED SHALL REMAIN THE PROPERTY OF THE PARTY WHOSE RESPONSIBILITY IT SHALL BE TO PROPERLY DISPOSE OF IT. FOR EXAMPLE, IF A PRIVATE CONTRACTOR IS AUTHORIZED TO DO THIS WORK, THE CONTRACTOR IS THE RESPONSIBLE PARTY AND MUST DISPOSE OF THE REMOVED PIPE AT THE CONTRACTOR'S OWN EXPENSE.
3.2.1.21 TO PERSON, EXCEPT AN AUTHORIZED REPRESENTATIVE OF THE KENT COUNTY WATER AUTHORITY OR UNDER THEIR OBSERVATION, WILL BE ALLOWED UNDER ANY CIRCUMSTANCES TO TAP THE MAINS OR DISTRIBUTION PIPES, INSERT CORPORATION STOPS THEREIN, SET OR REMOVE METERS ON SERVICE PIPES, OR INTERFERE WITH WATER GATES OR CURB STOPS.
3.2.1.22 TO NEW PIPING SYSTEM SHALL BE PERMANENTLY CONNECTED TO AN EXISTING KENT COUNTY WATER AUTHORITY MAIN UNTIL AFTER OBTAINING SUCCESSFUL RESULTS FROM WATER QUALITY TESTS FROM A STATE OF RHODE ISLAND CERTIFIED LABORATORY MEETING THE STANDARDS SET BY RI DEPARTMENT OF HEALTH, AND WATER QUALITY TEST INDICATES ARE CONSISTENT WITH THE QUALITY OF WATER IN THE KENT COUNTY WATER AUTHORITY SYSTEM, INCLUDING HETEROLOGIC PLATE COUNT RESULTS.
3.2.1.24 TEMPORARY FITTINGS FOR FLUSHING, PRESSURE TESTING AND CHLORINATION ARE REQUIRED FOR ALL NEWLY INSTALLED MAINS. NEW MAINS SHALL BE CAPPED AT EACH END. EACH END SHALL BE PROVIDED WITH A TEMPORARY RISER OF SUFFICIENT LENGTH TO REACH FINISHED GRADE AND AN ISOLATION VALVE. THE TAP SHALL BE FITTED WITH AN ISOLATION VALVE, TWO FEET OF MAIN THAT IS RESTRAINED, RESTRAINED CAP AND TEMPORARY RISER OF SUFFICIENT LENGTH TO REACH FINISHED GRADE AND AN ISOLATION VALVE. RISERS AND ISOLATION VALVES SHALL BE SIZED TO PROVIDE A FLUSHING WATER VELOCITY OF AT LEAST 2.5 FEET PER SECOND BASED ON THE INSTALLED MAIN SIZE. A METER AND TESTABLE CURB STOP IS REQUIRED TO BE PLACED ON EACH END OF THE MAIN. THE MAIN SHALL BE INSTALLED IN THE EXISTING AND NEW MAIN PLOT TO OBTAINING WATER FOR ANY PROCESS. DEPENDING ON THE SIZE OF THE MAIN, MULTIPLE TAPS AND BACKFLOW PREVENTERS MAY BE REQUIRED TO PROVIDE THE REQUIRED VELOCITIES WITHIN THE NEW MAIN.

3.22 PRESSURE TEST:

- 3.2.2.1 ALL SERVICES, WATER MAINS, BYPASS PIPING AND APPURTENANCES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ANY TEST. A PRESSURE TEST SHALL BE CONDUCTED ON ALL COMPLETED WATER LINES PRIOR TO ACCEPTANCE. THE PROPOSER, AT HIS OR HER OPTION, TO THE KENT COUNTY WATER AUTHORITY, SHALL ACCOMPLISH THE PRESSURE TEST. AN AUTHORIZED REPRESENTATIVE OF THE KENT COUNTY WATER AUTHORITY SHALL WITNESS THE TEST.
3.2.2.2 EACH VALVE SECTION OF THE MAIN SHALL BE FILLED SLOWLY WITH WATER AT A RATE NOT GREATER THAN ONE FOOT OF HEAD PER SECTION PER SECOND. ALL AIR SHALL BE RELEASED BY CORPORATION STOPS, HYDRANTS AND INSTALLED AUTOMATIC AIR RELEASE FITTINGS. ALL AIR MUST BE REMOVED AND THE FULL PIPE SHALL SIT IDE FOR A PERIOD OF 24 HOURS PRIOR TO COMMENCEMENT OF THE PRESSURE TEST. PIPING INSTALLATIONS GREATER THAN 1,000 FEET SHALL BE ACCOMPLISHED IN SECTIONS NO GREATER THAN 1,000 FEET.
3.2.2.3 THE TEST PRESSURE SHALL BE BROUGHT UP TO AT LEAST 50% HIGHER THAN THE NORMAL ANTICIPATED WORKING PRESSURE, OR 150 PSI, WHICHEVER IS GREATER, AND MAINTAINED FOR A CONTINUOUS TWO (2) HOUR PERIOD. AN AUTHORIZED REPRESENTATIVE OF THE KENT COUNTY WATER AUTHORITY SHALL WITNESS THE TEST. ANY LOSS OF PRESSURE INDICATES A LEAK, AND NO PIPE INSTALLATION WILL BE ACCEPTED UNTIL THE LEAK IS CORRECTED.
3.2.2.4 PROPER THRUSTING OF ALL PIPING, CAPS, HYDRANTS, AND APPURTENANCES SHALL BE PROVIDED TO RESIST THE IMPOSED TEST PRESSURE.

3.23 CHLORINATION/DISINFECTION:

- 3.2.3.1 ALL NEW OR REPAIRED POTABLE WATER SYSTEM DISTRIBUTION MAINS, SERVICE PIPE AND THE NECESSARY CONNECTING PIPES, FITTINGS, CONTROL VALVES, AND ALL APPURTENANCES IN OR ADJACENT TO ANY RESIDENCE, BUILDING OR PREMISES SHALL BE PURGED OF DELETERIOUS MATTER AND SHALL BE DISINFECTED PRIOR TO UTILIZATION OR PERMANENT CONNECTION TO THE KENT COUNTY WATER AUTHORITY SYSTEM. THAT PORTION OF THE CUSTOMER'S SERVICE PIPE AFTER THE CURB STOP SHALL BE DISINFECTED UNDER THE SUPERVISION OF THE LOCAL PLUMBING OFFICIAL. THE OWNER MUST PROVIDE WRITTEN LABORATORY CERTIFIED DOCUMENTATION OF THE DISINFECTION TEST RESULTS TO THE KENT COUNTY WATER AUTHORITY BEFORE MAKING ANY PERMANENT CONNECTION TO THE KENT COUNTY WATER AUTHORITY SYSTEM OR BEFORE REACTIVATING WATER SERVICE CAN BE AUTHORIZED. PLEASE REFER TO APPENDICES FOR PROGRAM REQUIREMENTS OF THE CUSTOMER WATER SERVICE DISINFECTION POLICY.
3.2.3.2 THE PROPOSER OR THE CONTRACTOR FOR THE PROPOSER, IN ACCORDANCE WITH CHAPTER 5, DISTRIBUTION SYSTEM CHLORINATION, AMERICAN WATER WORKS ASSOCIATION MANUAL #20, SHALL PERFORM CHLORINATION. TABLE CHLORINATION SHALL NOT BE ALLOWED.
3.2.3.3 THE OWNER OR CUSTOMER IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE DISINFECTION PROCESS OR PROCEDURE.
3.2.3.4 THE DISINFECTION MUST RESULT IN ELIMINATING FROM THE VARIOUS PARTS OF THE NEW PIPE LINE ANY EVIDENCE OF THE EXISTENCE, THEREIN, OF BACTERIA INDICATIVE OF ANY CONTAMINATION, AS DETERMINED BY TESTS OF THE BACTERIAL CONTENT OF SAMPLES OF WATER TAKEN FROM THE NEW WATER MAIN. THE DISINFECTION MAY BE ACCOMPLISHED BY INTRODUCING INTO ALL THE VARIOUS PARTS OF THE NEW WATER MAINS, A LIQUID SOLUTION CONTAINING LA AVAILABLE CHLORINE IN SUCH VOLUME THAT THE RATE OF DOSAGE TO THE WATER MAINS SHALL BE AT LEAST 50 PARTS PER MILLION OF AVAILABLE CHLORINE. TABLE CHLORINATION IS NOT ALLOWED. THE CONTACT PERIOD FOR THIS DESIGN AND A LONGER PERIOD WILL BE REQUIRED IF RESIDUAL CHLORINE SHOW IT TO BE NECESSARY FOR PROPER DISINFECTION.
3.2.3.5 THE NEW WATER SYSTEM SHALL BE FLUSHED OUT AFTER DISINFECTION AND REFILLED WITH FRESH WATER. ALL CHLORINATED WATER USED IN THE DISINFECTION PROCESS SHALL BE DE-CHLORINATED PRIOR TO DISCHARGING AREA.
3.2.3.6 WATER MUST SIT IN THE MAIN FOR AT LEAST 24 HOURS PRIOR TO TAKING A TEST SAMPLE. WATER UTILIZED FOR THIS PURPOSE, FLUSHING OR PRESSURE TESTING, WHICH IS OBTAINED DIRECTLY FROM THE KENT COUNTY WATER AUTHORITY SYSTEM, MUST FLOW THROUGH AN ISOLATED CONNECTION TO THE KENT COUNTY WATER AUTHORITY SYSTEM WITH AN APPROVED METHOD. TESTABLE BACKFLOW PREVENTERS AND JUMPER LINES SHALL BE INSTALLED WHERE NECESSARY. THE INSTALLER SHALL FURNISH AND INSTALL SUITABLE TEMPORARY TESTING PLUGS, CAPS, PUMPS, PIPE CONNECTIONS AND OTHER APPURTENANCES, AS NECESSARY, TO OBTAIN SAMPLES AT POINTS NO FURTHER THAN 1,000 FEET APART.
3.2.3.7 AFTER FINAL FLUSHING AND BEFORE THE NEW WATER MAIN IS CONNECTED TO THE DISTRIBUTION SYSTEM, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES FOR CHLORINATION (HPC), TAKEN FROM EACH END OF THE MAIN, SHALL BE COLLECTED FROM THE TRENCH OR FROM THE CURB STOP OF THE NEW MAIN. AT LEAST ONE SAMPLE SHALL BE COLLECTED EVERY 1000 FT. OF NEW MAIN, PLUS ONE SET OF TWO SAMPLES FROM THE END OF THE LINE. AT LEAST ONE SET OF TWO SAMPLES SHALL BE TAKEN FROM EACH BRANCH. SAMPLES SHALL BE COLLECTED BY KENT COUNTY WATER AUTHORITY EMPLOYEES, GIVEN A TWO-DAY NOTICE, AND TESTED BY A LABORATORY APPROVED BY KENT COUNTY WATER AUTHORITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAMPLE COLLECTION AND TESTING. THE TEST SCHEDULE CURRENT SCHEDULE IN EFFECT AT THE TIME OF TESTING. PAYMENT SHALL BE PRIOR TO SAMPLE COLLECTION BY THE KENT COUNTY WATER AUTHORITY. THE WATER SAMPLE TEST RESULTS MUST INDICATE THAT THE WATER QUALITY IN THE NEW MAIN IS CONSISTENT IN QUALITY WITH THE KENT COUNTY WATER AUTHORITY SYSTEM WATER.

4.1 BACKGROUND:

CONFIGURATION MANAGEMENT FOR THE SYSTEM WIDE STANDARDIZATION OF REPAIR PARTS, APPURTENANCES, AND CONSTRUCTION MATERIALS ARE NECESSARY TO MAINTAIN REASONABLE SPARE PARTS INVENTORIES FOR EMERGENCY REPAIRS AND CONTROL THE RELATED COST TO THE BENEFIT OF THE CUSTOMER. FOR THESE REASONS, THE KENT COUNTY WATER AUTHORITY HAS SELECTED MATERIAL STANDARDS THAT PROVIDE THE GREATEST SERVICE LIFE, RELIABILITY, AND ARE CONSISTENT WITH OVERALL INFRASTRUCTURE COMPATIBILITY. ALL MATERIALS USED WITHIN THE KENT COUNTY WATER AUTHORITY SHALL BE MADE IN UNITED STATES OF AMERICA OR SPECIALLY APPROVED OTHERWISE AND CONFORM TO THE STANDARD REQUIREMENTS CONTAINED IN THIS SECTION.

4.2 SERVICES:

- 4.2.1 SERVICE PIPE SIZES 4 TO 2 INCH SHALL BE EITHER COPPER OR H.D.P.E. PIPE. COLOR MUST BE BLUE WITH A VIRGIN CLEAR NATURAL CENTER. CONTINUOUS IDENTIFICATION MARKINGS OVER THE ENTIRE LENGTH OF THE PIPE WITH SEALED ENDS AND COILED IN ROLLS FROM 100 FT. MINIMUM. WHEN H.D.P.E. SERVICE PIPE IS CHOSEN, A SOLID SLEEVE SHALL BE INSTALLED AT EACH CONNECTION AND A 12-FOOT PIPE "K" COPPER SHALL BE INSTALLED AT THE POINT OF ENTRY INTO ANY BUILDING OR STRUCTURE, AND ON THE INLET AND OUTLET OF A METER PIT.
4.2.1.1 H.D.P.E. SHALL CONFORM TO ASTM D1248 TYPE II, GRADE P34, CLASS A, CATEGORY 5, COLOR BLUE WITH VIRGIN CLEAR NATURAL CENTER. AWWA C901, 200
4.2.1.2 COPPER PIPE SHALL BE TYPE "K" COPPER TUBING DESIGNED FOR POTABLE WATER SERVICE ANSI/ASTM B88. SERVICES 3 INCH AND ABOVE SHALL BE DUCTILE IRON AND CONFORM TO THE REQUIREMENTS FOR MAIN MATERIALS AND INSTALLATION.

4.3 METERS:

- 4.3.1 ALL METERS SHALL BE COMPATIBLE WITH THE SYSTEM UTILIZED BY THE KENT COUNTY WATER AUTHORITY. THE NEPTUNE E-CODER 900: SYSTEM IS STANDARDIZED IN RESPECT TO CONNECTION. THIS/AWMA C150/A21.51, ANSI/AWWA C150/A21.50 CLASS 52 DOUBLE GASKET MORTAR LINED. GASKETS SHALL CONFORM TO ANSI/AWWA C111/A21.11. ALL METERS ARE TO READ IN CUBIC FEET. MUST BE CAPABLE OF BEING READ THE RADIO FREQUENCY SYSTEM IN PLACE AT THE KENT COUNTY WATER AUTHORITY. REGISTER SHALL CONTAIN A 9-DIGIT LOCAL REGISTRATION AND 4-8 DIGITS CAN BE COMMUNICATED FOR BILLING PURPOSES.
4.3.2 ANY METER LOCATED IN A METER PIT OR CHAMBER SHALL BE EQUIPPED WITH REGISTER PROTECTED SPECIALLY FOR MOISTURE PROTECTION AND "PIT" STYLE APPLICATION.
4.3.3 ALL FIRE SERVICE METERS SHALL BE IN ACCORDANCE WITH THE KENT COUNTY WATER AUTHORITY AND NFPA STANDARDS WITH UL/FM APPROVED STRAINER DESIGNED FOR FIRE SERVICE.

4.5 AIR RELEASE MANHOLE:

AIR RELEASE MANHOLES SHALL BE WATERIGHT PRE-CAST CONCRETE CONSTRUCTED WITH WATERIGHT CAST IRON MANHOLE FRAME AND DIAMOND CHECK PATTERN COVER. COVER SHALL HAVE THE WORD "WATER" CAST UPON IT IN 4" CAPITAL LETTERS. THE CHAMBER, FRAME, COVER, AND STRUCTURAL COMPONENTS SHALL BE DESIGNED TO WITHSTAND A H-20 WHEEL LOAD. THE FRAME AND WATERIGHT COVER ASSEMBLY MUST CONFORM TO THE REQUIREMENTS OF THE KENT COUNTY WATER AUTHORITY FOR SIZE AND DIMENSION. MANHOLE SHALL BE OUTFITTED WITH CORROSION RESISTANT, NON-SLIP STEPS.

4.6 THRUST RESTRAINT:

- 4.6.1 RESTRAINING DEVICES SHALL BE FITTED ON ALL MAINS. THRUST BLOCKS SHALL BE CONSTRUCTED FROM CONCRETE 3000 PSI AT 28 DAYS, SIZED ACCORDING TO THE SIZE OF PIPELINE, TYPE OF UTILIZATION, WATER PRESSURE AND THE CHARACTERISTICS OF THE SOIL. THE CONCRETE SHALL BE PROPERLY FORMED AS TO SLOPE FOR THE GIVEN APPLICATION AND BEARING WIDTH. THE CONCRETE SHALL BE IN CONTACT ONLY WITH THE FITTING, NOT WITH THE PIPE ITSELF, FASTENERS OR THE JOINT. CONCRETE CURING TIME SHALL BE A MINIMUM OF 7 DAYS.
4.6.2 THRUST RESTRAINT MAY BE VIA RESTRAINED JOINT, DUCTILE IRON PIPE MEETING ANSI/AWWA C151/A21.51 AND ANSI/AWWA C111/A21.11, RESTRAINED JOINT PIPE LENGTHS (RESTRAINED DATA) SHALL BE SUFFICIENT TO RESTRAIN THRUST IMPARTED BY 1/12 TIMES THE ANTICIPATED WORKING PRESSURE BUT NOT LESS THAN 150 PSI WITH A 1.5 FACTOR OF SAFETY.
4.6.3 GLAND AND RESTRAINT COMPONENTS MADE FROM DUCTILE IRON AND SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53. CAPABLE OF BEING USED WITH STANDARDIZED MECHANICAL JOINT BELT CONFORMING TO AWWA C11 AND C113. MULTIPLE WEDGE STYLE RESTRAINT MECHANISM WITH POWDER COATED HEAT-TREATED DUCTILE IRON BOLTS. PROPER ACTUATION ENSURED BY TORQUE LIMITING TWIST OFF NUTS. MINIMUM SAFETY FACTOR 2 TO 1. RESTRAINED JOINTS SHALL BE SUITABLE FOR 150 PSI WORKING PRESSURE AND FABRICATED OF HEAVY SECTION DUCTILE IRON CASTINGS. GASKETS SHALL MEET THE MATERIAL REQUIREMENTS OF ANSI/AWWA C111 FOR MECHANICAL JOINT GASKETS. BOLTS AND NUTS AS REQUIRED SHOULD BE LOW CARBON STEEL CONFORMING TO ASTM A307, GRADE B.

4.7 WATER PIPE:

- 4.7.1 ALL DUCTILE IRON PIPE AND APPURTENANCES SHALL BE FROM A SINGLE MANUFACTURER SOURCE. FOREIGN PIPE FITTINGS AND GASKETS ARE STRICTLY FORBIDDEN. DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA C151/A21.51, ANSI/AWWA C150/A21.50 CLASS 52 DOUBLE GASKET MORTAR LINED. GASKETS SHALL CONFORM TO ANSI/AWWA C111/A21.11. ALL PIPES SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. ALL PIPES SHALL BE CEMENT-MORTAR LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA C104/A21.14 EXCEPT THE LINING THICKNESS SHALL BE TWICE THAT SPECIFIED. JOINTS FOR PIPE SHALL BE WITH STAY-TIGHT STYLE ONLY OR MECHANICAL JOINT CONFORMING TO ANSI/AWWA C111. ALL MECHANICAL JOINT PIPES SHALL BE SUPPLIED WITH ACCESSORIES. RESTRAINED JOINTS SHALL BE SUITABLE FOR 150 PSI WORKING PRESSURE AND FABRICATED OF HEAVY SECTION DUCTILE IRON CASTINGS. GASKETS SHALL MEET THE MATERIAL REQUIREMENTS OF ANSI/AWWA AND MADE IN THE USA.
TYPE: DUCTILE IRON MEETING ANSI/AWWA C151/A21.51 AND ANSI/AWWA C150/A21.50.
CLASS: SPECIAL THICKNESS CLASS 52.
LINING: MECHANICAL JOINT - MEETING ANSI/AWWA C151/A21.51.
END JOINTS: PUSH ON - TYTON STYLE ONLY - MEETING ANSI/AWWA C111/A21.51.
MECHANICAL JOINT - MEETING ANSI/AWWA C111/A21.11.
EXTERIOR: ANSI/AWWA C104/A21.14.
COATING: ALL REQUIREMENTS OF EPA FOR POTABLE WATER.
INTERIOR: RUBBER MEETING ANSI/AWWA C111/A21.11.
GASKET: NITRILE (IN CONTAMINATED SOIL).

4.8 PIPE FITTINGS:

- DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C153/A21.53. FOREIGN FITTINGS, GASKET GLANDS AND ACCESSORIES ARE STRICTLY FORBIDDEN. ALL FITTINGS SHALL HAVE A BITUMINOUS OUTSIDE COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. ALL FITTINGS SHALL BE CEMENT-MORTAR LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA C104/A21.14 EXCEPT THE LINING THICKNESS SHALL BE TWICE THAT SPECIFIED. JOINTS FOR FITTINGS SHALL BE MECHANICAL JOINT CONFORMING TO ANSI/AWWA C111. ALL MECHANICAL JOINT FITTINGS SHALL BE SUPPLIED WITH GLANDS AND NUTS.
TYPE: 4 INCH TO 12 INCH DUCTILE IRON COMPACT MEETING ANSI/AWWA C153/A21.53. 16 INCH AND LARGER DUCTILE IRON MEETING ANSI/AWWA C153/A21.53 OR ANSI/AWWA C101/A21.10.
PRESSURE CLASS: PIPE FITTINGS SHALL HAVE A PRESSURE RATING OF 300 FOR 24-INCH AND SMALLER AND 250 PSI FOR 30-INCH AND LARGER. FITTINGS SHALL AT A MINIMUM HAVE THE SAME PRESSURE RATING AS THE CONNECTING PIPE.
RUBBER MEETING ANSI/AWWA C111/A21.11.
NITRILE (IN CONTAMINATED SOIL).

4.9 VALVES:

- 4.9.1 VALVES SHALL BE CAST IRON OR DUCTILE IRON 250-PSI WORKING PRESSURE. OPERATING STEM SHALL BE PROVIDED WITH A MINIMUM OF TWO (2) O-RING STEM SEALS. BONNET AND GLAND BOLTS/WASHERS SHALL BE STAINLESS STEEL. WEDGES SHALL BE FULLY ENCAPSULATED. THE INTERIOR AND EXTERIOR SURFACES OF ALL CAST IRON OR DUCTILE IRON COMPONENTS SHALL BE FUSION BOND EPOXY COATED, 8 MILS MINIMUM THICKNESS. EPOXY COATING MUST BE UNDAMAGED WITH NO CHIPS OR ABRASION. FIELD TOUCH-UP OF INTERIOR COATING IS NOT ALLOWED. FIELD TOUCH-UP OF EXTERIOR COATING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL VALVES SHALL BE FULLY TESTED AND INSTALLED IN ACCORDANCE WITH THE USE OF EPOXY COATED VALVES AS NECESSARY TO ENSURE THAT NO COATING SYSTEM DAMAGE OCCURS. AT A MINIMUM FIELD SLINGS OR BELTS SHALL BE USED FOR ALL HANDLING. ALL EPOXY-COATED VALVES SHALL BE SHALLETED AND PROPERLY SHIPPED WRAPPED UPON DELIVERY TO ASSURE COATING SYSTEM INTEGRITY IS NOT COMPROMISED.
4.9.1.1 RESILIENT SEAT: RUBBER SERVICE NON-RISING STEM. ABOVE GRADE SERVICE OR PITS OS & Y WITH HAND WHEEL OR NON-RISING STEM WITH HAND WHEEL.
TYPE: WORKING PRESSURE: 250 PSI.
OPENING: LEFT OR RIGHT DEPENDING ON SYSTEM LOCATION.
STEM: 420 STAINLESS STEEL OR EQUAL WITH MINIMUM 60,000 PSI YIELD STRENGTH.
FASTENERS: STAINLESS STEEL, TYPE 304 FOR ALL OF THE VALVE.
COATINGS: INTERIOR & EXTERIOR TO BE COATED WITH FUSION BONDED HOLIDAY FREE EPOXY COATING MINIMUM 8 MILS NOMINAL THICKNESS MEETING OR EXCEEDING AWWA C550.
WEDGES: FULLY RUBBER ENCAPSULATED CAST IRON, DUCTILE IRON OR BRONZE GATE MEETING AWWA C509.
OPERATING NUT: 2 INCH SQUARE OPERATING NUT WITH HEXAGON STAINLESS STEEL BOLT FASTENER.
STEM SEAL: MINIMUM TWO O-RING SEALS.
CONNECTION: MECHANICAL JOINT.
4.9.1.2 BUTTERFLY 16" AND LARGER: RUBBER SEATED TIGHT CLOSING OR EXCEEDING AWWA C504 UNDERGROUND SERVICE. CLASS 150 OR 250 DEPENDING UPON SERVICE
TYPE: APPLICATION REQUIREMENTS.
STEM: DUCTILE IRON OR HEAVY STRENGTH CAST IRON WITH EITHER MECHANICALLY FASTENED BUNA RUBBER SEAL OR TYPE 316 STAINLESS STEEL SEAL SEAT RING.
ACTUATOR: DUCTILE IRON OR BUNA N RUBBER. RUBBER SEAT CAN BE EITHER BONDED OR MECHANICALLY FASTENED AND SHALL NOT INTERRUPT FLOW. DUAL LINK CONSTRUCTION WITHIN A SEALED HOUSING FOR UNDERGROUND USE DESIGNED FOR SUBMERGENCE IN WATER TO 25 FEET OF HEAD AND MEETING AWWA C504. VALVE NUT SHALL BE MINIMUM OF TWO INCH SQUARE MADE OF DUCTILE IRON AND FASTENED TO STEM. OPERATOR TO BE TRAVELING NUT TYPE CAPABLE OF WITHSTANDING AN OVERLOAD TORQUE OF 450 FOOT-POUNDS WITHOUT DAMAGE TO THE VALVE OR OPERATOR.
OPENING: LEFT OR RIGHT DEPENDING ON SYSTEM LOCATION.
FASTENERS: GRADE 18-8 STAINLESS STEEL, TYPE 304 FOR ALL FASTENERS OF THE VALVE.
COATINGS: INTERIOR & EXTERIOR TO BE COATED WITH FUSION BONDED HOLIDAY FREE EPOXY MINIMUM THICKNESS 8 MILS NOMINAL MEETING OR EXCEEDING AWWA C-550.
CONNECTION: MECHANICAL JOINT OR FLANGED.
4.9.1.3 TAPPING SLEEVES AND VALVES: TYPE: RESILIENT SEAT GATE VALVES DESIGNED SPECIFICALLY FOR TAPPING.
STEM: STAINLESS STEEL SLEEVES SHALL USE GRID PATTERN VIRGIN RUBBER ASTM 2000, FULL 360-DEGREE PIPE COVERAGE. DUCTILE IRON SLEEVES SHALL USE MECHANICAL JOINT WITH RUBBER SEALS. MAXIMUM WORKING PRESSURE: 4 INCH-12 INCH 250 PSI, 16 INCH-24 INCH 200 PSI.
FASTENER: GRADE 18-8 TYPE 304 STAINLESS STEEL.
4.9.1.4 SWING CHECK VALVES SHALL UTILIZE IRON-BODY BRONZE-MOUNTED DESIGN. THEY MAY EMPLOY METAL TO METAL OR COMPOSITION TO METAL SEAT CONSTRUCTION.
4.9.1.4.1 WORKING PRESSURE SHALL BE A MINIMUM OF 175 PSI FOR VALVES UP TO 12 INCH AND 150 PSI FOR 16 INCH TO 24 INCH.
4.9.1.4.3 SWING CHECK VALVES SHALL BE MOUNTED IN A HORIZONTAL POSITION. DIRECT ACCESS TO THE VALVE SHALL BE ACCOMPLISHED BY USING A PRE-CAST CONCRETE MANHOLE WITH HEAVY-DUTY CAST IRON MANHOLE FRAME AND SOLID COVER. CONCRETE STRUCTURE AND COVER SHALL BE CAPABLE OF WITHSTANDING AN ASHTO H-20 LOAD. THE COVER SHALL HAVE A DIAMOND CHECK PATTERN WITH THE WORD "WATER" (IN UPPER CASE LETTERS) CAST UPON IT. THE MANHOLE SHALL BE OUTFITTED WITH CORROSION RESISTANT, NON-SLIP STEPS.
4.9.2 VALVE ROAD BOX: ALL VALVES (EXCEPT SWING CHECK) SHALL BE EQUIPPED WITH A CAST IRON "BUFFALO" TYPE, ADJUSTABLE (SLIDING) VALVE ROAD BOX. THE UPPER PORTION SHALL BE 24 INCH LONG AND THE BOTTOM SECTION 48 INCH LONG. A DOUBLE SOLID RING SEAT WITH THE WORD "WATER" (IN CAPS) CAST UPON IT.
4.9.2.1 THE UPPER PORTION OF THE BOX SHALL BE MANUFACTURED WITH A HEAVY FLANGE HAVING SUFFICIENT BEARING AREA TO PREVENT SETTLEMENT. THE LOWER SECTION SHALL BE CONFIGURED TO ENCLOSE THE VALVE STUFFING BOX WITH AN INSIDE DIAMETER OF AT LEAST 1/4 INCH. THE INSTALLED END BOX SHALL BE CAPABLE OF VERTICAL ADJUSTMENT OF A MINIMUM OF 6 INCH WHILE MAINTAINING AN OVERLAP OF AT LEAST 4 INCH BETWEEN SECTIONS.

4.10 HYDRANTS:

TO MAINTAIN SYSTEM WIDE STANDARDIZATION, HYDRANTS SHALL BE DRY BARREL TYPE WITH 5/4 INCH VALVE. HYDRANTS SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE," AWWA C-502, AND SHALL IN ADDITION MEET THE SPECIFIC REQUIREMENTS OF THE KENT COUNTY WATER AUTHORITY. HYDRANTS SHALL BE INSTALLED AT EACH CONNECTION AND A 12-FOOT PIPE "K" COPPER SHALL BE INSTALLED AT THE POINT OF ENTRY INTO ANY BUILDING OR STRUCTURE, AND ON THE INLET AND OUTLET OF A METER PIT. MECHANICAL JOINT CONNECTION FOR 6" DUCTILE IRON PIPE, ONE 4" INCH STEAMER NOZZLE AND TWO 2 1/2 INCH HOSE NOZZLES, BRASS OR BRASS SLEAVED VARIANS, NATIONAL STANDARD THREAD. HYDRANT NUT SHALL BE INSTALLED AT EACH CONNECTION AND A 12-FOOT PIPE "K" COPPER SHALL BE INSTALLED AT THE POINT OF ENTRY INTO ANY BUILDING OR STRUCTURE, AND ON THE INLET AND OUTLET OF A METER PIT. THE HYDRANTS SHALL BE DESIGNED TO PERMIT ROTARY MOVEMENT OF THE UPPER BARREL. ANY NUMBER OF COMPRESSOR DESIGN, OPENING AND CLOSING WITH THE WATER PRESSURE. SHUTTING DOWN SERVICE OR REMOVING FLANGE BOLTS AND NUTS. HYDRANT MUST OPEN TURNING OPERATING NUT TO LEFT (COUNTERCLOCKWISE) AND MUST BE MARKED WITH AN ARROW AND WORKING PRESSURE. HYDRANT SHALL BE INSTALLED WITH A MINIMUM THICKNESS 8 MILS MEETING OR EXCEEDING AWWA C550. EPOXY COATING MUST BE UNDAMAGED WITH NO CHIPS OR ABRASION. LOWER BARREL SHALL BE BITUMINOUS COATED OR EPOXY COATED. FIELD TOUCH-UP OF EPOXY INTERIOR COATING IS NOT ALLOWED. FIELD TOUCH-UP OF EXTERIOR SURFACES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOATING SPECIFICATIONS ONLY. CONTRACTORS SHALL USE SPECIAL HANDLING AND INSTALLATION PRECAUTIONS WITH THE USE OF EPOXY COATED APPURTENANCES AS NECESSARY TO ENSURE THAT NO COATING SYSTEM DAMAGE OCCURS. ALL EPOXY APPURTENANCES FOUND MISHANDLED AT DELIVERY OR DURING INSTALLATION SHALL BE REJECTED AND REMOVED FROM THE JOB SITE. ABOVE GRADE EXPOSED HYDRANT COMPONENTS SHALL BE COATED WITH ONE COAT ZINC RICH URETHANE PRIMER & 2.5-3.5 MILS DRY FILM THICKNESS. HYDRANT BARREL, BREAKAWAY FLANGE, SHALL BE COATED WITH PHEROLIC URETHANE ENAMEL GLOSS SILVER, TWO COATS @ 4.0 MILS DRY FILM THICKNESS EACH COAT. TOPCOAT SHALL PRODUCE A CONSISTENT AND HOLIDAY FREE COLOR COATING. CAPS AND BONNET SHALL RECEIVE TWO COATS OF GLOSS SAFETY RED, PHENOLIC URETHANE ENAMEL. 4.0 MILS DRY FILM THICKNESS EACH COAT. COATING SHALL PRODUCE A CONSISTENT AND HOLIDAY FREE COAT OF GLOSS SAFETY RED. SAND BLASTED TO SSPC-SP-6 PRIOR TO COATINGS. ALL ORIGINALS SHALL BE SHIPPED WITHOUT CHAINS. MANUFACTURE SHALL PROVIDE A TEN-YEAR WARRANTY ON ALL PARTS AND WORKMANSHIP. HYDRANT REPAIR NUTS SHALL BE ORIGINAL MANUFACTURE SPECIFICALLY DESIGNED FOR THE HYDRANT. ALL HYDRANTS SHALL ALSO BE MANUFACTURED TO MEET OR EXCEED ADDITIONAL DESIGN AND OPERATING CHARACTERISTICS LISTED BELOW.

- 5 1/4 INCH VALVE OPENING/3 PORT STYLE, DRY BARREL.
OPEN LEFT.
DEPTH OF BURRY: 5'-0" MINIMUM FROM BURY LINE TO TOP FLANGE OF HYDRANT BOOT.
PORTS: TWO 2 1/4 INCH BRONZE HOSE PORTS 180° APART NST THREAD. ONE 4 1/4 INCH BRONZE PUMPER/STEAMER 90° FROM EACH HOSE PORT, NST THREAD.
BREAKAWAY: ALL HYDRANTS TO HAVE TRAFFIC BREAKAWAY FLANGE.
DRAIN WAYS: SLIDING DRAIN SEAL TYPE. DRAIN CHANNEL SHALL BE 360 DEGREES AND CONTAIN A MINIMUM OF TWO BRONZE OR BRASS SLEAVED OUTLET PORTS.
COATINGS: PRIOR TO PRIMING, SAND BLAST HYDRANT TO SSPC-SP-6 PRIMED WITH ZINC RICH URETHANE COMPATIBLE COATING. TOP COAT WITH TWO COATS OF GLOSS SAFETY RED. HYDRANT COMPONENTS SHALL BE COATED WITH ONE COAT ZINC RICH URETHANE PRIMER & 2.5-3.5 MILS DRY FILM THICKNESS. HYDRANT BARREL, BREAKAWAY FLANGE, SHALL BE COATED WITH PHEROLIC URETHANE ENAMEL GLOSS SILVER, TWO COATS @ 4.0 MILS DRY FILM THICKNESS EACH COAT. TOPCOAT SHALL PRODUCE A CONSISTENT AND HOLIDAY FREE COLOR COATING. CAPS AND BONNET SHALL RECEIVE TWO COATS OF GLOSS SAFETY RED, PHENOLIC URETHANE ENAMEL. 4.0 MILS DRY FILM THICKNESS EACH COAT. COATING SHALL PRODUCE A CONSISTENT AND HOLIDAY FREE COAT OF GLOSS SAFETY RED. SAND BLASTED TO SSPC-SP-6 PRIOR TO COATINGS. ALL ORIGINALS SHALL BE SHIPPED WITHOUT CHAINS. MANUFACTURE SHALL PROVIDE A TEN-YEAR WARRANTY ON ALL PARTS AND WORKMANSHIP. HYDRANT REPAIR NUTS SHALL BE ORIGINAL MANUFACTURE SPECIFICALLY DESIGNED FOR THE HYDRANT. ALL HYDRANTS SHALL ALSO BE MANUFACTURED TO MEET OR EXCEED ADDITIONAL DESIGN AND OPERATING CHARACTERISTICS LISTED BELOW.
EXTERIOR STEM: STAINLESS STEEL UPPER AND LOWER STEM. ALL WETTED PARTS SUCH AS SPRINGS, PINS AND FASTENERS, SHALL BE STAINLESS STEEL OR OTHER COMPATIBLE LEAD FREE NON CORROSIVE MATERIALS.
MAIN VALVE: HEAVY CAST IRON CORE FULLY ENCAPSULATED IN RUBBER OR MULTIPLE PIECE. SEAT MAY BE EITHER BRONZE OR STAINLESS STEEL.
WEATHER SHIELD AND CAP: DUCTILE IRON.
CHAINS: NO CHAINS TO BE SUPPLIED.

4.11 CORPORATION STOP:

- CORPORATION STOPS SHALL BE BALL TYPE WITH EITHER STAINLESS STEEL, SYNTHETIC COATED BRASS BALL OR NICKEL COATED BRASS BALL DESIGNED FOR POTABLE WATER SERVICE. EXCEPT TYPE 304 STAINLESS STEEL, BODY SHALL BE HEAVY CAST LEAD FREE "ENVIROBRASS" UNS ALLOY NUMBER C9520 ASTM B594-98A AND/OR MEET OR EXCEED THE LEAD LEACHING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 STANDARD. ALL CORPORATION STOPS SHALL MEET OR EXCEED DESIGN STANDARDS OF AWWA C800 ALONG WITH THE DESIGN AND OPERATING CHARACTERISTICS OF THE FOLLOWING:
TYPE: FORD OR EQUAL.
SIZES: 4 INCH, 1 INCH, 1 1/2 INCH, AND 2 INCH.
OPENING: OPEN LEFT.
END CONNECTIONS: COMPRESSION WITH NON-CORROSIVE GRIP RING MEETING ASTM B-159-BUNA N RUBBER AND CONDUCTIVITY RING. THREADED END SHALL BE AWWA CC TAPER THROU FOR DIRECT TAP.
MATERIAL: HEAVY CAST LEAD FREE "ENVIROBRASS" UNS ALLOY NUMBER C9520 ASTM B594-98A AND/OR AWWA C800/ASTM B-62 MEETING OR EXCEEDING THE LEAD LEACHING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 STANDARD.

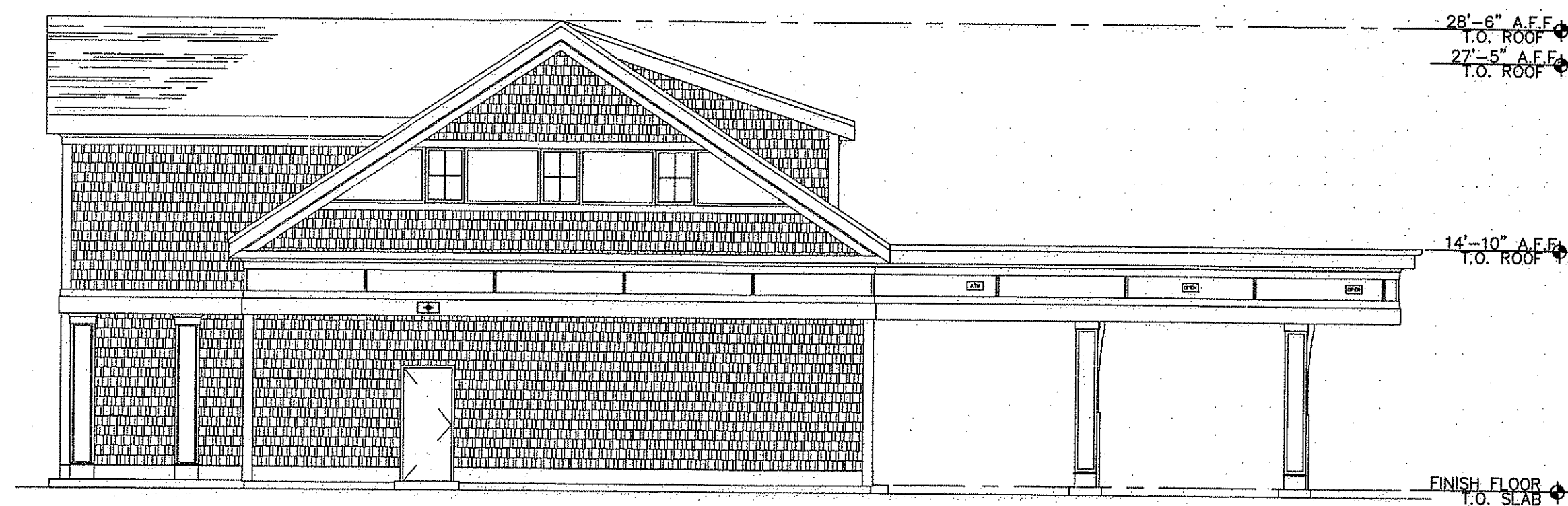
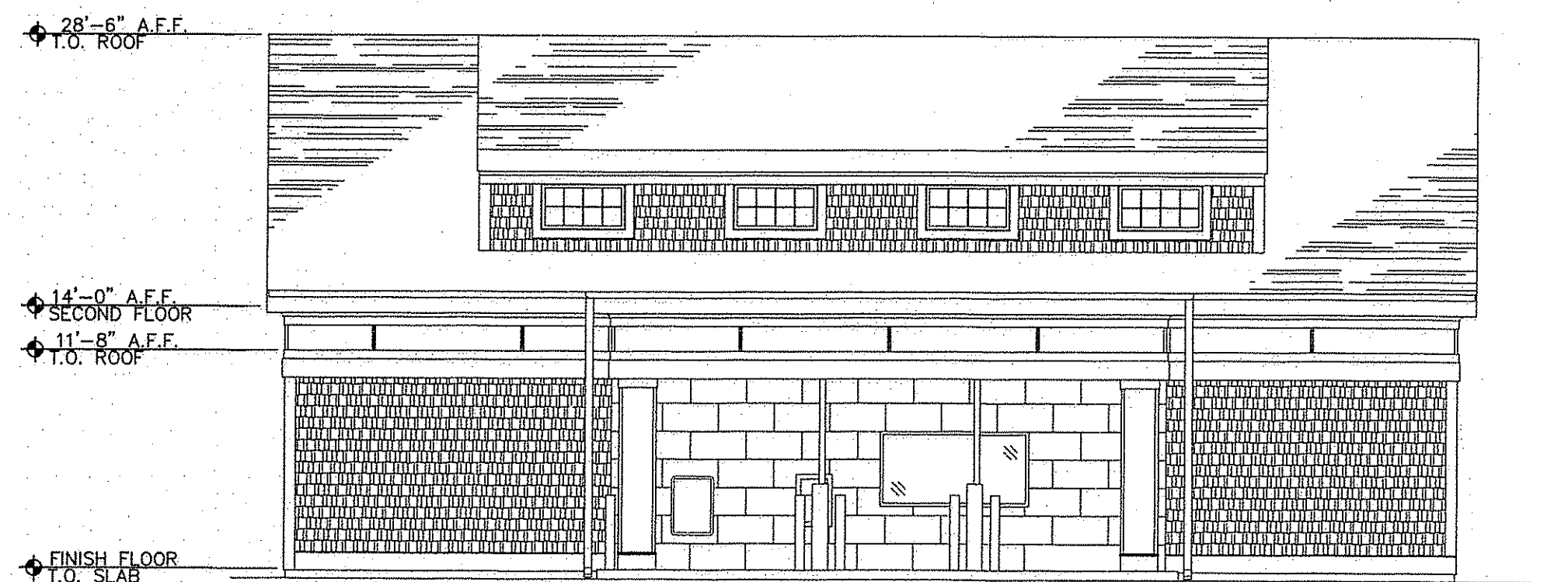
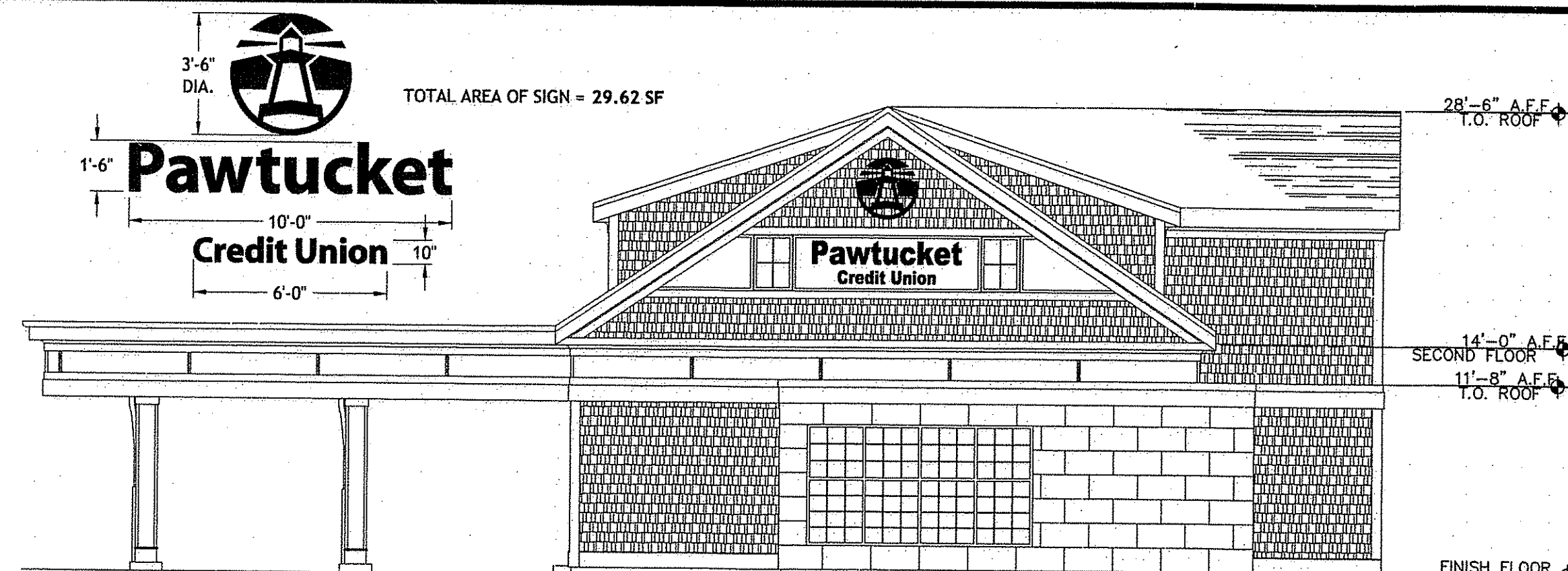
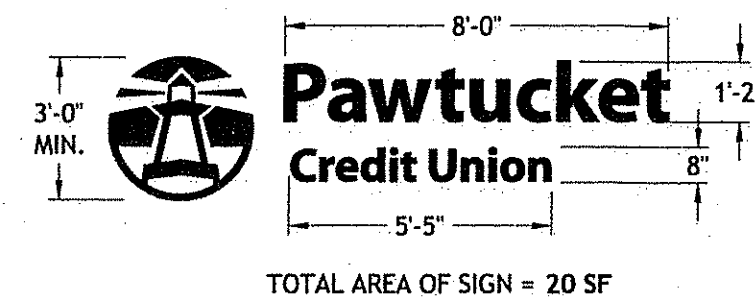
4.12 CURB STOPS:

- CURB STOPS SHALL BE BALL TYPE WITH EITHER STAINLESS STEEL, SYNTHETIC COATED BRASS BALL OR NICKEL COATED BRASS BALL DESIGNED FOR WATER SERVICE UP TO 300 PSI. BODY SHALL BE HEAVY CAST LEAD FREE "ENVIROBRASS" UNS ALLOY NUMBER C9520 ASTM B594-98A AND/OR MEET OR EXCEED THE LEAD LEACHING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 STANDARD. ALL CURB STOPS SHALL MEET OR EXCEED THE DESIGN STANDARDS OF AWWA C800 ALONG WITH THE DESIGN AND OPERATING CHARACTERISTICS OF THE FOLLOWING:
TYPE: FORD OR EQUAL.
SIZES: 4 INCH, 1 INCH, 1 1/2 INCH, AND 2 INCH.
OPENING: OPEN LEFT.
END CONNECTIONS: COMPRESSION WITH NON CORROSIVE GRIP RING MEETING ASTM B-159-BUNA N RUBBER AND CONDUCTIVITY RING.
MATERIAL: HEAVY CAST LEAD FREE "ENVIROBRASS" UNS ALLOY NUMBER C9520 ASTM B594-98A AND/OR AWWA C800/ASTM B-62 MEETING OR EXCEEDING THE LEAD LEACHING PERFORMANCE SPECIFICATIONS OF ANSI/NSF 61 STANDARD.
DRAINING: OPEN LEFT.
NONE.

4.13 SERVICE & GATE BOX:

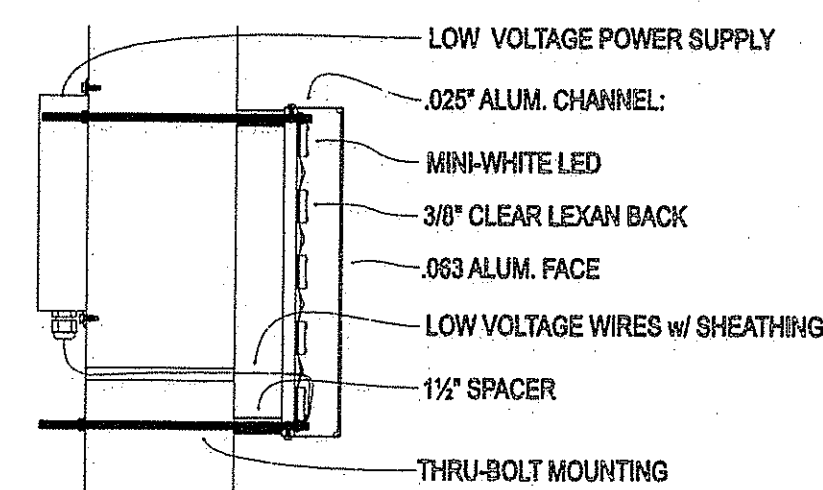
- 4.13.1 ALL SERVICE & GATE BOXES SHALL BE MANUFACTURED IN NORTH AMERICA OR SELECTED FOREIGN MADE. SELECTED FOREIGN MADE BOXES MUST RECEIVE PRIOR APPROVAL BASED ON DESIGN AND STYLE SAMPLES TO BE PROVIDED FOR REVIEW. THEY SHALL BE HEAVY PATTERN CAST IRON, BUFFALO STYLE, SLIP ADJUSTABLE TYPE WITH HEAVY CAST IRON COVER AND BRASS BOLT FASTENER TYPE LOCK. THE WORD "WATER" SHALL BE CAST UPON THE COVER IN HEAVY PATTERN RAISED LETTERS. COVERS SHALL BE 1/2" THICK. INTERIOR SURFACES SHALL BE COATED WITH FUSION BONDED HOLIDAY FREE EPOXY COATING. INTERIOR AND EXTERIOR COATING SHALL BE IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. BOXES SHALL HAVE BARRELS OF NOT LESS THAN 2 1/2 INCH IN DIAMETER. THE UPPER SECTION OF EACH BOX SHALL HAVE A BOTTOM FLANGE OF SUFFICIENT BEARING AREA TO PREVENT SETTLING. THE BASE OF THE LOWER SECTION SHALL BE A REINFORCED ARCH CONFIGURATION AND SIZED TO PROVIDE COMPLETE COVERAGE FOR THE DEPTH OF BURRY.
4.13.2 GATE VALVE BOXES MAY BE EITHER MANUFACTURED IN NORTH AMERICA OR SELECTED FOREIGN MADE. SELECTED FOREIGN MADE BOXES MUST RECEIVE PRIOR APPROVAL BASES ON DESIGN AND STYLE SAMPLES TO BE PROVIDED FOR REVIEW. THEY SHALL BE HEAVY PATTERN CAST IRON, SLIP ADJUSTABLE TYPE AND PROVIDED WITH HEAVY CAST IRON COVER. COVER SHALL HAVE THE WORD "WATER" CAST UPON IN HEAVY PATTERN RAISED LETTERS 5/4 INCH DIAMETER. COVER SHALL BE DROP IN TYPE WITHOUT FINS SOLID RING. BOXES SHALL HAVE A BITUMINOUS INTERNAL AND EXTERNAL COATING IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 AND ANSI/AWWA C153/A21.53 RESPECTIVELY. THE UPPER SECTION OF EACH BOX SHALL HAVE A BOTTOM FLANGE OF SUFFICIENT BEARING AREA TO PREVENT SETTLING. THE BASE OF THE LOWER SECTION SHALL BE BELLSHAPED AND SIZED TO ENCLOSE THE STUFFING BOX AND OPERATING NUT OF THE VALVE. BOXES SHALL HAVE BARRELS OF NOT LESS THAN 2 1/2 INCH IN DIAMETER. BOX SECTIONS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE COMPLETE COVERAGE FOR THE DEPTH OF BURRY. UPPER PORTION SHALL BE 26" LONG AND THE BOTTOM SECTION 48" MIN IN LENGTH.

4.14 SADDLES:



**BUILDING ELEVATIONS**

SCALE: 3/8" = 1'-0"



HALO-LIT REVERSE CHANNEL LETTER



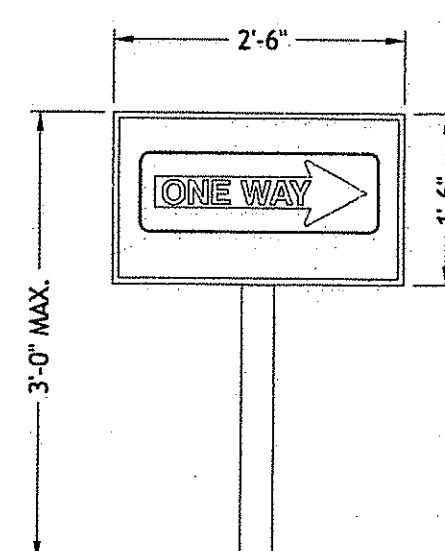
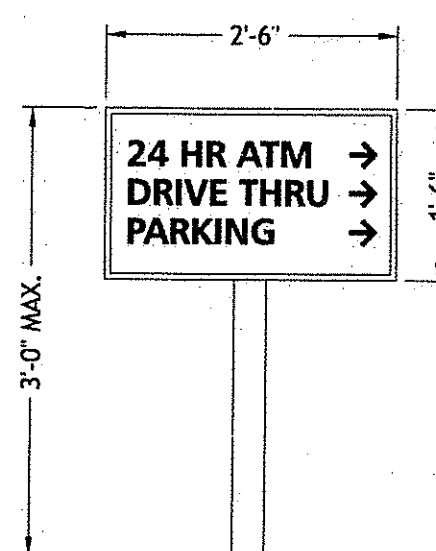
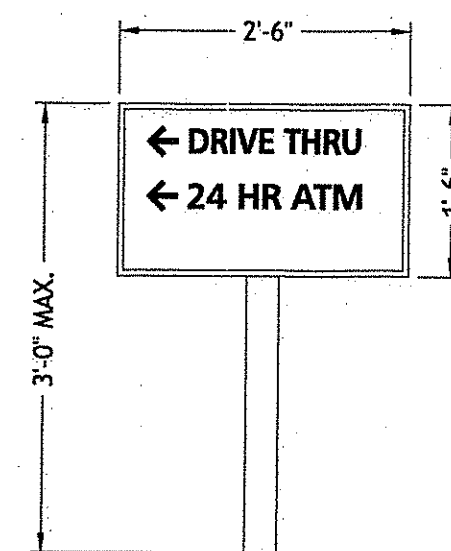
HALO-LIT REVERSE CHANNEL LOGO

**Pawtucket Credit Union**

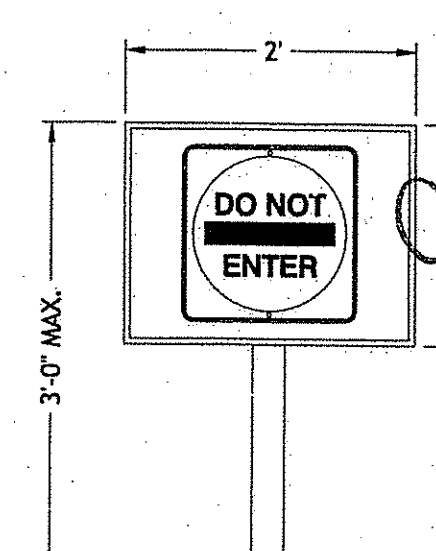
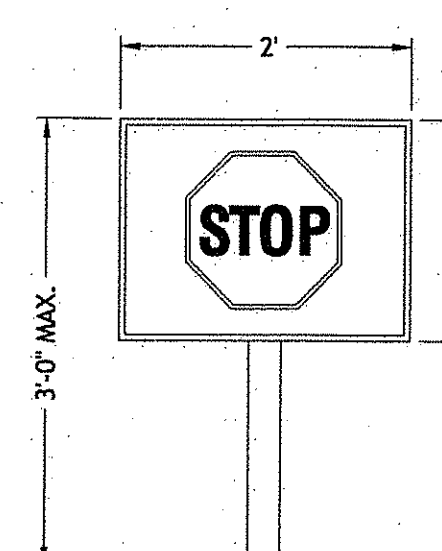
REVERSE CHANNEL LETTERS

BACK-LIT CHANNEL LETTERS "PCU" AND LIGHTHOUSE LOGO

- (BLACK) PAINTED ALUMINUM FABRICATED LETTERS IN .063 FACES AND .025 CHANNELS
- SLOAN L.E.D. ILLUMINATION
- LOW VOLTAGE REMOTE POWER SUPPLY
- 3/8" CLEAR LEXAN LETTER BACKS
- DRILL & TAP LEXAN FOR THRU-BOLTED 10-24 STUD MOUNTING
- 1/2" NYLON SPACERS
- USE SILICONE AT ALL WALL PENETRATIONS
- LETTER BACKS PROJECT 1/2" FROM FASCIA w/ NYLON SPACERS



**DIRECTIONAL SIGNS**  
DIRECTIONAL SIGN AREA = 3.75 SF



**STOP & DO NOT ENTER SIGNS**  
DIRECTIONAL SIGN AREA = 3 SF

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS  
AS SPECIFIED IN THE LETTER OF APPROVAL  
DATED AUG 25 2010 FILE # 10-0057  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

REVISIONS:

NO.	DATE	DESCRIPTION
1	3/12/10	MASTER PLAN SUBMISSION, RIDEM, RIDOT, SPWER & KCWA SUBMISSIONS
2	6/1/10	PRELIMINARY PLAN & RIDEM COMMENTS
3	6/30/10	RIDOT COMMENT

DESIGNED BY: GEC  
DRAWN BY: WMLJR  
CHECKED BY: JAC  
DATE: 2/12/2010  
PROJECT NO: 05-571

PRELIMINARY, NOT FOR CONSTRUCTION

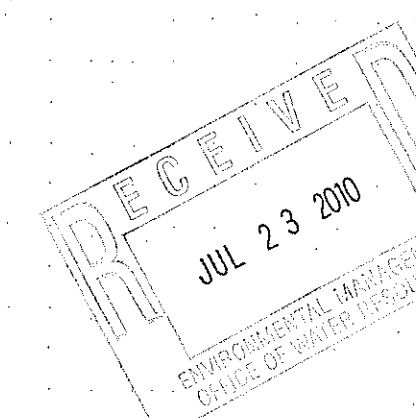
**BUILDING ELEVATIONS & SIGNAGE DETAILS**

**SHEET 14 OF 15**

**JCE**  
JOE CASALI ENGINEERING, INC.  
CIVIL, SITE DEVELOPMENT, TRANSPORTATION  
DRAINAGE, WETLANDS, BIDS, TRAFFIC, FLOODPLAIN  
300 W. MAIN ST., WARWICK, RI 02886  
(401) 844-1300, (401) 844-1314, WWW.JCEENGINEERING.COM

JOSEPH A. CASALI  
No. 7250  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
6-30-10

**PAWTUCKET CREDIT UNION**  
5661 POST ROAD  
EAST GREENWICH, RHODE ISLAND  
AP 11 LOTS 72 & 73



Q:\05-571\PCU05-571 East Greenwich\ACAD\PCU-EG (PLANSET).dwg Jun. 30, 2010 10:17am

