# EAST POINTE

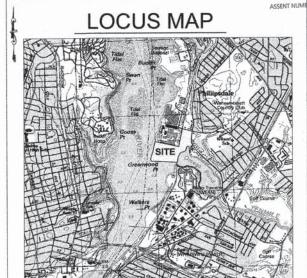
# EAST PROVIDENCE, RHODE ISLAND

REV. FEBRUARY 14, 2007

**AERIAL PHOTO** 

REV. AUGUST 14, 2007 REV. SEPTEMBER 21, 2007

**REVISED FEBRUARY 11, 2008** 



REFERENCE: USGS MAP OF PROVIDENCE RI. DATED 1987

#### PERMITTING SUMMARY

AGENCY	DATE	COMMENTS
CITY OF EP - WDC	5/2006 1/2007	SUBMISSION TO WDC APPROVED WITH CONDITIONS
FEMA - CLOMR	11/2004 12/2005 3/2006 2/2007 5/21/07 9/18/07 1/30/08 2/2008	SUBMISSION FOR CLOMR RESPONSE TO COMMENTS (RFI) APPROVED MODIFICATION APP. UNDER REVIEW REVISED DESIGN - NEW APPLICATION RESPONSE TO COMMENTS CLOMR APPROVAL
CRMC - CATEGORY B	2/2007 7/2007	FULL APPLICATION SUBMITTAL CONDITIONAL APPROVAL
RIDEM - FWW PD	5/21/07 8/14/07 8/22/07	REVISED DESIGN / RESPONSE TO COMMENTS REVISED DESIGN / RESPONSE TO COMMENTS PERMIT RECEIVED APPLICATION NO. 07-0076
RIDEM - WATER QUALITY	8/8/07 9/28/07	REVISED DESIGN / RESPONSE TO COMMENTS CERTIFICATE RECEIVED FILE NO. 07-011
ACOE - INDIVIDUAL PERMIT	9/21/07 9/27/07	REVISED DESIGN / RESPONSE TO COMMENTS PERMIT NO. NAE-2007-819 RECEIVED
RIDOT - PAP		IN PROGRESS

COASTAL RESOURCES MANAGEMENT COUNCIL APPROVED PLANS

STAFF MEMBER D. TCELS SUBJECT TO STIPULATIONS CONTAINED IN

DRAWING INDEX

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DETAILS - 7	SHEET 29	
REVETMENT CROSS SECTIONS	SHEET 30	
CONCEPTUAL TRAFFIC IMPROVEMENTS	SHEET 31	
		-

CITY OF EAST PROVIDENCE 145 TAUNTON AVENUE EAST PROVIDENCE, RI 02914

GEONOVA DEVELOPMENT CO. LLC C/O GREENBERG TRAURIG 200 PARK AVENUE NEW YORK, NY 10166

#### APPLICANT:

GEONOVA DEVELOPMENT CO. LLC

NORTHEAST ENGINEERS & CONSULTANTS, INC.



ENVIRONMENTAL SURVEYING

CIVIL

RANSPORTATION

STRUCTURAL GEOTECHNICAL

# NORTHEAST ENGINEERS AND CONSULTANTS, INC.

AERIAL PHOTO BY RI GEOGRAPHIC INFORMATION SYSTEM, DATED APRIL 1997

55 JOHN CLARKE ROAD MIDDLETOWN, RHODE ISLAND 02842 PHONE: (401) 849-0810

INDUSTRIAL 1: LIMITED MANUFACTURING

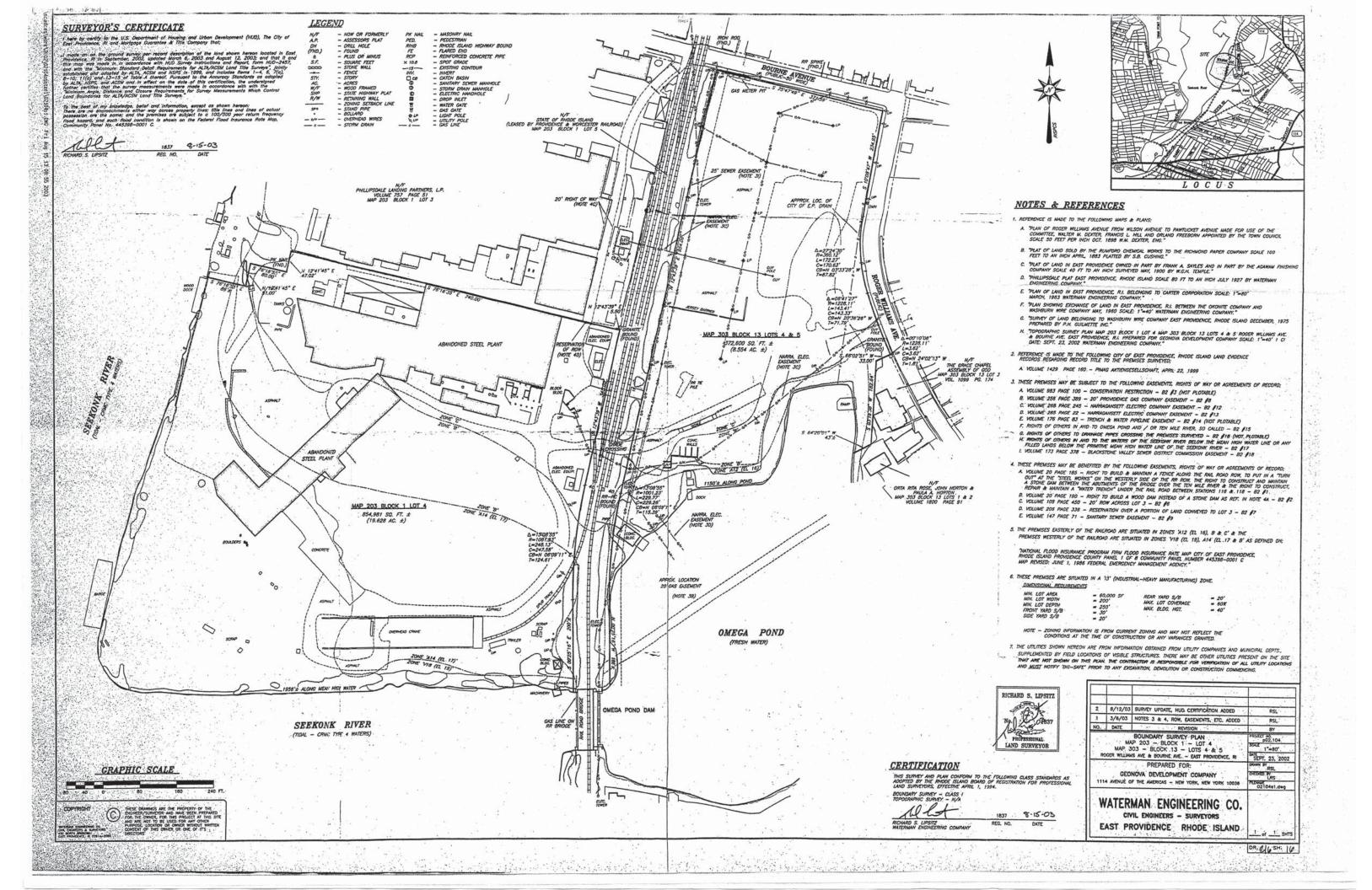
RESIDENTIAL 3: ONE FAMILY AND TWO FAMILY

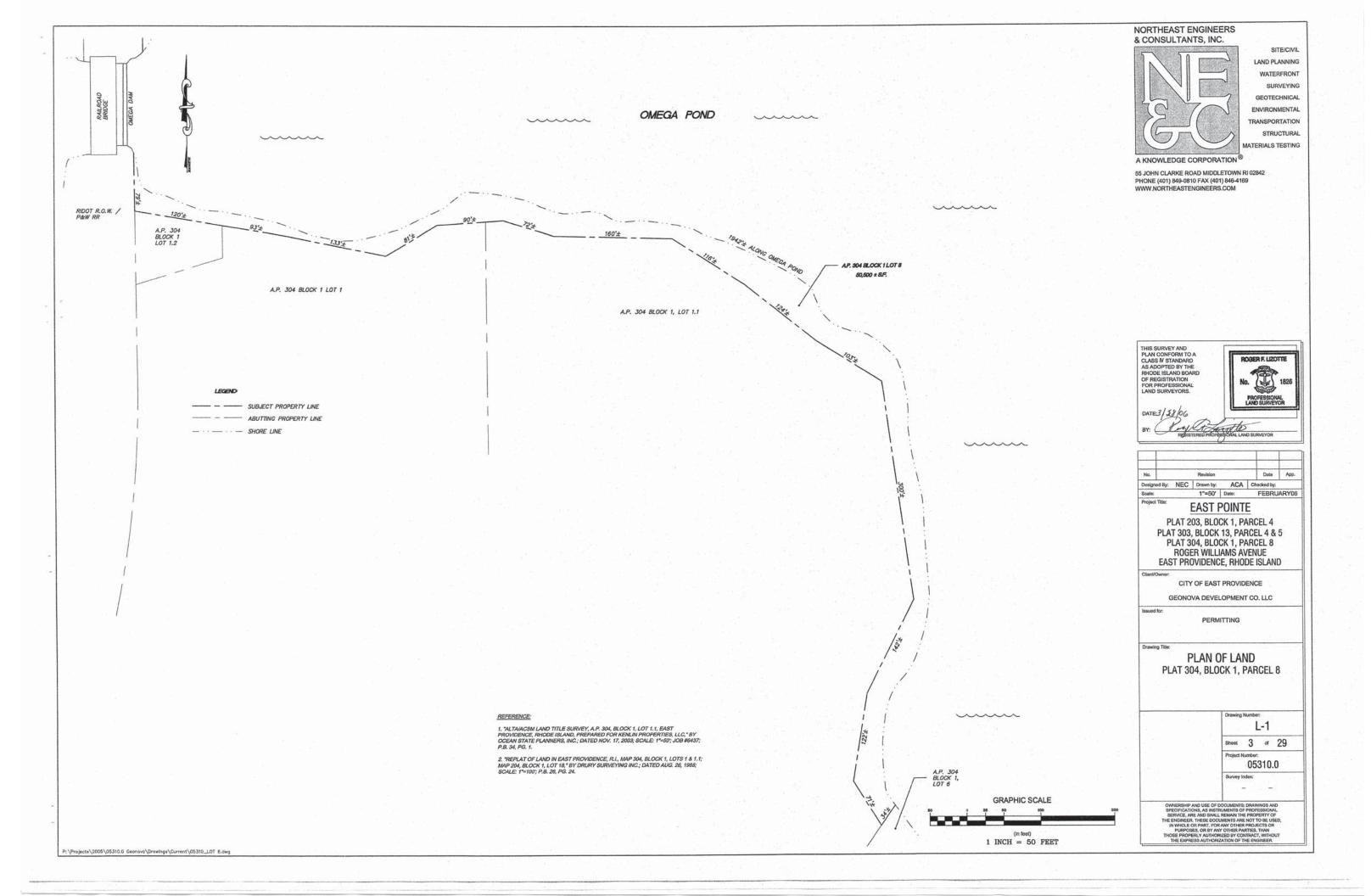
INDUSTRIAL 3: HEAVY MANUFACTURING COMMERCIAL 2: NEIGHBORHOOD BUSINESS

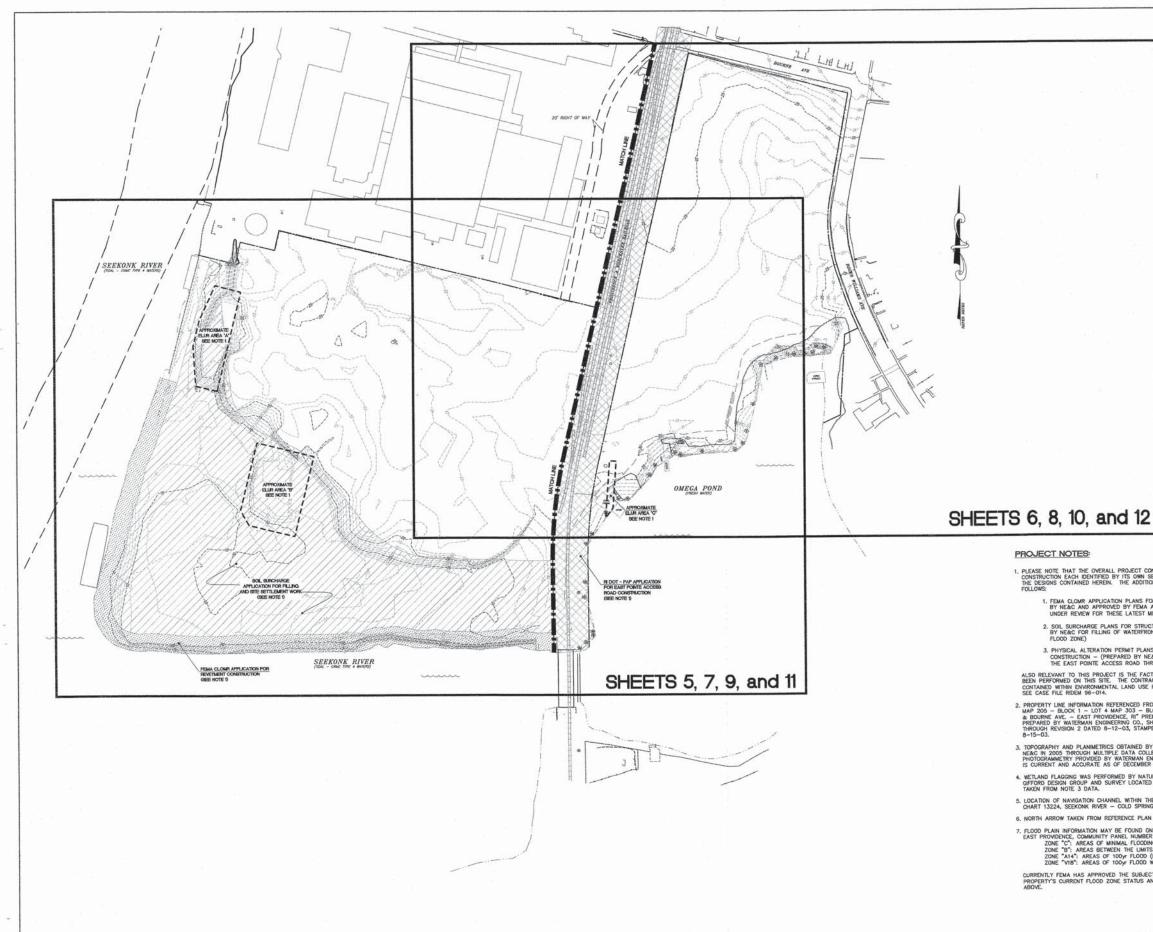
OPEN SPACE 1 OPEN SPACE

\* ENTIRE PROJECT AREA LIES WITHIN THE WATERFRONT SPECIAL DEVELOPMENT DISTRICT

R-5 RESIDENTIAL 5: MULTIFAMILY





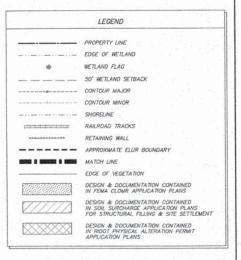




SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM



#### 2 REVISIONS PER CITY COMMENTS 1 REVISIONS PER CRMC & DEM Date App. Designed By: NEC Drawn by: ACA Checked by: 1"=100" Date: FEBRUARY06 EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

**KEY PLAN** 



KEY Sheet 4 of 31 05310.0

OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.

#### PROJECT NOTES:

- - FEMA CLOMR APPLICATION PLANS FOR REVETMENT CONSTRUCTION (PREPARED BY NE&C AND APPROVED BY FEMA ALTHOUGH A MODIFICATION IS CURRENTLY UNDER REVIEW FOR THESE LATEST MINOR CHANGES)
  - SOIL SURCHARGE PLANS FOR STRUCTURAL FILLING AND SETTLEMENT (PREPARED BY NEAC FOR FILLING OF WATERPRONT SHE TO RAISE DEVELOPMENT OUT OF FLOOD ZONE)
  - PHYSICAL ALTERATION PERMIT PLANS FOR THE EAST POINTE ACCESS ROAD CONSTRUCTION (PREPARED BY NEWC FOR PERMITTING AND CONSTRUCTION OF THE EAST POINTE ACCESS ROAD THROUGH RIDOT)
- ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT SOIL REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS SITE. THE CONTRACTOR SHALL ABIDE BY ALL RESTRICTIONS CONTAINED WITHIN ENVIRONMENTAL LAND USE RESTRICTIONS (ELUR) SHOWN ON THE PLANS. SEE CASE FILE RIDEM 18-0-10.
- 2. PROPERTY LINE INFORMATION REFERENCED FROM PLAN ENTITLED "BOUNDARY SURVEY PLAN MAP 205 BLOCK 1 LOT 4 MAP 303 BLOCK 13 LOTS 4 & 5 ROSER WILLIAMS AVE & BOURNE AVE. EAST PROVIDENCE, R" PREPARED FOR GEONOVA DEVELOPMENT COMPANY, PREPARED BY WATERMAN ENGINEERING CO., SHEET 1 OF 1, DATED SEPT. 23, 2002, THROUGH REVISION 2 DATED 8—12—03, STAMPED AND SIGNED BY RICHARD S. LIPSITZ ON 8—15—03.
- 3. TOPOGRAPHY AND PLANIMETRICS OBTAINED BY BOTH ON-GROUND SURVEY PERFORMED BY NEAC IN 2005 THROUGH MULTIPLE DATA COLLECTIONS AND EXISTING CONDITIONS AERIAL PHOTOGRAMMETRY PROVIDED BY WATERBANA ENGINEERING CO., EXISTING CONDITIONS DATA IS CURRENT AND ACCURATE AS OF DECEMBER 2005.
- 6. NORTH ARROW TAKEN FROM REFERENCE PLAN IN NOTE 2 ABOVE.
- 7. FLOOD PLAIN INFORMATION MAY BE FOUND ON FLOOD INSURANCE RATE MAP (FIRM) FOR EAST PROVIDENCE, COMMUNITY PANEL NUMBER 445388-0001 C, MAP REVISED JUNE 1, 1983.

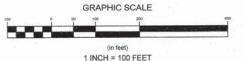
  ZONE "6": AREAS OF MINIMAL FLOODING

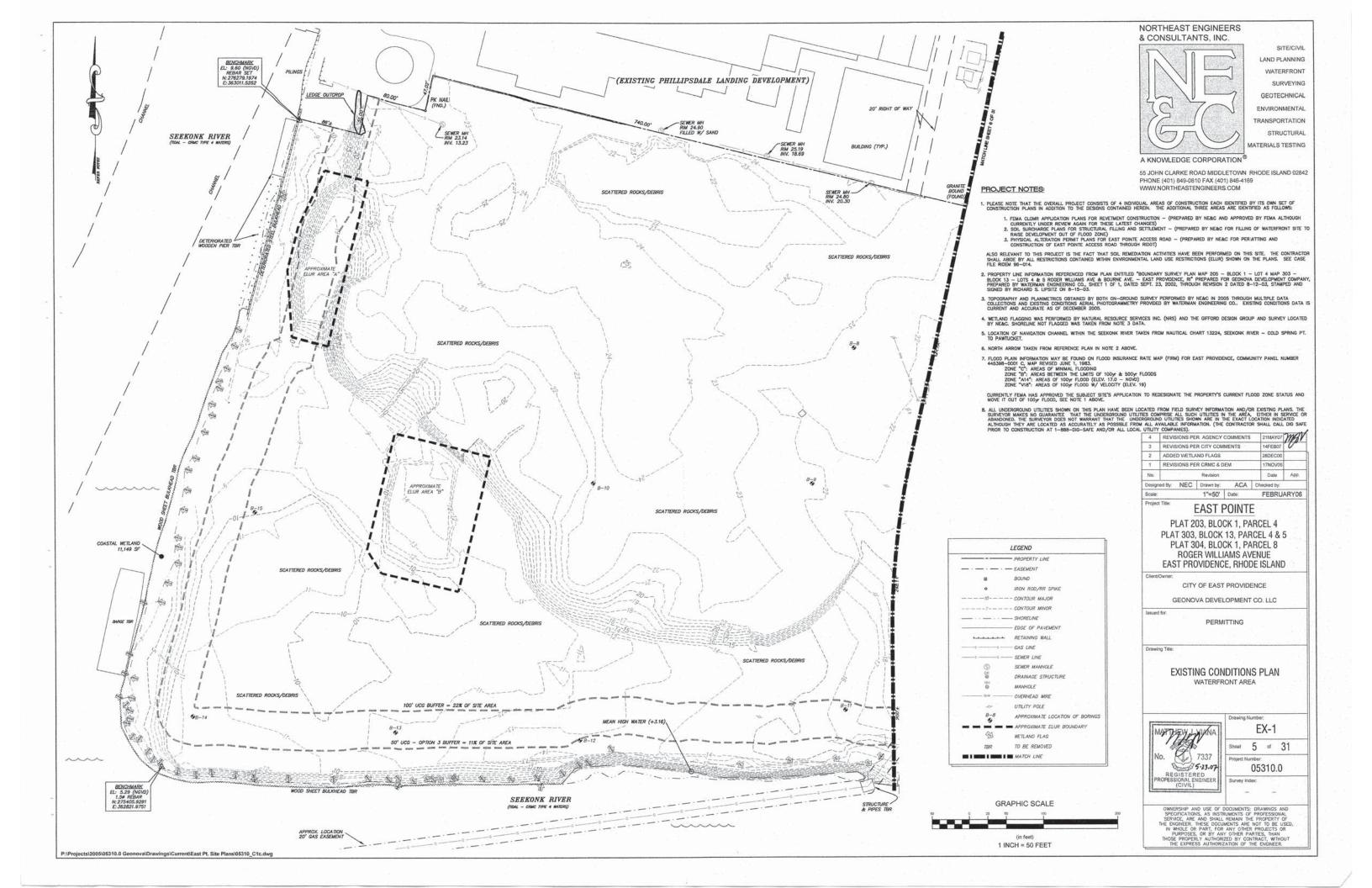
  ZONE "8": AREAS BETWEEN THE LIMITS OF 100/r & 500/r FLOODS

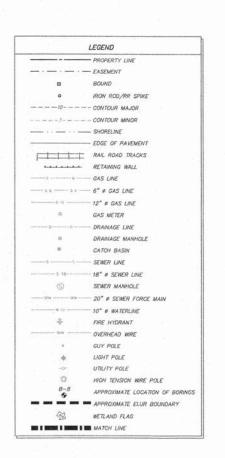
  ZONE "414": AREAS OF 100/r FLOOD (ELEV. 17.0 NGVO)

  ZONE "VIB": AREAS OF 100/r FLOOD (ELEV. 17.0 NGVO)

CURRENTLY FEMA HAS APPROVED THE SUBJECT SITE'S APPLICATION TO REDESIGNATE THE PROPERTY'S CURRENT FLOOD ZONE STATUS AND MOVE IT OUT OF 100yr FLOOD, SEE NOTE 14 HOLDS







#### LISTING OF EXISTING TREES TO BE REMOVED

Tree No.	Botanical Name/ Common Name	Approximate Diameter at Breast Height
1_	Ulmus rubra Slippery Elm	- 8°
2	Ulmus rubra Slippery Elm	4"
3	Robinia pseudoacacia Black Locust	5"
4	Robinia pseudoacacia Black Locust	6"
5	Robinia pseudoacacia Black Locust	4"
6	Robinia pseudoacacia Black Locust	3"
7	Robinia pseudoacacia Black Locust	6"
8	Robinia pseudoacacia Black Locust	10"
9	Allanthus altissima Tree of Heaven	3"-6" (5-Stem)
10	Populus deltoides Cottonwood	18"
11	Populus deltoides Cottonwood	12"

P:\Projects\2005\05310.0 Geonova\Drawings\Current\East Pt. Site Plans\05310\_C1c.dwg

#### NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION

STRUCTURAL MATERIALS TESTING

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

#### PROJECT NOTES:

- DRAIN MH RIM 22.46 18" RCP INV. IN 19.46 17" STEEL INV. OUT 19.30

- - Fema clowr application plans for revetment construction (prepared by ne&c and approved by fema although currently under revew again for these latest changes)
     Soil surcharge plans for structural filling and settlement (prepared by ne&c for filling of waterfront site to raise development out of flood zone)
     Physical alteration permit plans for east pointe access road (prepared by ne&c for permitting and construction of east pointe access road through ridot)

- 2. PROPERTY LINE INFORMATION REFERENCED FROM PLAN ENTITLED "BOUNDARY SURVEY PLAN MAP 205 BLOCK 1 LOT 4 MAP 303 BLOCK 13 LOTS 4 & 5 ROGER WILLIAMS AVE & BOURNE AVE. EAST PROVIDENCE, RI" PREPARED FOR GEONOVA DEVELOPMENT COMPANY, PREPARED BY WATERMAN ENGINEERING CO., SHEET 1 OF 1, DATED SEPT. 23, 2002, THROUGH REVISION 2 DATED 8-12-03, STAMPED AND SIGNED BY RICHARD S. LIPSITZ ON 8-15-0.
- 4. WETLAND FLAGGING WAS PERFORMED BY NATURAL RESOURCE SERVICES INC. (NRS) AND THE GIFFORD DESIGN GROUP AND SURVEY LOCATED BY NE&C, SHORELINE NOT FLAGGED WAS TAKEN FROM NOTE 3 DATA.
- 5. LOCATION OF NAVIGATION CHANNEL WITHIN THE SEEKONK RIVER TAKEN FROM NAUTICAL CHART 13224, SEEKONK RIVER COLD SPRING PT. TO PAWTUCKET.

CURRENILY FEMA HAS APPROVED THE SUBJECT SITE'S APPLICATION TO REDESIGNATE THE PROPERTY'S CURRENT FLOOD ZONE STATUS AND MOVE IT OUT OF 100y; FLOOD, SEE NOTE 1 ABOVE.

8. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONEM. THE SURVEYOR DEES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (THE CONTRACTOR SHALL CALL DIG SAFE PRIOR TO CONSTRUCTION AT 1-888-DIGS-SAFE AND/OR ALL LOCAL UTILITY COMPANIES.)

3	REVISIONS PE	R AGENCY	COMMENTS	21MAY07	may	
2	REVISIONS PE	14FEB07	0			
1	REVISIONS PE	REVISIONS PER CRMC & DEM				
No.		Revision		Date	Арр.	
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Scale:		1"=50"	Date:	FEBRU	ARY06	
Clienti	PLAT 303 PLAT 3 ROGE EAST PRO Owner: CITY GEONO	BLOCK 04, BLO ER WILL OVIDENC	CK 1, PA IAMS AV	RCEL 4 & ARCEL 8 ENUE DE ISLANI		
Isouti	no.	PERM	ITTING			
Drawi	ng Title:			3		
	EXISTI	NG CON	IDITION	S PLAN		

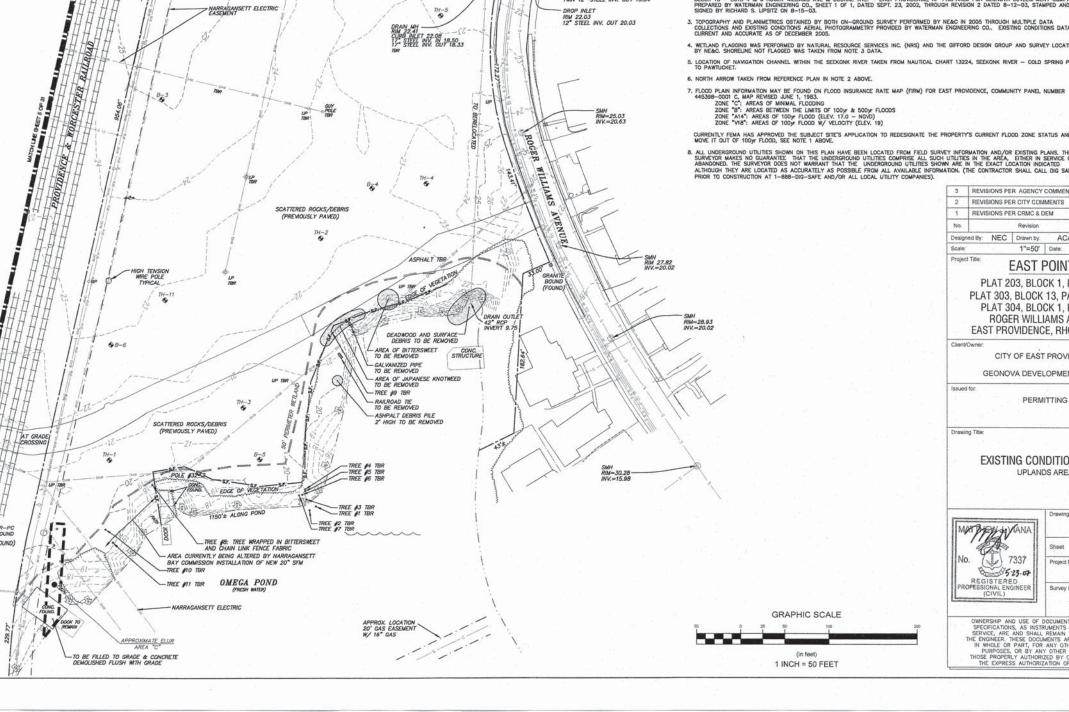
7337 5-23-07

EX-2

Sheet 6 of 31

05310.0

UPLANDS AREA

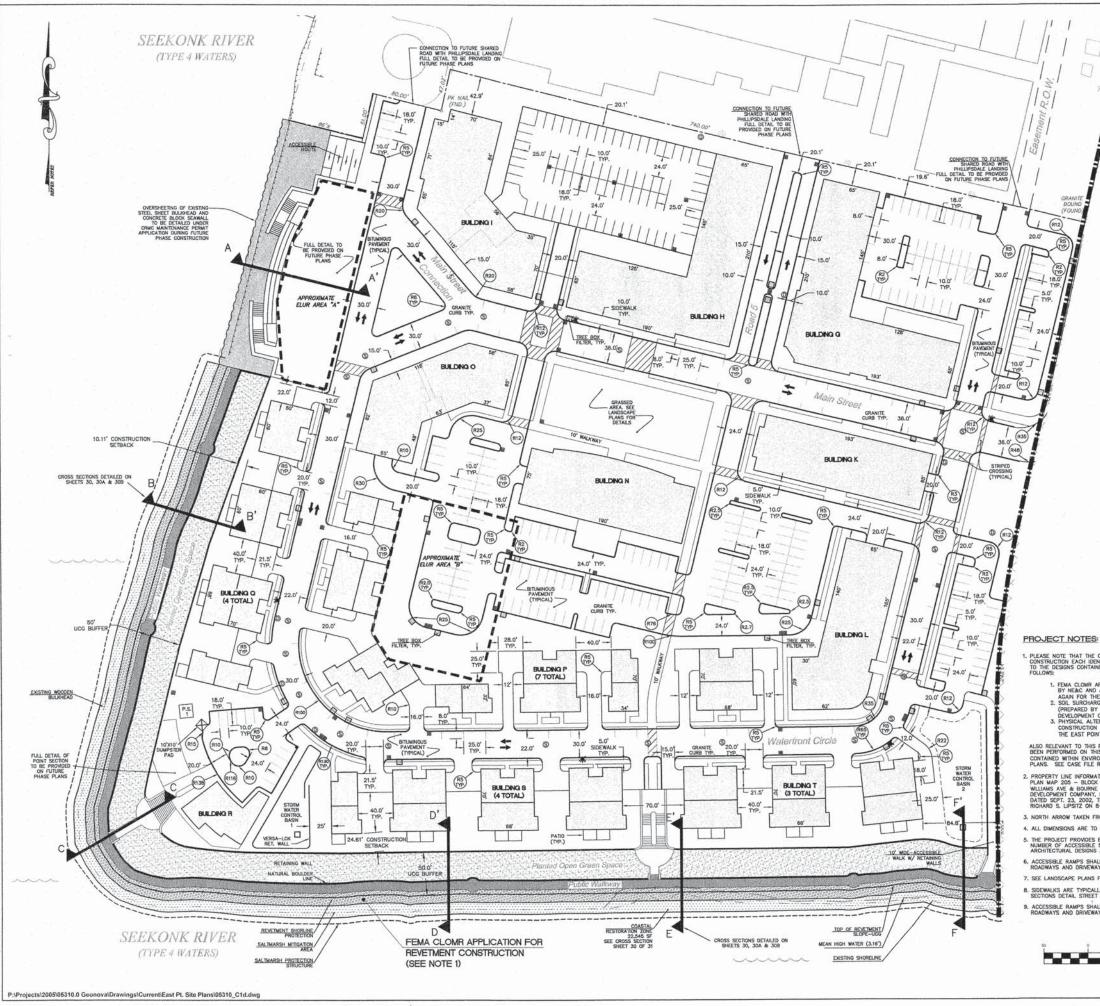


SCATTERED ROCKS/DEBRIS (PREVIOUSLY PAVED)

- GAS METER PIT

B-2

20" NBC SEV

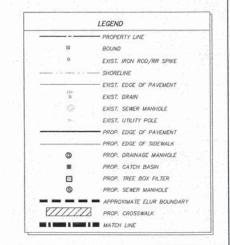




SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL RANSPORTATION STRUCTURAL MATERIALS TESTING

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Scale:		1"=50"	=50' Date:		FEBRU.	ARY06
Design	ed By: NEC	Drawn by:	ACA	Ch	ecked by:	
No.	Revision			Date	Арр	
1	REVISIONS P	ER CRMC & E	DEM	-	17NOV06	
2	REVISIONS P	ER WDC WOR	RKSHOP		28DEC06	
3	REVISIONS P	ER CITY COM	MENTS		14FEB07	
4	REVISIONS P	REVISIONS PER AGENCY COMMENTS			21MAY07	10
5	REVISIONS PE	R DEM COM	MENTS		BAUG07	ma

## **EAST POINTE**

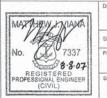
PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

PROPOSED LAYOUT PLAN WATERFRONT AREA



C-1 Sheet 7 of 31 05310.0

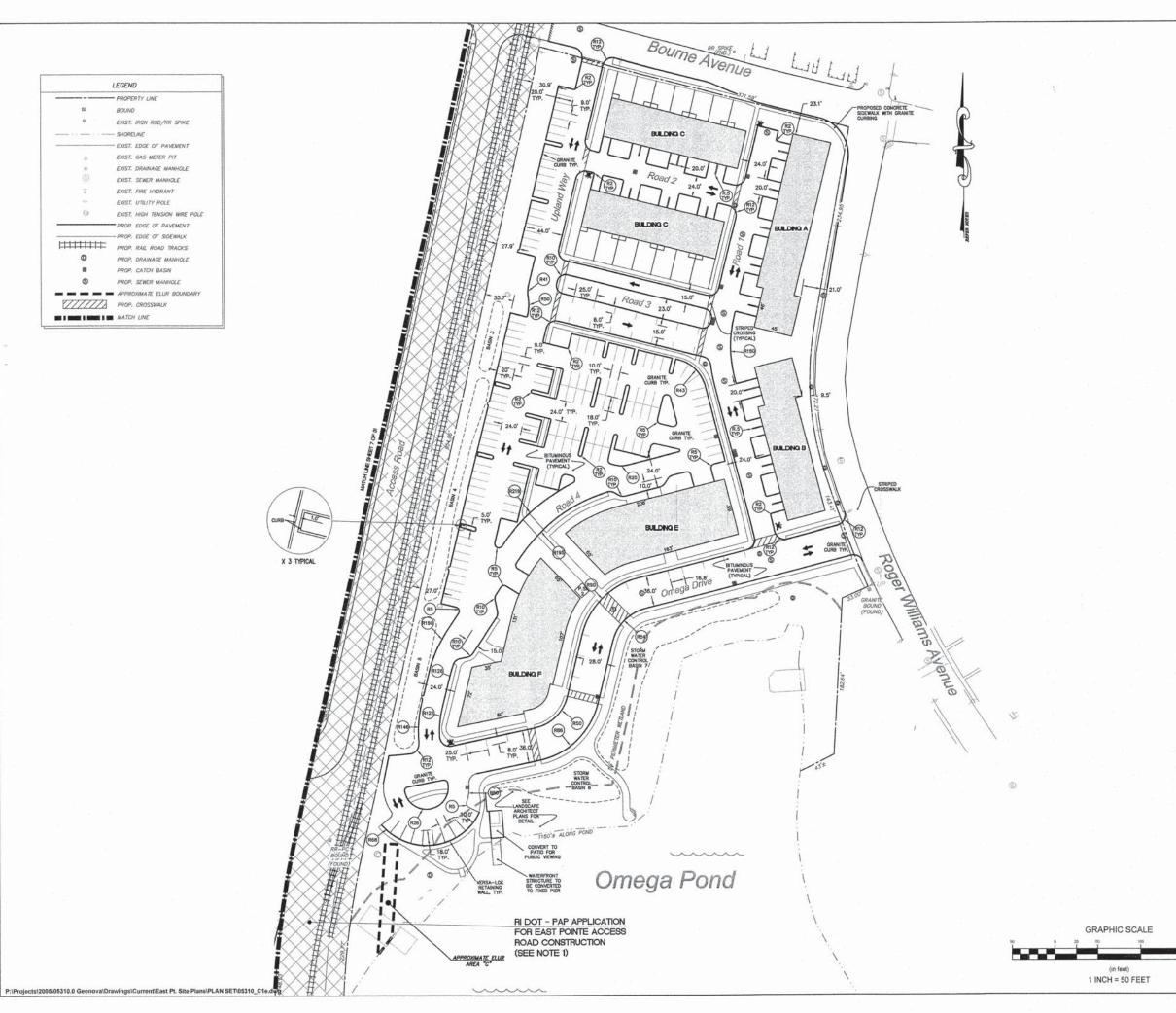
BY NE&C AND APPROVED BY FEMA ALTHOUGH CURRENTLY UNDER REVIEW AGAIN FOR THESE LATEST CHANGES)

2. SOIL SURCHARGE PLANS FOR STRUCTURAL FILLING AND SETTLEMENT — (PREPARED BY NE&C FOR FILLING OF WATERFRONT SITE TO RAISE DEVELOPMENT OUT OF FLOOD ZONE OF THE PROPERTY OF FLOOD CONSTRUCTION — (PREPARED BY NE&C FOR FEMITTING AND CONSTRUCTION — (PREPARED BY NE&C FOR PERMITTING AND CONSTRUCTION OF THE EAST POINTE ACCESS ROAD THROUGH RIDDOT) ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT SOL REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS SITE. THE CONTRACTOR SHALL ABBDE BY ALL RESTRICTIONS CONTAINED WITHIN ENVIRONMENTAL LAND USE RESTRICTIONS (ELUR) SHOWN ON THE PLANS. SEE GASE FILE RIDEM 88-014.

- PROPERTY LINE INFORMATION REFERENCED FROM PLAN ENTITLED "BOUNDARY SURVEY PLAN MAP 205 BLOCK 1 LOT 4 MAP 203 BLOCK 13 LOT 4 & 5 ROGER WILLIAMS AVE & BOUNNE, AVE. EAST PROVIDENCE, AVE. PREPARED FOR GEODOVA DEVELOPMENT COMPANY, PREPARED BY WATERMAN ENGINEERING CO., SHEET 1 OF 1, DATED SEPT. 23, 2002, THROUGH REMSION 2 DATED 8—12—03, STAMPED AND SIGNED BY ROCHARD S. LIPSITZ ON 8—15—03.
- 3. NORTH ARROW TAKEN FROM REFERENCE PLAN IN NOTE 2 ABOVE
- 4. ALL DIMENSIONS ARE TO FACE OF CURB.
- ACCESSIBLE RAMPS SHALL BE REQUIRED AT ALL SIDEWALK INTERSECTIONS WITH ROADWAYS AND DRIVEWAYS.
- 8. SIDEWALKS ARE TYPICALLY 5' OR 10' WIDE UNLESS OTHERWISE NOTED, ALL STREET CROSS SECTIONS DETAIL STREET WALKS.
- . ACCESSIBLE RAMPS SHALL BE REQUIRED AT ALL SIDEWALK INTERSECTIONS WIT ROADWAYS AND DRIVEWAYS.

GRAPHIC SCALE

1 INCH = 50 FEET



LEGEND

- PROPERTY LINE BOUND

- SHORELINE

EXIST. IRON ROD/RR SPIKE

- EXIST. EDGE OF PAVEMENT

EXIST. DRAINAGE MANHOLE EXIST. SEWER MANHOLE

EXIST. HIGH TENSION WIRE POLE

PROP. RAIL ROAD TRACKS PROP. DRAINAGE MANHOLE

PROP. SEWER MANHOLE APPROXIMATE ELUR BOUNDARY

777777 PROP. CROSSWALK MATCH LINE

EXIST. GAS METER PIT

EXIST. FIRE HYDRANT

EXIST. UTILITY POLE

#### NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL

MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

#### PROJECT NOTES:

PLEASE NOTE THAT THE OVERALL PROJECT CONSISTS OF 4 INDIVIDUAL AREAS OF CONSTRUCTION EACH IDENTIFIED BY ITS OWN SET OF CONSTRUCTION PLANS IN ADDITION TO THE DESIGNS CONTAINED HEREIN. THE ADDITIONAL THREE AREAS ARE IDENTIFIED AS

1. FEMA CLOMR APPLICATION PLANS FOR REVETMENT CONSTRUCTION —
(PREPARED BY NE&C AND APPROVED BY FEMA ALTHOUGH CURRRENTLY UNDER
REVIEW AGAIN FOR THESE LATEST O'LANGES)
2. SOLL SURGHARGE PLANS FOR STRUCTURAL FILLING AND SETTLEMENT —
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THE EAST POINTE ACCESS ROAD THROUGH RIDOT)

ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT SOIL REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS STIE. THE CONTRACTOR SHALL ABIDE BY ALL RESTRICTIONS CONTAINED WITHIN EDVIRONMENTAL LAND USE RESTRICTIONS (ELUR) SHOWN ON THE PLANS, SEE CASE FILE RIDEM 96-014.

- PROPERTY LINE INFORMATION REFERENCED FROM PLAN ENTITLED "BOUNDARY SURVEY PLAN MAP 205 BLOCK 1 LOT 4 MAP 303 BLOCK 13 LOTS 4 & 5 ROGER WILLIAMS AVE & BOURNE AVE. EAST PROVIDENCE, RIF PERPARED FOR GCOLOVA DEVELOPMENT COMPANY, PREPARED BY WATERMAN ENGINEERING CO., SHEET 1 OF 1, DATED SEPT. 23, 2002, THROUGH EXISTING 2 DATED 8—12—03, STAMPED AND SIGNED BY RICHARD S. LIPSTIZ ON 8—15—03.
- 3. NORTH ARROW TAKEN FROM REFERENCE PLAN IN NOTE 2 ABOVE.
- 4. ALL DIMENSIONS ARE TO FACE OF CURB.
- ACCESSIBLE RAMPS SHALL BE REQUIRED AT ALL SIDEWALK INTERSECTIONS WITH ROADWAYS AND DRIVEWAYS.
- 7. SEE LANDSCAPE PLANS FOR PROPOSED GROUND COVER, PLANTINGS, LIGHT POLES ETC.
- SIDEWALKS ARE TYPICALLY 5' OR 10' MIDE UNLESS OTHERWISE NOTED. ALL STREET CROSS SECTIONS DETAIL STREET WALKS.
- ACCESSIBLE RAMPS SHALL BE REQUIRED AT ALL SIDEWALK INTERSECTIONS WITH ROADWAYS AND DRIVEWAYS.

Designed By: NEC Scale:		1"=50'			ARY06	
Daeinn	ad By	NEC	Drawn by:	ACA	Checked by:	
No.			Revision		Date	App.
1	REVI	SIONS PE	R CRMC & D	EM	17NOV06	
2	REVI	SIONS PE	R WDC WOR	RKSHOP	28DEC06	
3	REVI	REVISIONS PER CITY COMMENTS			14FE807	0
4	REVISIONS PER DEM COMMENTS				14AUG07	MA

## EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

Drawing Title:

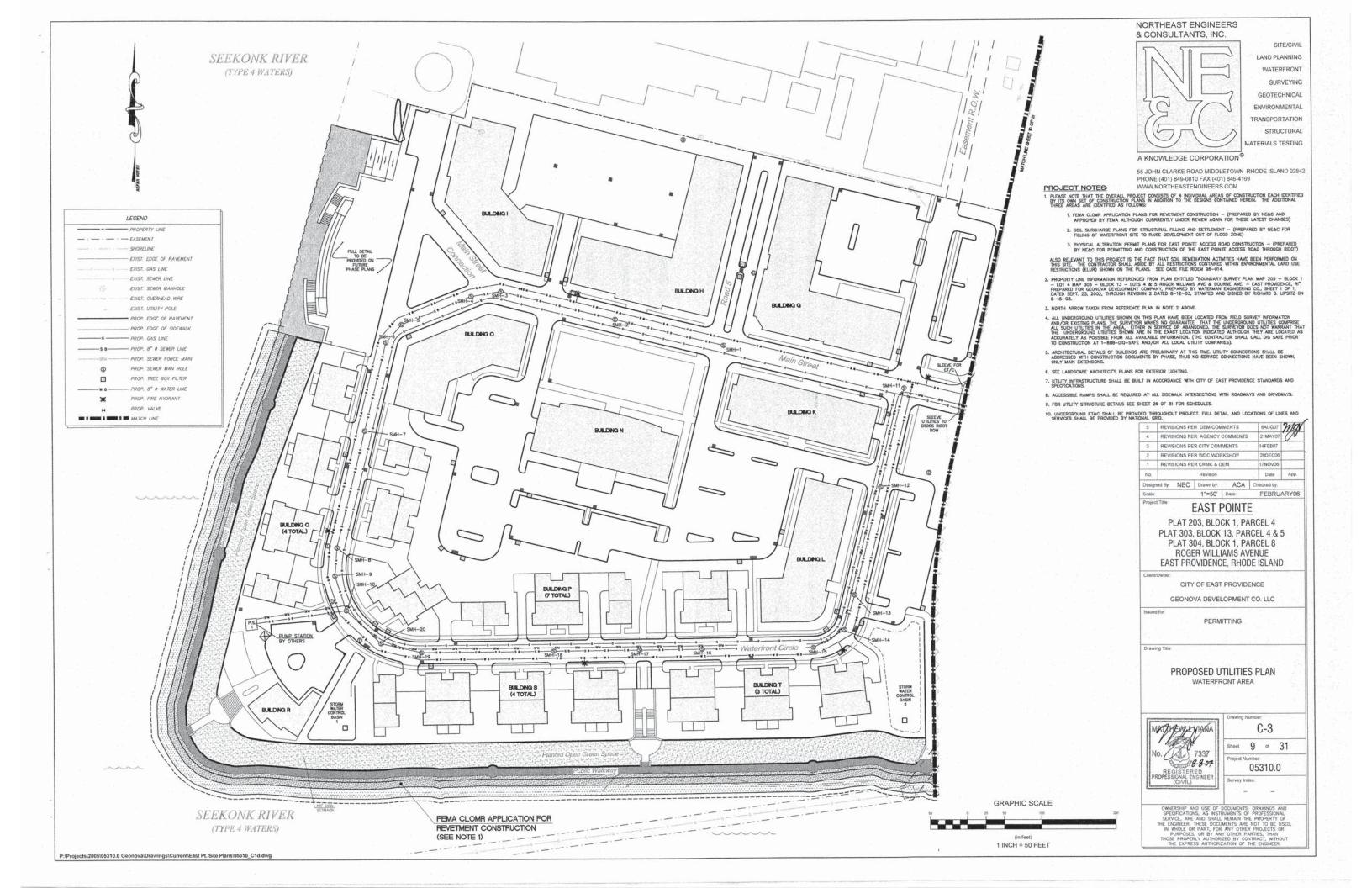
PROPOSED LAYOUT PLAN UPLANDS AREA

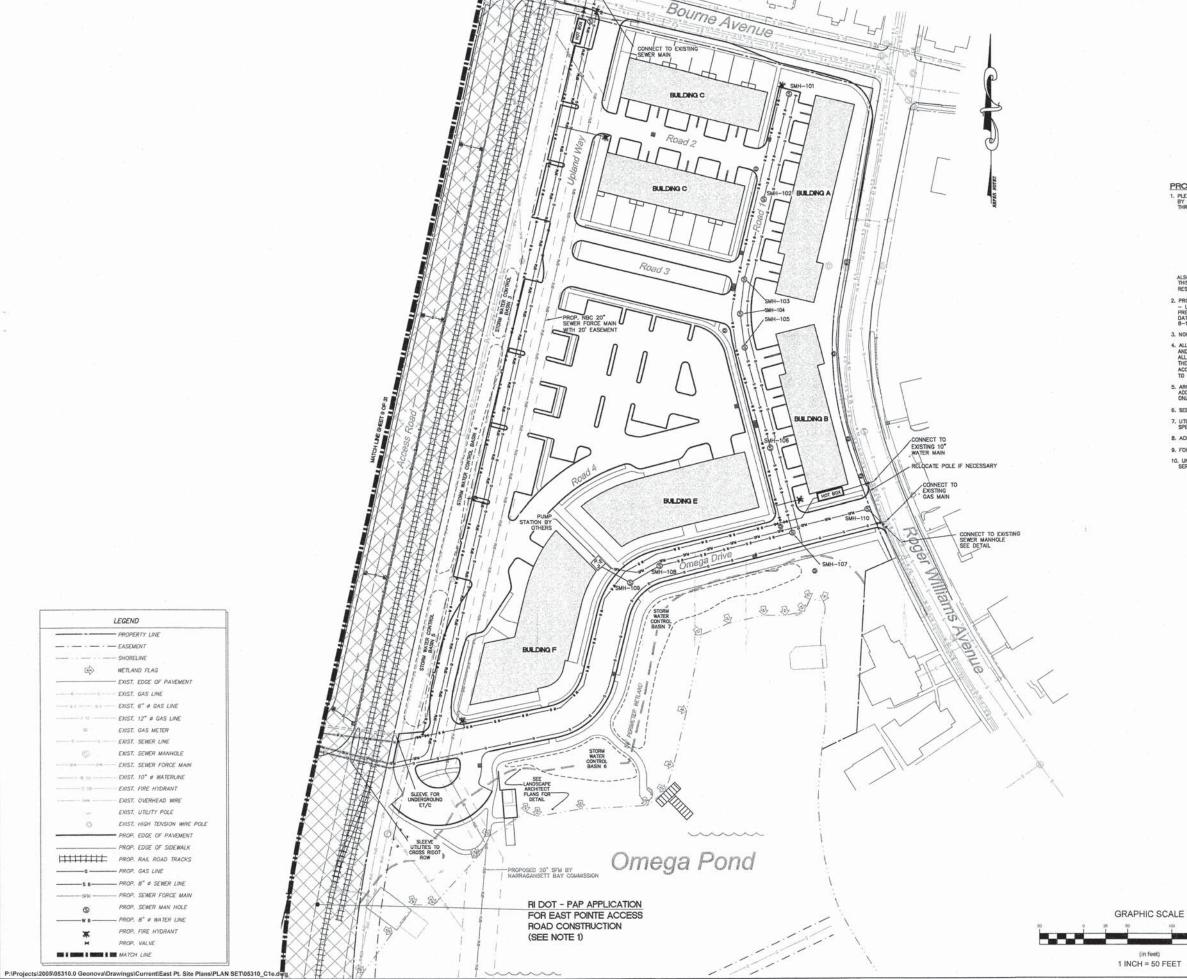


C-2 Sheet 8 of 31

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SITE/CIVIL LAND PLANNING WATERFRONT

SURVEYING

GEOTECHNICAL

TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

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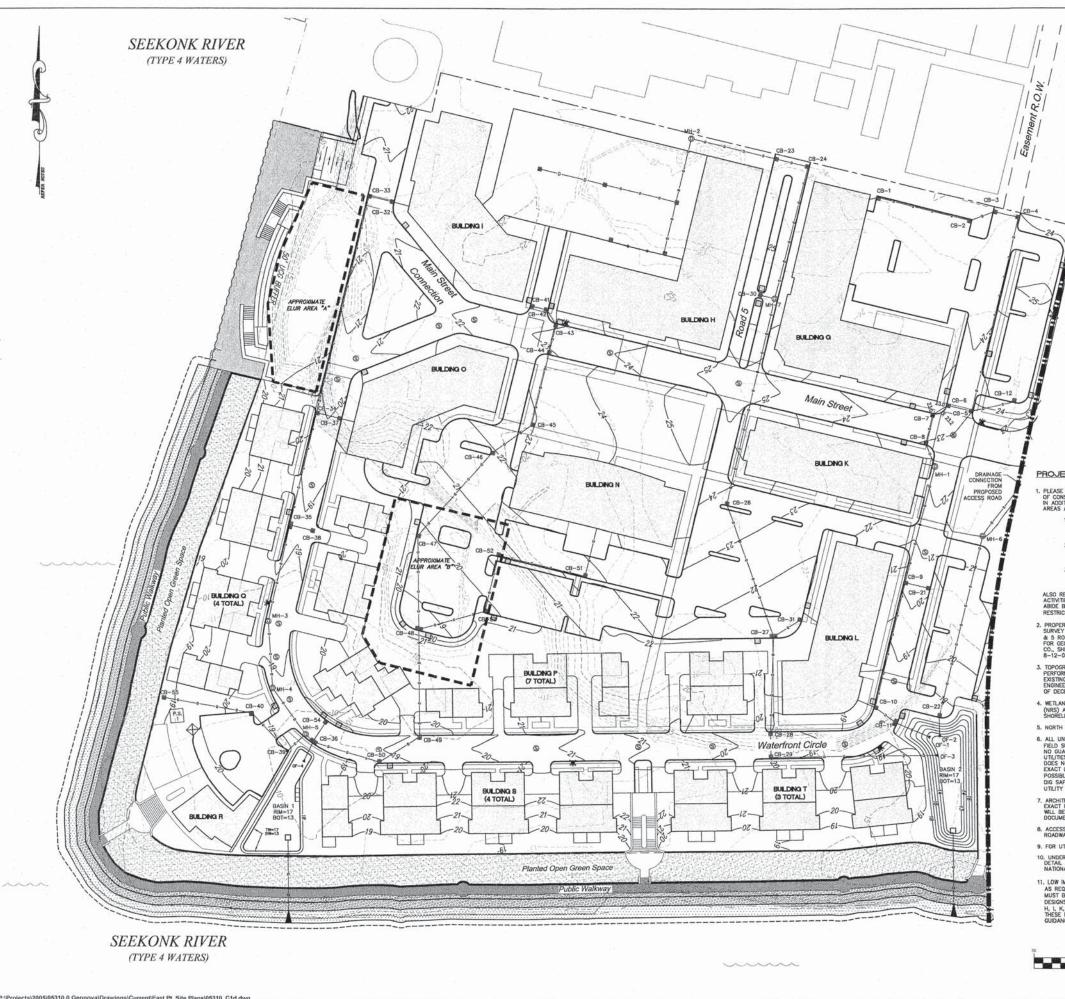
 PHYSICAL ALTERATION PERMIT PLANS FOR EAST POINTE ACCESS ROAD CONSTRUCTION — (PREPARED BY NE&C FOR PERMITTING AND CONSTRUCTION OF THE EAST POINTE ACCESS ROAD THROUGH RIDOT)

ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT SOIL REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS SITE. THE CONTRACTOR SHALL ABBID BY ALL RESTRICTIONS CONTAINED WITHIN ENVIRONMENTAL LAND USE RESTRICTIONS (CLUT) SHOWN ON THE PLANS. SEE CASE FILE RIDEM 80-014.

- 2. PROPERTY LINE INFORMATION REFERENCED FROM PLAN ELIBER SQUINDARY SURVEY PLAN MAP 205 BLOCK 1

  LOT 4 MAP 303 BLOCK 13 LOTS 4 & 5 ROGER WILLIAMS ANG & BOURNE ANG. EAST PROVIDENCE, RI\*
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  DATED SEPT. 23, 2002, THROUGH REVISION 2 DATED 8—12—03, STAMPED AND SIGNED BY RICHARD S. LIPSITZ ON
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- 4. ALL UNDERGOUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EMSTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUICH UTILITIES IN THE AREA, ETHER IN SERVICE OR ARANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION NOICHTED ALTHOUGH THEY ARE LOCATED AS ACCUMENTLY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (THE CONTRACTOR SHALL CALL DIG SAFE PRIOR TO CONSTRUCTION AT 1-888-DIG-SAFE AND/OR ALL LOCAL UTILITY COMPANIES).
- ARCHITECTURAL DETAILS OF BUILDINGS ARE PREJAMINARY AT THIS TIME. UTILITY CONNECTIONS SHALL BE ADDRESSED WITH CONSTRUCTION DOCUMENTS BY PHASE, THUS NO SERVICE CONNECTIONS HAVE BEEN SHOWN, ONLY MAIN EXTENSIONS.
- 6. SEE LANDSCAPE ARCHITECT'S PLANS FOR EXTERIOR LIGHTING.
- UTILITY INFRASTRUCTURE SHALL BE BUILT IN ACCORDANCE WITH CITY OF EAST PROVIDENCE STANDARDS AND SPECFICATIONS.
- 8. ACCESSIBLE RAMPS SHALL BE REQUIRED AT ALL SIDEWALK INTERSECTIONS WITH ROADWAYS AND DRIVEWAYS.
- 9. FOR UTILITY STRUCTURE DETAILS SEE SHEET 26 OF 31 FOR SCHEDULES.
- UNDERGROUND ET&C SHALL BE PROVIDED THROUGHOUT PROJECT. FULL DETAIL AND LOCATIONS OF LINES AND SERVICES SHALL BE PROVIDED BY NATIONAL GRID.

4	REVISIONS I	PER DEM CON	IMENTS	1	4AUG07	mas
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SITE/CIVIL GEOTECHNICAL ENVIRONMENTAL RANSPORTATION STRUCTURAL MATERIALS TESTING

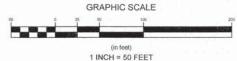
A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM



#### PROJECT NOTES:

- - FEMA CLOMR APPLICATION PLANS FOR REVETMENT CONSTRUCTION —
     (PREPARED BY NE&C AND APPROVED BY FEMA ALTHOUGH
     CURRENTLY UNDER REVIEW AGAIN FOR THESE LATEST CHANGES)
  - SOIL SURCHARGE PLANS FOR STRUCTURAL FILLING AND SETTLEMENT
     — (PREPARED BY NE&C FOR FILLING OF WATERFRONT SITE TO RAISE DEVELOPMENT OUT OF FLOOD ZONE)
  - 3. PHYSICAL ALTERATION PERMIT PLANS FOR EAST POINTE ACCESS ROAD CONSTRUCTION - (PREPARED BY NE&C FOR PERMITTING AND CONSTRUCTION OF THE EAST POINTE ACCESS ROAD THROUGH RIDOT)
- ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT SOIL REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS SITE. THE CONTRACTOR SHALL ABIDE BY ALL RESTRICTIONS CONTAINED WITHIN ENVIRONMENTAL LAND USE RESTRICTIONS (ELUR) SHOWN ON THE PLANS, SEE CASE FILE RIDEM 96-014.
- 2. PROPERTY LINE INFORMATION REFERENCED FROM PLAN ENTITLED "BOUNDARY SURVEY PLAN MAP 205 BLOCK 1 LOT 4 MAP 303 BLOCK 13 LOTS 4 & 5 ROGER MILLIAMS ARE BOURNE AVE. EAST PROVIDENCE, "IF PREPARED FOR GEONOVA DEVELOPMENT COMPANY, PREPARED BY WATERMAN ENGINEERING CO., SHEET 1 OF 1, DATED SEPT. 23, 2002, THROUGH REVISION 2 DATED 8—12—03, STAMPED AND SIGNED BY RICHARD S. LIPSITZ ON 8—15—03.
- 3. TOPOGRAPHY AND PLANIMETRICS OBTAINED BY BOTH ON-GROUND SURVEY PERFORMED BY NEAC IN 2005 THROUGH MULTIPLE DATA COLLECTIONS AND EXISTING CONDITIONS AERIAL PHOTOGRAMMETRY PROVIDED BY WAITERMAN ENGINEERING CO., EXISTING CONDITIONS DATA IS CURRENT AND ACCURATE AS OF DECEMBER 2005.
- WETLAND FLAGGING WAS PERFORMED BY NATURAL RESOURCE SERVICES INC. (NRS) AND THE GIFFORD DESIGN GROUP AND SURVEY LOCATED BY NE&C. SHORELINE NOT FLAGGED WAS TAKEN FROM NOTE 3 DATA.
- 5. NORTH ARROW TAKEN FROM REFERENCE PLAN IN NOTE 2 ABOVE.
- 6. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM 5. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR ESISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVINCE OR ABANDONED, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (THE CONTRACTOR SHALL CALL DIG SAFE PRIOR TO CONSTRUCTION AT 1-888-DIG-SAFE AND/OR ALL LOCAL UTILITY COMPANIES).
- ACCESSIBLE RAMPS SHALL BE REQUIRED AT ALL SIDEWALK INTERSECTIONS WITH ROADWAYS AND DRIVEWAYS.
- 9. FOR UTILITY STRUCTURE DETAILS SEE SHEET 26 OF 31 FOR SCHEDULES. UNDERGROUND ET&C SHALL BE PROVIDED THROUGHOUT PROJECT. FULL DETAIL AND LOCATIONS OF LINES AND SERVICES SHALL BE PROVIDED BY NATIONAL ORID.
- 11. LOW IMPACT DEVELOPMENT (LID) TECHNIQUES FOR STORMWATER TREATMENT AS REQUIRED UNDER THE CRMC URBAN COASTAL GREENWAYS (UCG) POLICY MUST BE INCORPORATED INTO ALL FINAL ARCHITECTURAL/ ENGINEERING DESIGNS FOR THE HIGH RES BUILDINGS PROPOSED (SPECIFICALLY BUILDINGS G, H, L, K, L, N & O). THESE STRUCTURES ARE CONCEPTUAL IN NATURE ON THESE PLANS, THUS DETAILED LID INCLUSION WAS NOT PPOSSIBLE. SEE LID GUIDANCE DETAILS PROVIDED ON SHEET 25 OF 31.



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No.		Revision		Date	App.
1	REVISIONS PE	R CRMC & D	EM	17NOV06	
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3	REVISIONS PE	R CITY COM	MENTS	14FEB07	
4	REVISIONS PE	21MAY07	00		
5	REVISIONS PE	R DEM CON	MENTS	8AUG07	(119)

EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

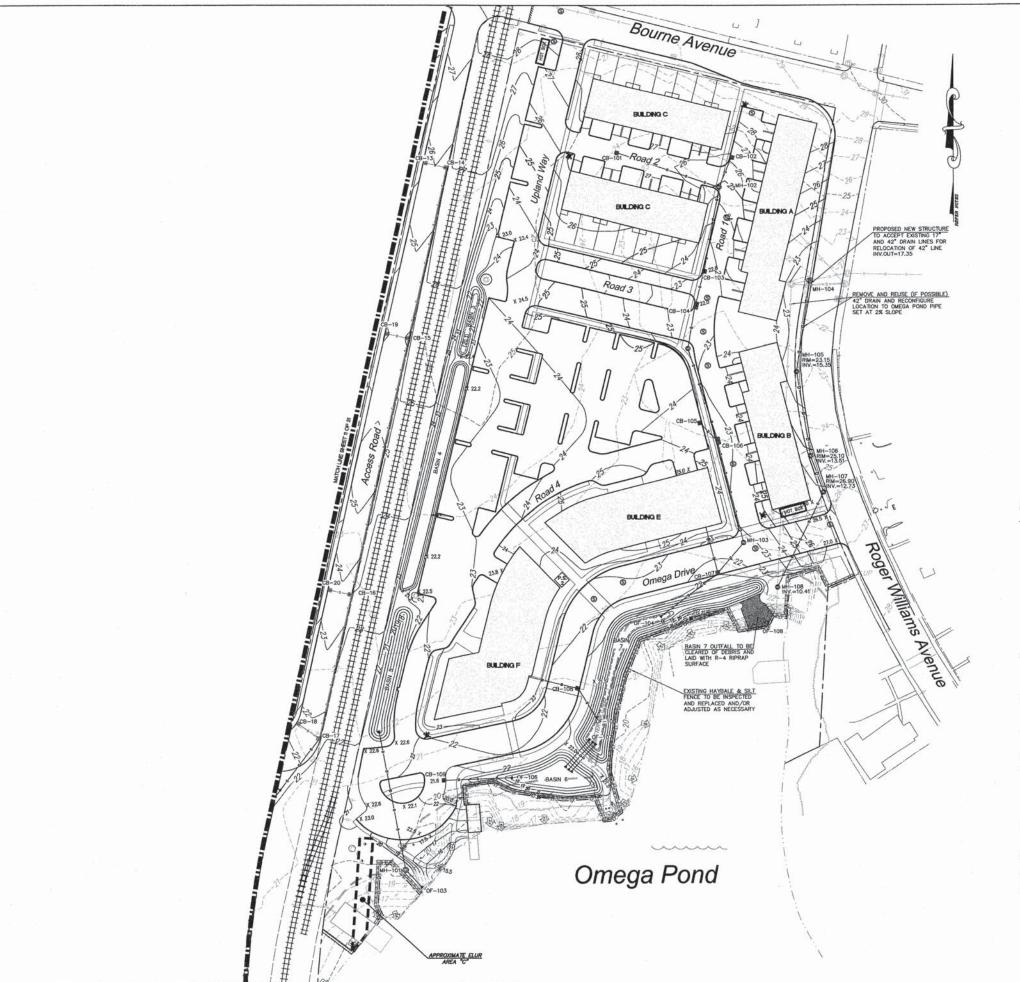
PERMITTING

PROPOSED GRADING & DRAINAGE PLAN WATERFRONT AREA



C-5 Sheet 11 of 31 05310.0

OWIERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OF PART, FOR ANY OTHER POLECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.





LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL. MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

LE	GEND
	PROPERTY LINE
	EXIST. CONTOUR MAJOR
	EXIST. CONTOUR MINOR
	SHORELINE
	WETLAND FLAG
mmmm.	EXIST. EDGE OF VEGETATION
	EXIST. EDGE OF PAVEMENT
0	EXIST, DRAINAGE LINE
20	EXIST. DRAINAGE MANHOLE
	EXIST. CATCH BASIN
2	EXIST, FIRE HYDRANT
de	EXIST. UTILITY POLE
0	EXIST. HIGH TENSION WIRE POLE
	PROP. EDGE OF PAVEMENT
	PROP. EDGE OF SIDEWALK
	PROP. RAIL ROAD TRACKS
o	PROP. DRAINAGE LINE
•	PROP. DRAINAGE MANHOLE
	PROP. CATCH BASIN
24	PROP. CONTOUR
	MATCH LINE

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## EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC PERMITTING

#### PROPOSED GRADING & DRAINAGE PLAN UPLANDS AREA



C-6

Sheet 12 of 31 05310.0

CHANGES)

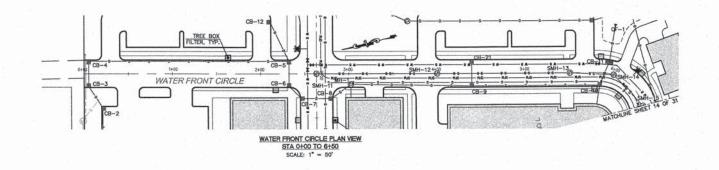
2. SOIL SURCHARGE PLANS FOR STRUCTURAL FILLING AND
SETTLEMENT - (PREPARED BY NE&C FOR FILLING OF WATERFRONT
SITE TO RAISE DEVELOPMENT OUT OF FLOOD ZONE)

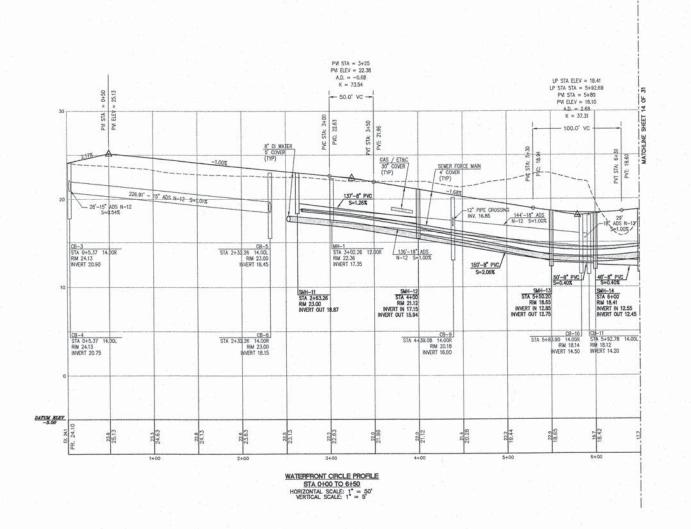
3. PHYSICAL ALTERATION PERMIT PLANS FOR EAST POINTE ACCESS ROAD CONSTRUCTION — (PREPARED BY NE&C FOR PERMITTING AND CONSTRUCTION OF THE EAST POINTE ACCESS ROAD THROUGH RIDOT)

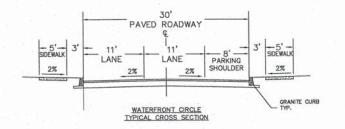
ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT SOIL REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS SITE. THE CONTRACTOR SHALL ABIDE BY ALL RESTRICTIONS CONTAINED WITHIN ENVIRONMENTAL LAND USE RESTRICTIONS (ELUR) SHOWN ON THE PLANS. SEE CASE FILE RIDEM 98-014.

- PROPERTY LINE INFORMATION REFERENCED FROM PLAN ENTITLED "BOUNDARY SURVEY PLAN MAP 205 BLOCK 1 LDT 4 MAP 303 BLOCK 13 LDTS 4 & 5 ROCER WILLIAMS AVE & BOURNE AVE. EAST FROVOMENCE, RI' PREPARED FOR GEONOVA DEVELOPMENT COMPANY, PREPARED BY WATERMAN ENGINEERING CO., SHEET 1 OF 1, DATED SEPT, 23, 2002. THROUGH REVISION 2 DATED 8-12-03, STAMPED AND SIGNED BY RICHARD S. LIPSITZ ON 8-15-03.
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- 9. FOR UTILITY STRUCTURE DETAILS SEE SHEET 26 OF 31 FOR SCHEDULES.

GRAPHIC SCALE 1 INCH = 50 FEET











SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

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3	REVISIONS PE	21MAY07	mon		
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No.		Revision		Date	App.
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AS SHOWN Date: FEBRUARY06

## EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

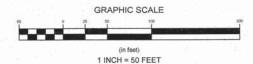
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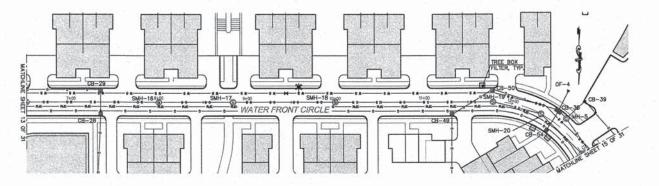
PLAN & PROFILE WATERFRONT CIRCLE-1



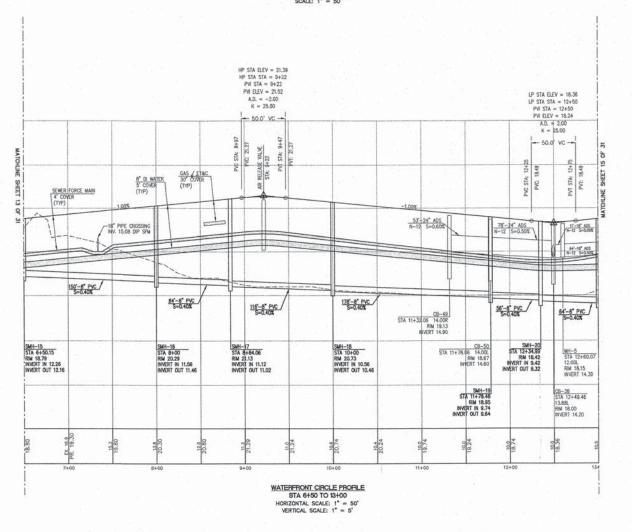
PP-1 Sheet 13 of 31

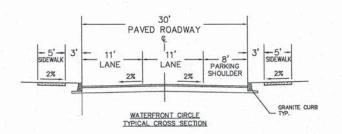
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# WATER FRONT CIRCLE PLAN VIEW STA 6+50 TO 13+00 SCALE: 1" = 50"









SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

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## EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

PLAN & PROFILE WATERFRONT CIRCLE-2

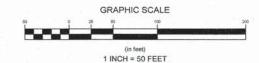


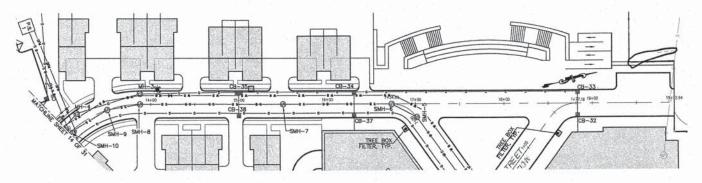
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Sheet 14 of 31

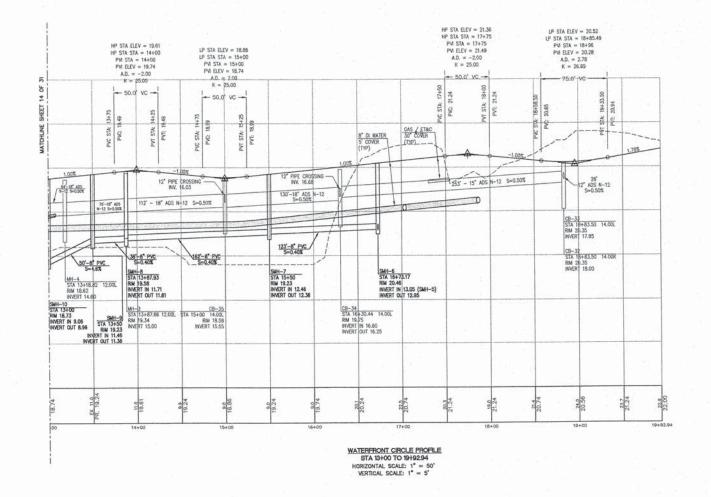
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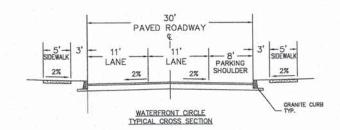
OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PRACETS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERTY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.





WATER FRONT CIRCLE PLAN VIEW
STA 13+00 TO 19+92.94
SCALE: 1" = 50"









SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

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## EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

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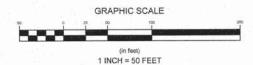
PLAN & PROFILE WATERFRONT CIRCLE-3

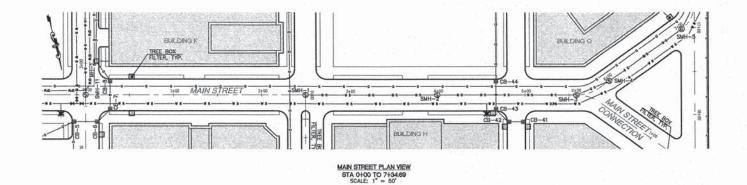


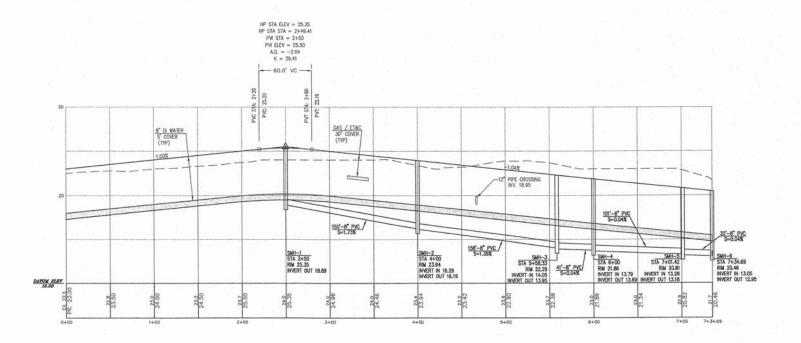
PP-3 Sheet 15 of 31

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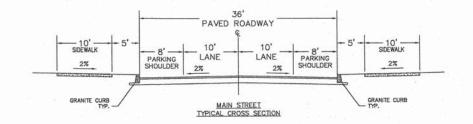
OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIPICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERTY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.







MAIN STREET PROFILE
STA 0+00 TO 7+34.69
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



#### NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

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### EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE GEONOVA DEVELOPMENT CO. LLC

Issued for:

PERMITTING

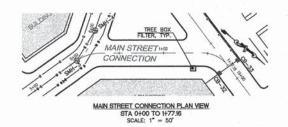
PLAN & PROFILE MAIN STREET

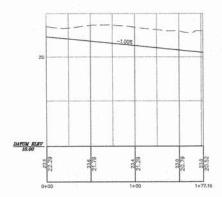


PP-4 Sheet 16 of 31

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GRAPHIC SCALE 1 INCH = 50 FEET



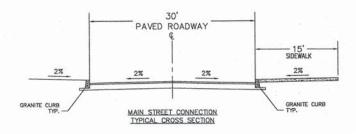


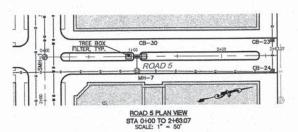
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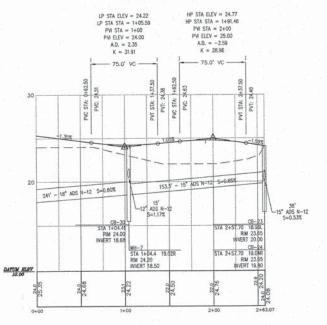
STA 0+00 TO 1+77:16

HORIZONTAL SCALE: 1" = 50'

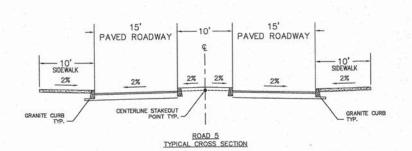
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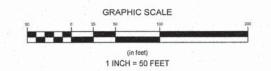






ROAD 5 PROFILE STA 0+00 TO 2+63.07 HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5'







SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

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3	REVISIONS PE	R AGENCY	COMMENTS	21MA	107 mal
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## EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE GEONOVA DEVELOPMENT CO. LLC

PERMITTING

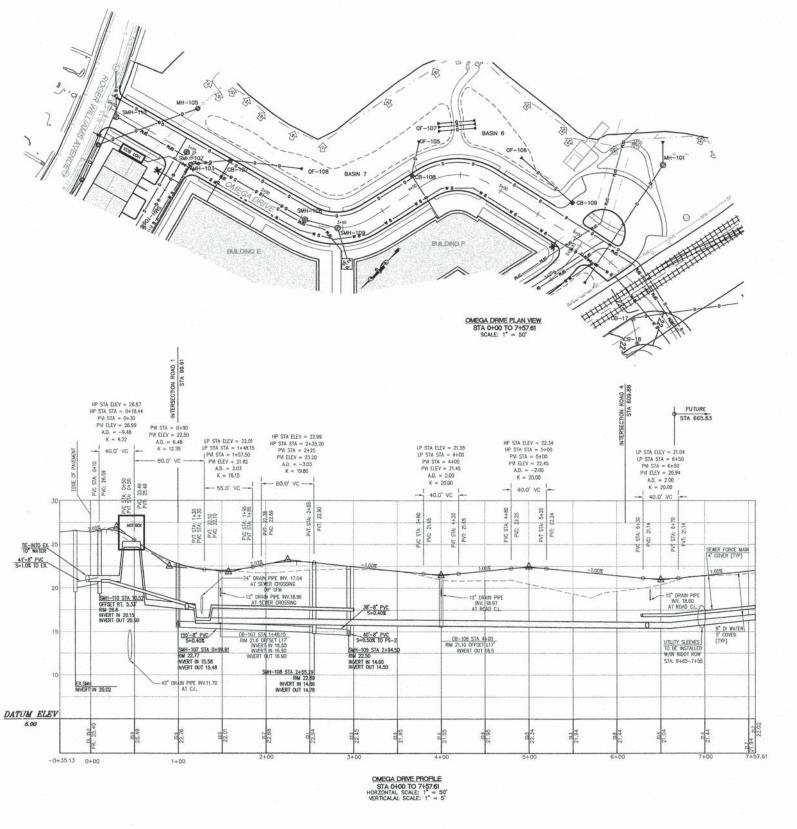
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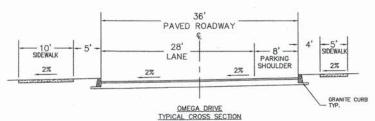
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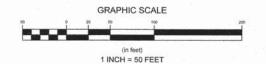


PP-5 Sheet 17 of 31 05310.0

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SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL **ENVIRONMENTAL** TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

2 R	EVISION	S PER CITY (	COMMENTS	14FEB07	mar
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CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

Drawing Title:

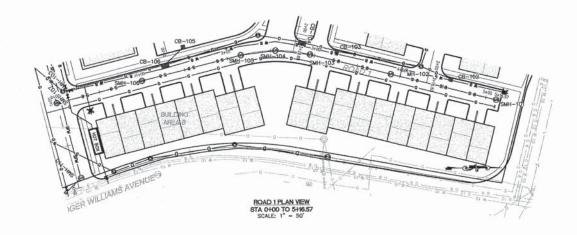
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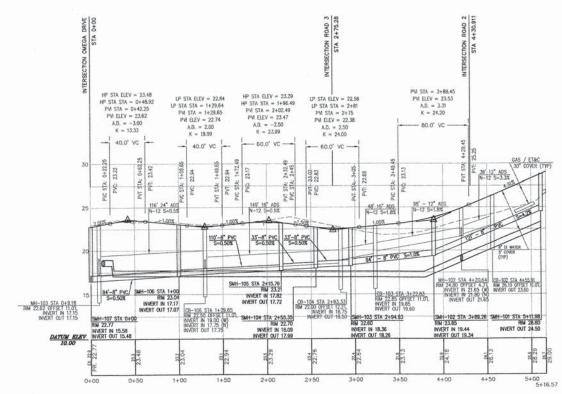


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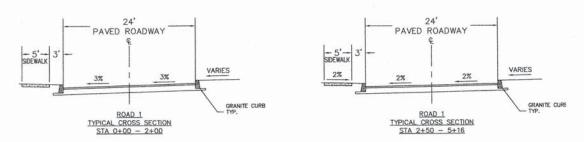
Sheet 18 of 31

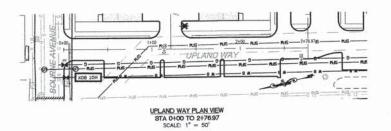
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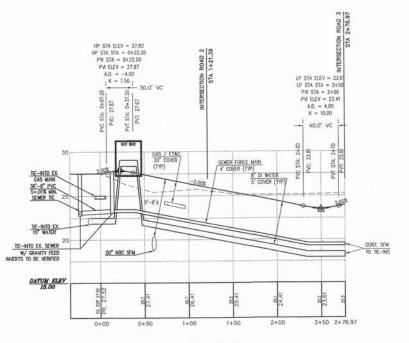




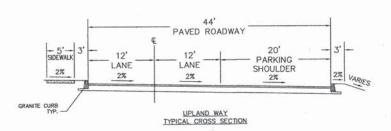
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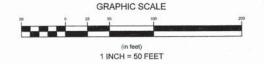






UPLAND WAY PROFILE STA 0+00 TO 2+76.97 HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5"







SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169

REVISIONS	S PER CITY	COMMENTS		14FEB07	mou
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NEC	Drawn by:	ACA	C	necked by:	
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#### EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

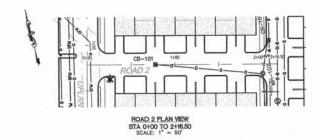
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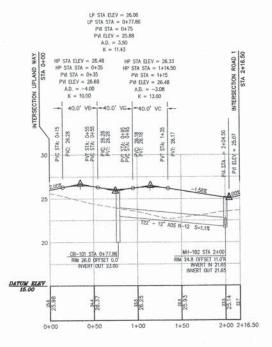
PLAN & PROFILE **ROAD 1 & UPLAND WAY** 



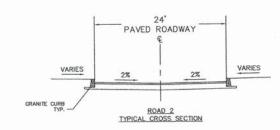
PP-7 theet 19 of 31

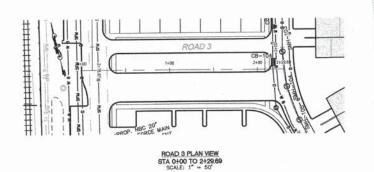
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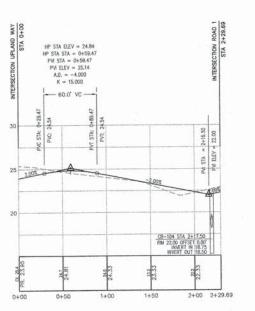




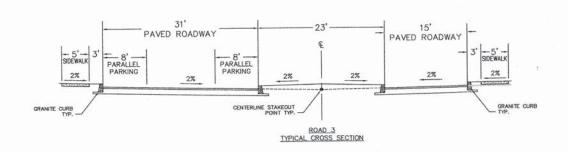
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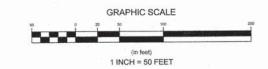






ROAD 3 PROFILE STA 0+00 TO 2+29.69 HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5'







MATERIALS TESTING

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SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL

Scale:		AS	SHOWN	Date:	FEBRU	ARY06
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No.			Revision		Date	Арр.
1		REVISION	IS PER CRM	C & DEM	17NOV06	0
2	R	EVISIONS	PER CITY	COMMENTS	14FEB07	mga

## **EAST POINTE**

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

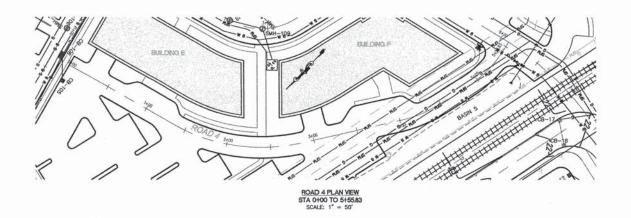
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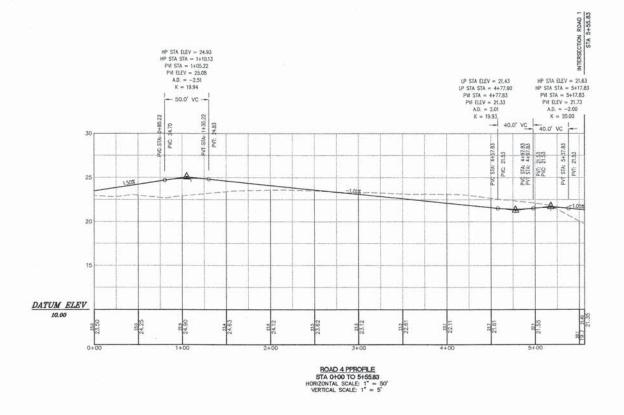
PLAN & PROFILE ROAD 2 & ROAD 3



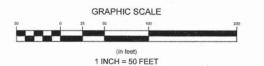
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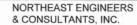
Sheet 20 of 31 05310.0













SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

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## **EAST POINTE**

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

PLAN & PROFILE ROAD 4



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05310.0

#### SOIL EROSION and SEDIMENT CONTROL NOTES

A SITE ENVIRONMENTAL LAND USE RESTRICTION (ELUR) OVERVIEW

THE SUBJECT PROJECT AREA IS BURDENED BY THREE ENVIRONMENTAL LAND USE RESTRICTIONS (ELUR) PROHIBITING CERTAIN ACTIVITIES WITHIN THOSE AREAS. THESE RESTRICTIONS ARE CUILLINED IN THE RIDBEN FILE RECARDING THIS FACULTY. THE CONTRACTOR SHALL STRICTLY FOLLOW THE SOIL MANAGEMENT PRACTICES OUTLINED IN THE ELUR DOCUMENTS. THESE CAN BE FOUND AT RIDBEN CASE FILE 58-0-14.

#### B. GENERAL CONSTRUCTION SEQUENCE

- 1. PLEASE NOTE THAT THE OVERALL PROJECT CONSISTS OF 4 INDIVIDUAL AREAS OF CONSTRUCTION EACH IDENTIFIED BY ITS OWN SET OF CONSTRUCTION PLANS IN ADDITION TO THE DESIGNS CONTAINED HEREWITH. THE ADDITIONAL THREE AREAS ARE IDENTIFIED AS FOLLOWS:
  - 1. FEMA CLOWR APPLICATION PLANS FOR REVETMENT CONSTRUCTION (APPROVED AND CURRENTLY UNDER REVIEW BY FEMA FOR THESE LATEST MODIFICATIONS)
  - SOIL SURCHARGE PLANS FOR STRUCTURAL FILLING AND SETTLENT (PREPARED BY NE&C FOR FILLING OF WATERFRONT SITE TO RAISE DEVELOPMENT OUT OF V & A FLOOD ZONES)
  - PHYICAL ALTERATION PERMIT PLANS FOR CONSTRUCTION OF EAST POINTE ACCESS ROAD— (PREPARED BY NE&C FOR PERMITTING AND CONSTRUCTION OF ACCESS ROAD THROUGH RIDOT ROW)
- DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- CONSTRUCT WHEEL CLEANING BLANKET AT THE ENTRANCE LOCATIONS SHOWN ON THESE PLANS. CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE SITE VIA THESE ENTRANCES ONLY.
- 4. INSPECT/ UPGRADE OR INSTALL SILT FENCES AND/OR HAY BALES AS INDICATED ON THE DRAWNGS TO CONTROL EROSION AND PREVENT SEDIMENT CONTAMINATION OF STREAMS AND WETLANDS PRIOR TO ANY EARTH MOVING ACTIVITIES.
- 5. REMOVE TREES WHERE NECESSARY
- 6. EXCAVATE STORMWATER CONTROL FACILITIES IN ACCORDANCE WITH THE PLANS AND DETAILS. AREAS OF STORMWATER CONTROL BASINS SHALL NOT BE COMPACTED BY HEAVY EQUIPMENT. IF SUCH COMPACTION OCCURS, DEEP ROTOTILLING (127) / AERATION SHALL BE PERFORMED TO ENSURE INFILTRATION HAS BEEN RE-ESTABLISHED,
- 8. INSTALL THE REQUIRED UTILITIES.
- 9, EACH PROJECT PHASE SHALL PROVIDE DETAILED SESC CONSTRCUTION PLANS ISOLATING THE LIMIT OF DISTURBANCE FOR EACH PHASE. CONSTRCUTION SEQUESNCE AND METHODS SHALL BE REVIWED AND APPROVED BY THE DESIGN RUGNERE AND / OR REVIEWING AGENCIES HAVING JURISTICTION. SEE GENERAL NOE ∮18.

- DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED DAT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOP SOIL TO REMOVE VEGETATION, ROOTS, AND ANY OTHER OBJECTIONABLE MATERIAL.
- ALL FILL SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT SUBSIDENCE, OR OTHER RELATED PROBLEMS.
- FILL INTENDED TO SUPPORT BUILDING STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES AND SPECIFICATIONS.
- ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 12" IN THICKNESS.
- FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDIN DEBRIS, AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN, SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.
- 9. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION SUBGRADE.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- ALI, DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF FINISH GRADING IN ACCORDANCE WITH THE VEGETATIVE PRACTICE NOTES.
- REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.
- TEMPORARY STOCKPILES SHALL BE CONSTRUCTED AS NECESSARY IN ACCORDANCE WITH THESE DETIALS.

- 1. LOAM AND SEEDING SHALL BE IN ACCORDANCE WITH RIDOT L.01 & L.02 NOTES.
- A MINIMUM OF 4 INCHES OF CLEAN LOAM SHALL BE INSTALLED. THE LOAM SHALL BE GRADED TO A SMOOTH CONDITION AND STONES AND OTHER OBJECTS LARGER THAN 2 INCHES SHALL BE REMOVED.

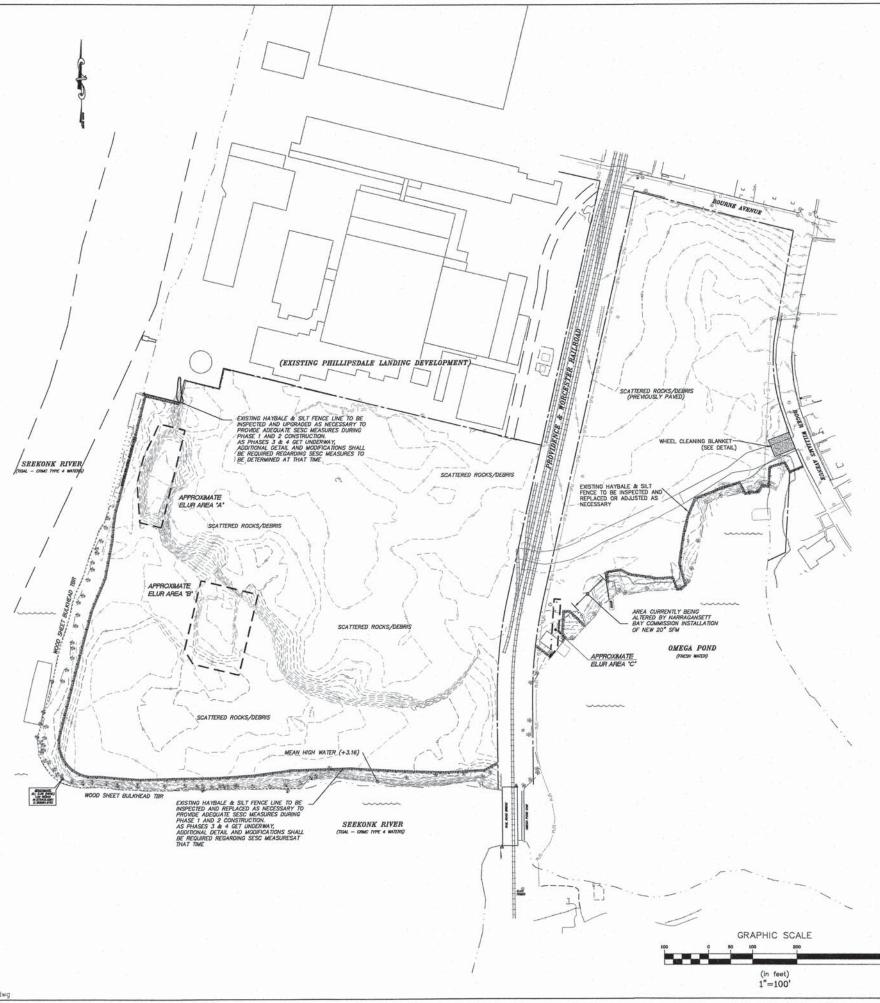
#### TEMPORARY MEASURES (FOR TEMPORARY PROTECTION OF DISTURBED AREAS)

- LIMESTONE AND FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:
   LIMESTONE: 3 TONS/ACRE
   FERTILIZER: (10-10-10): 600 LBS/ACRE
- SEED SHALL BE APPLIED AT THE FOLLOWING RATE: WINTER RYE: 112 LB/ACRE
- 3. HAY MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TONS/ACRE.

#### E. STORMWATER CONTROL BASIN EXCAVATION / CONSTRUCTION

- 1. POND CONTRUCTION SHALL BE IN CONFORMANCE WITH THESE PLANS AND THE STATE OF RHODE ISLAND STORMWATER DESIGN and INSTALLATION STANDARDS MANUAL.
- 2. ALL PROTECTIVE SESC MEASURES SHALL BE IN PLACE PRIOR TO EXACVATION ACTIVITIES.
- 3. A MINIMUM OF 12" OF ORGANIC SOIL SHALL LINE THE INSIDE OF THE BASINS FOR VEGETATIVE GROWTH, SEE DETAILS ON PLAN SET.
- 4. SIDE SLOPE STABILIZATION SHALL NEEDS TO BE ESTABLISHED PRIOR TO ALLOWING STORMWATER TO ENTER THE BASINS. SEE LANDSCAPE PLANS FOR VEGETATION SPECS.

- SILT FENCES AND HAY BALES SHALL BE INSPECTED AS INDICATED IN THE DETAILS. AT A MINIMUM THE SILT FENCING AND HAY BALES SHALL BE INSPECTED AND REPAIRED ONCE A WERK AND/OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFAIL OR SNOWMELT. SECURIENT TRAPPED BEHIND THE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND RECRADED ON THE SITE.
- 2. EXCELSIOR MATTING, WHERE NECESSARY, SHALL BE INSPECTED ON A WEEKLY BASIS.
- THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO PAVING DURING CONSTRUCTION THE ENTRANCE SHALL BE INSPECTED WEEKLY, AND REESTABLISHED AS NEOESSARY.
- SEEDED AREAS SHALL BE RESEEDED AS NECESSARY TO INSURE ESTABLISHMENT OF VEGETATION.



NORTHEAST ENGINEERS & CONSULTANTS, INC.

> SITE/CIVIL WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

A KNOWLEDGE CORPORATION

PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

2 REVISIONS PER CITY COMMENTS No. Date App. Designed By: NEC Drawn by: ACA Checked by:

1"=100' Date:

FEBRUARY06

EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

Drawing Title:

SOIL EROSION & SEDIMENT CONTROL PLAN



SESC Sheet 22 of 31

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#### GENERAL NOTES:

- - FEMA CLOMR APPLICATION PLANS FOR REVETMENT CONSTRUCTION (UNDER REVIEW BY FEMA CURRENTLY FOR PERMITTING OF NEW SHORELINE)

ALSO RELEVANT TO THIS PROJECT IS THE FACT THAT REMEDIATION ACTIVITIES HAVE BEEN PERFORMED ON THIS SITE. ALTHOUGH PHYSICAL ACTIVITIES HAVE BEEN COMPLETED, THE COSSURE REPORT IS STILL PEDIONG APPROVAL BY RIDEW OFFICE OF WASTE MANAGEMENT. TO CONTRACTOR SHALL DETAIN THE FINAL CLOSURE REPORT UPON ITS APPROVAL AND ABIDE BY ALL RESTRICTIONS CONTAINED WHISH IT. SHOULD ANY RESTRICTION POSE A COMPLICT WITH THESE DESIGNS, THE CLOSURE REPORT RESTRICTIONS SHALL SUPERSEDED THESE DESIGNS. APPROVALE OF CHYRONMENTAL LAND USE RESTRICTIONS (CULIF) HAVE BEEN SHOWN ON THE TAXEN BUT ARE SUBJECT TO MORPHOLATION BY RIDEW UNDER THAL APPROVA

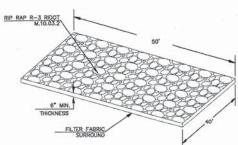
- 2. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT AND ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS. COMISSIONS OR DISCREPANCES BEFORE COMMENCING THE WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC. AND OTHER APPROVAL RELATED ITEMS WITH THE CITY OF EAST PROVIDENCE. NO CONSTRUCTION IS TO COMMENCE UNITL SUCH PERMITS HAVE BEEN SECURED.
- THE STATE OF RHODE ISLAND STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2004 AND ALL CURRENT ADDENDA, AND THE RHODE ISLAND STANDARD DETAILS ARE MADE A PART HEREOF, AS IF ATTACHED HERETO.
- 7. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO BE MADE TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE CHLY APPROXIMATELY CORRECT. THE CONTRACTOR IS REQUIRED TO VERIFY THE LOCATION OF ALL SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER UTILITIES NOT ON RECORD OR SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REPAIR AND REINSTATEMENT. OF UTILITY SERVICES DAMAGED.
- 8. RELOCATION OF ANY UTILITIES SHALL BE AT THE OWNERS EXPENSE AND BE COMPLETED WITH THE UTILITY WORK. THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATION REQUIRED PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, PAYEMENT, WALKS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
- AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- 11. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTRACTOR SHALL DEFEND, INDENNIFY AND HOLD THE CONTRACTOR SHALL DEFEND, INDENNIFY AND HOLD THE COMPREAD THE PROPERTY AND HOLD THE CONTRACTOR SHALL DEFEND, INDENNIFY AND HOLD THE COMPREAD THE PROPERTY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER."
- 12. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA. EITHER IN SERVICE OR ABAMDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE DOORS TO ANALY AREA THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE DOORS TO ANALY AND ANALY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (PLEASE CONTACT DIG SAFE PRIOR TO CONSTRUCTION AT 1-800-225-4977 AND/OR ALL LOCAL UTILITY COMPANIES).
- WATER AND SEWER MAINS SHALL MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 10' AT ALL TIMES. CONSULT R.I.D.E.M. RULES AND REGULATIONS FOR ANY DEVIATIONS FROM THIS
- 15, ALL SEWER MANHOLE FRAMES AND COVERS SHALL PROVIDE 30" CLEAR ACCESS AND HAVE THE WORD "SEWER" CAST IN CENTER W/ 3" LETTERS.
- 16. AS-BUILT DRAWINGS OF ALL UTILITIES SHALL BE PROVIDED IN ACCORDANCE W/ EPPWD
- 17. SHOP DRAWINGS OF ALL PROPOSED CONSTRUCTION MATERIALS AND STRUCTURES SHALL BE REQUIRED FOR REVIEW AND APPROVAL BY THE DESIGNERS (In. ENGINEERS / ARCHITECTS / LANDSCAPE ARCHITECTS ETC.)
- 18. PRIOR TO THE START OF CONSTRUCTION OF ANY PHASE OF THE PROJECT THE CONTRACTOR SHALL PROVIDE TO THE OWNER AND ENGINEER A CONSTRUCTION SEQUENCING, METHODS AND MEANS PROGRAM ELLUSTRATION THE METHODOLOGY / TIMING / SCHEDULING / AND SEQUENCING OF ALL WORK BOTH IN A GENERAL FORM AS WELL AS A DETAILED THE DELIBER THAT CAN BE UPDATED THROUGHOUT THE CONSTRUCTION PHASES. THIS PROPOSAL FOR SEQUENCING AND MEANS MUST BE COORDINATED WITH AND APPROVED BY ALL REVERMING AGENCIES HAVING JURISDICTION ONCE PREPARED. THE ENGINEER SHALL COORDINATE THIS EFFORT OF REVIEW AND APPROVED.
- APPROVAL.

  19. ALTHOUGH THE PROJECT IS SEEKING AN OVERALL PERMITTING APPROVAL FROM THE VARIOUS REVIEWING AGENCIES, THE PROJECT IS PLANNED TO BE CONSTRUCTED IN FOUR (4) INDIVIDUAL PHASES. EACH IS BREFLY DESCRIBED BELOW, PLEASE, NOTE THESE ARE SUBJECT TO CHANCE SHOULD THE ULTIMATE DEVELOPER / CONTRACTOR CHANCE THE PROGRAM.

  PHASE I: PHASE I IMILL CONSIST OF THE CONSTRUCTION OF THE UPLANDS SECTION OF THE PROJECT.

  PHASE II: PHASE II SHALL CONSIST OF THE CONSTRUCTION OF THE UPLANDS SECTION OF THE PHASE III. SHALL CONSIST OF BILDS G,H, O, R AND 12 RESIDENTIAL UNITS ALADION WATERFRONT CRICE.

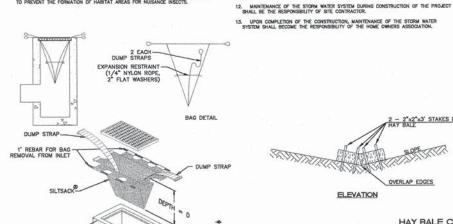
  PHASE IV: PHASE IV SHALL CONSIST OF ALL REMAINING IMPROVEMENTS
- 20 LOW IMPACT DEVELOPMENT (LID) TECHNIQUES FOR STORMWATER TREATMENT AS REQUIRED UNDER THE CRUC URBAN COASTAL GREENWAYS (LOG) POLICY MUST BE INCORPORATED INTO ALL FINAL ARCHITECTURAL, FORNICESTING DESIONS FOR THE HIGH RISE BILLIDINGS PROPOSED (SPECIFICALLY BUILDINGS G. H., K, L, N & O). THESE STRUCTURES ARE CONCEPTUAL IN NATURE ON THESE FLANS, THUS DETAILED LID INCLUSION WAS NOT PPOSSIBLE. SEE LID GUIDANCE DETAILS PROVIDED ON SHEET 25 OF 31.



WHEEL CLEANING BLANKET DETAIL

#### STORMWATER CONTROL BASIN MAINTENANCE NOTES:

- GRASSES AND/OR SPECIFIED VEGETATION SHALL BE PLANTED AROUND AND WITHIN THE STORWWATER FACILITIES IMMEDIATELY FOLLOWING CONSTRUCTION TO STABILIZE SLOPES AND PREVENT FROSION.
- ALL INLET STRUCTURES SHALL HAVE THEIR SEDIMENTS REMOVED AND PROPERLY DISPOSED OF INMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES, WHEN SUMPS SHOW A SEDIMENT DEPTH AT 75% OF THEIR CAPACITY OR ON AN ANNUALLY BASIS, WHICH EVER COMES FIRST.

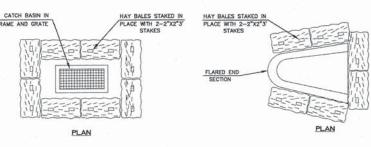


#### MAINTENANCE SCHEDULE:

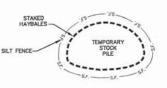
- EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT (>0.25" OF PRECIPITATION IN 24 HOURS).
- IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACKS SHALL BE INSPECTED EVERY 2-3 WEEKS.

- SILT SACKS SHALL BE CLEANED AS RECOMMENDED BY THE MANUFACTURER AND DISPOSED OF PROPERLY.

SILTSACK DETAIL N.T.S.



## HAY BALE INLET/OUTLET STRUCTURE PROTECTION

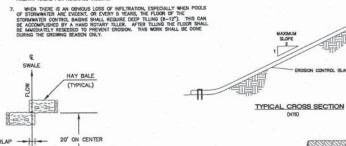


TEMPORARY STOCK PILE

#### N.T.S.

#### LOW IMPACT DEVELOPMENT (LID) MAINTENANCE NOTES:

- 3. ALL LID SYSTEMS SHALL HAVE THEIR SEDIMENTS REMOVED AND PROPERLISPOSED OF IMMEDIATELY POLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES, OR WHEN THERE IS EVIDENCE OF SEDIMENT OR CONVOUS LOSS OF PROPER FLUNCTION.



METAL CONNECTOR -CABLE 1/8"¢ (MIN.)

2"x2"x4"-6" (MAX.) OAK POST DRIVE IN TRENCH (SEE NOTE 2)

NOTES:

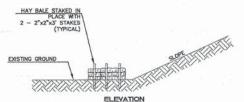


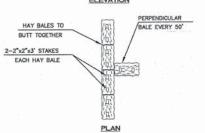
PLAN

2 - 2"x2"x3' STAKES EACH

OVERLAP EDGES

ELEVATION





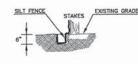
HAY BALE SEDIMENT BARRIER N.T.S.



1. SET 2-2" X 2" X 4' X 6" (MAX.) POSTS AND EXCAVATE A 6" X 6" TRENCH UPSLOPE ALONG LINE OF POSTS.

2. STAPLE SILT FENCE TO THE POSTS AND EXTEND INTO TRENCH AS SHOWN.

3. BACKFILL AND COMPACT THE EXCAVATED SOIL INTO THE TRENCH.



SILT FENCE

## NORTHEAST ENGINEERS

& CONSULTANTS, INC.

WATERFRONT GEOTECHNICAL **ENVIRONMENTAL** TRANSPORTATION STRUCTURAL

MATERIALS TESTING

LAND PLANNING

SITE/CIVIL

#### A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169

#### NOTES:

1/1

EROSION CONTROL BLANKET SPECS

HEAVY-DUTY CORD SEWN IN SILT FENCE FABRIC (TOP AND BOTTOM) (SEE DETAIL "A" FOR TOP CORD TO EVERY OTHER SILT FENCE POST)

DETAIL 'A

AREA OF DISTURBANCE

1. SHALL BE IN ACCORDANCE WITH SECTION 208 OF THE R.I. STANDARD SPECIFICATIONS.

4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

BALED HAY EROSION CHECK and SILT FENCE COMBINED (RIDOT 9.3.0)

3. 1"x1"x4'-6" (MIN.) POSTS ARE PERMITTED FOR PREFABRICATED SILT FENCE

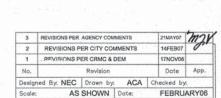
2. STD. 9:1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SLIT FENCE FABRIC SHALL NOT BE SLIT. STD. STD. 9:1.0 POST SHALL BE DRIVEN THROUGH SLIT FENCE FABRIC, 2"2"x4"-6" (MAX.) O.AK POST FOG SLIT FENCE SHALL BE LOCATED 8"-0" (MAX.) O.C. IN WETLAND AREAS AND 4"-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP OFF AREAS AS SHOWN ON PLANS.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

3. ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.

5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 8" OVERLAP, STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

\*REFER TO GENERAL STAPLE PATTERN GUIDE ON PAGE 16 FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.



#### Project Title **EAST POINTE**

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

**DETAILS-1** 

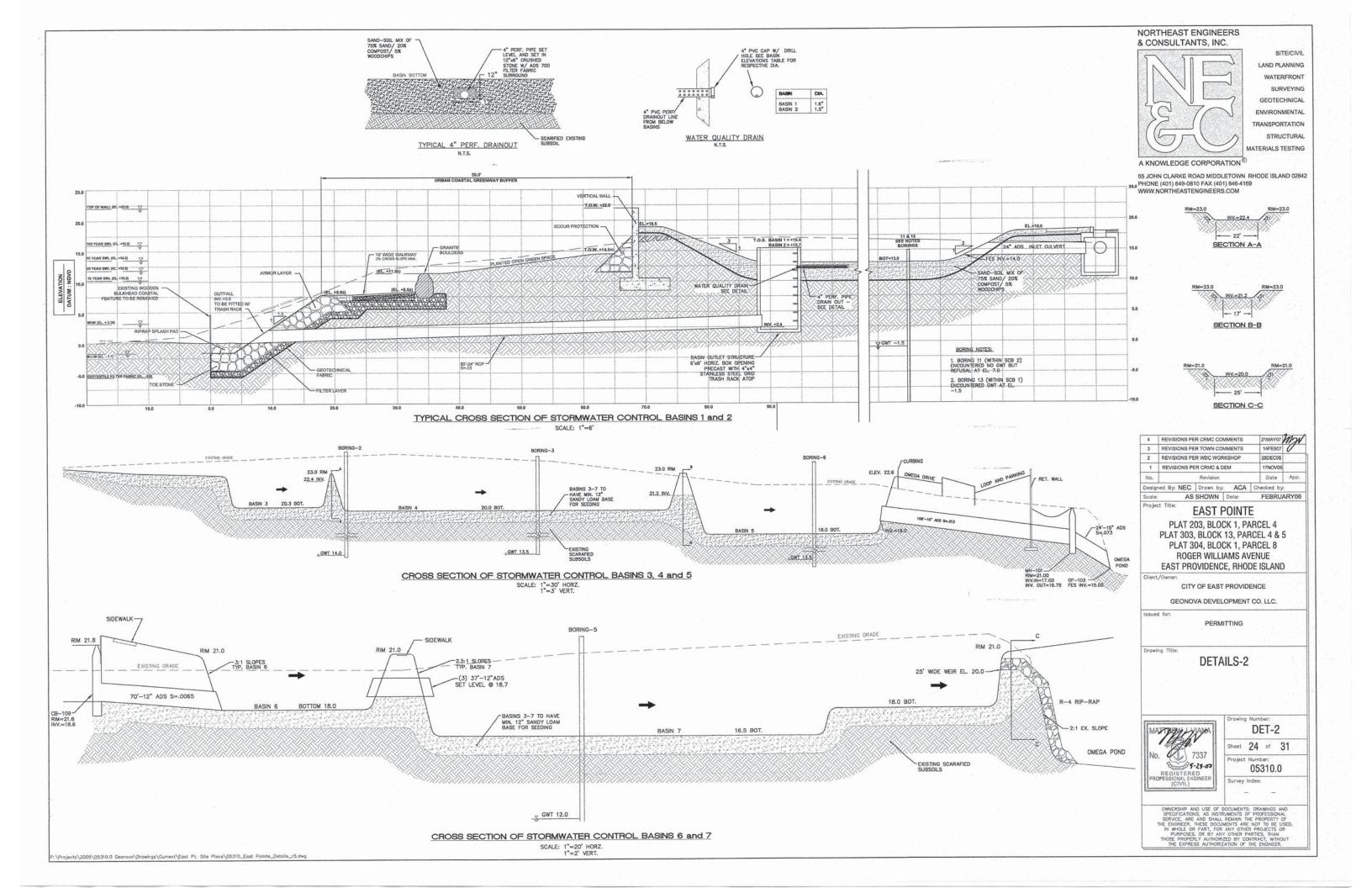


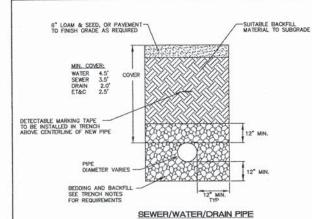
DET-1

Sheet 23 of 31

05310.0

P:\Projects\2005\05310.0 Geonova\Drawings\Current\East Pt. Site Plans\05310\_East Pointe\_Details\_r5.dwg





TRENCH DETAIL

3/4" STONE

FIRE HYDRANT

N.T.S.

THRUST BLOCK NOTES

#### TRENCH NOTES:

- 1.) UNSUITABLE MATERIAL SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 12-INCHES BELOW THE DESIGN INVERT ELEVATION.
- SEWER AND DRAIN PIPES SHALL BE LAID BEGINNING AT THE DOWNSTREAM END OF THE PIPE LINE, IN ACCORDANCE WITH RIDO SPECIFICATION 701.03.4
- 5.) ALL DRAIN PIPES SHALL BE ADS N-12 (SMOOTH BORE) TYPES UNLESS OTHERWISE INDICATED.
- ALL SEWER PIPE AND GASKETS SHALL CONFORM TO ASTM 3034 AND ASTM F679.
- ALL NEW SEWER MANHOLES SHALL HAVE KOR-N-SEAL CONNECTIONS, TYPICAL OR EQUAL.

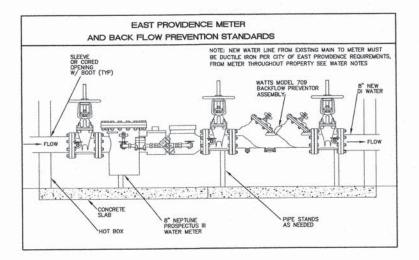
- 9. WATER PIPE TRENCHES MUST BE BEDDED WITH SAND CONTAINING NO PARTICLES LARGER THAT 3/8". THIS MATERIAL MUST CONFORM TO AASHTO M6 REQUIREMENTS.
- 10.) UTILITY INSTALLATIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE CITY OF EAST PROVIDENCE PUBLIC WORKS DEPARTMENT

#### WATER SERVICE CONNECTION NOTES:

- 2. SHOP DRAWINGS FOR MATERIALS ARE REQUIRED TO BE SUBMITTED FOR APPROVAL BY EAST PROVIDENCE WATER.
- 4. ALL WATER TAPS SHALL BE CONDUCTED UNDER THE SUPERVISION OF EAST PROVIDENCE WATER PERSONNEL.  $\label{eq:conduction}$

- 9. THE CONTRACTOR AND/OR DEVELOPER GUARANTEES WORKMANSHIP AND MATERIALS OF ALL WATER IMPROVEMENTS FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WATER SYSTEM.
- 10. WATER METER AND BACK FLOW PREVENTER TO BE HOUSED IN A HEATED STRUCTURE ABOVE GROUND.

CONNECTION MARKER



#### NORTHEAST ENGINEERS & CONSULTANTS, INC.



A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

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LAND PLANNING

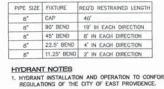
WATERFRONT

GEOTECHNICAL ENVIRONMENTAL

STRUCTURAL

SURVEYING

#### RESTRAINED LENGTH TABLE

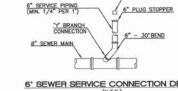


HYDRANT INSTALLATION AND OPERATION TO CONFORM TO REGULATIONS OF THE CITY OF EAST PROVIDENCE.

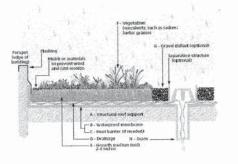
- HYDRANT SHALL BE AMERICAN DARLING OR SIMILAR APPROVED (OPEN RIGHT).
- HYDRANT NOZZLES SHALL BE SET AT A STANDARD HEIGHT ABOVE FINISHED GRADE (PER TOWN REQUIREMENTS).
- 4. MEGALUG RESTRAINED JOINTS MAY BE USED IN LIEU OF THRUST BLOCKS. TWO PIECE, SLIP TYPE

THRUST BLOCK

SQUARE FEET OF CONCRETE THRUST BLOCKING ON UNDISTURBED MATERIAL



6" SEWER SERVICE CONNECTION DETAIL



TYPICAL GREEN ROOF N.T.S.



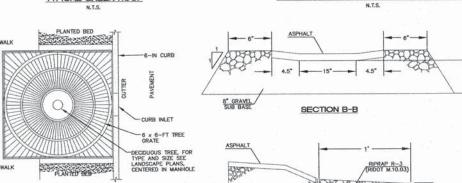
SECTION A-A

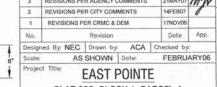
I A

PLAN VIEW

BITUMINOUS SPILL-OFF
N.T.S.

GRANITE CURB





PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROIVIDENCE

GEONOVA DEVELOPMENT CO. LLC

PERMITTING

FILTER FABRIC

ASPHALT PAVEMENT

GRANITE CURB

**DETAILS-3** 



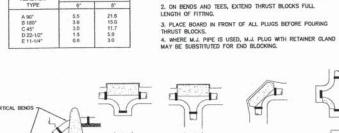
DET-3 25 of 31 05310.0

TREE BOX FILTER DETAIL N.T.S.

BRICK SHELF

12-IN. GRAVEL LAYER, COMPACTED

3" GRAVEL LAYER



1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED, MATERIAL NO JOINTS SHALL BE COVERED WITH CONCRETE.



5-1/4" HYDRANT AMERICAN DARLING

PLAN VIEW

CORPORATION STOP GATE VALVE PROFILE VIEW

SECTION VIEW

FORCE MAIN CONNECTION DETAIL ROGER WILLIAMS AVENUE TROUGH DETAIL



BRICK SHELF

PLAN VIEW

WATER GATE VALVE/SERVICE CURB STOP N.T.S.

e I.D.	From	To	Dia. (in)	Length (ft)	Slope (ft/ft)
0-1	BLDG G	CB-1	12	10	0.040
0-2	CB-1	CB-2	12	108	0.005
:0-3	CB-2	CB-3	15	27	0.006
0-4	CB-3	CB-4	15	28	0.005
0-5	CB-4	CB-5	15	227	0.010
:0-6	CB-5	CB-6	15	28	0.011
0-7	CB-6	CB-7	15	20	0.010
8-00	CB-7	CB-8	15	34	0.009
20-9	CB-8	MH-1	15	27	0.011
0-10	MH-1	CB-9	18	136	0.010
O-11	CB-9	CB-10	18	144	0.010
0-12	CB-10	CB-11	18	29	0.010
0-13	CB-11	OF-1	18	32	0.006
0-14	CB-12	CB-5	12	48	0.021
0-15	CB-13	CB-14	12	20	0.010
0-16	CB-14	CB-15	12	196	0.008
0-17	CB-15	CB-16	12	296	0.007
0-18	CB-16	CB-17	12	165	0.007
0-19	CB-17	CB-18	12	20	0.014
0-20	CB-18	MH-6	12	138	0.005
0-21	CB-19	CB-15	12	20	0.005
0-22	CB-20	CB-16	12	20	0.010
0-23		MH-1	12	18	0.028
0-24	BLDG L	CB-10	12	24	0.021
0-25	CB-22	OF-2	12	13	0.023
0-26	BLDG H	CB-30	12	14	0.011
0-27	CB-30	MH-7	12	15	0.012
0-28	MH-7	CB-26	18	241	800.0
0-29	CB-26	CB-27	18	160	0.005
0-30	CB-27	CB-28	18	108	0.005
0-31	CB-28	CB-29	18	28	0.005
0-32	CB-29	OF-3	24	185	0.005
0-33	CB-31	CB-27	12	36	0.033
0-34	CB-32	CB-33	12	28	0,005
O-35	CB-33	CB-34	15	253	0.005
0-36	CB-34	CB-35	18	130	0.005
0-37	CB-35	MH-3	18	112	0.005
0-38	MH-3	MH-4	18	75	0.005
0-39	MH-4	MH-5	18	64	0.005
0-40	MH-5	CB-36	18	11	0.009
0-41	CB-36	OF-4	24	24	0.008
0-41	BLDG I	CB-32	12	21	0.024
0-42	BLDG O		12	19	0.024
0-43	CB-37	CB-34	12	28	0.005
00-45	CB-37	CB-35	12	28	0.020
0-46	CB-55	CB-40	12	111	0.005
0-47	CB-40	CB-39	12	58	0.005
20-48	CB-40	MH-5	12	28	0.005
20-49	CB-39	CB-42	12	18	0.011
0-50	CB-41	CB-42	12	19	0.011
	CB-42	CB-43	12	34	0.009
0-51	CB-43	CB-44	12	85	0.009
00-52		CB-46	12	54	0.009
CO-53	CB-45	CB-46	12	126	0.009
	CB-46 CB-47	CB-47	15	107	0.009
00-55		CB-48	15	120	0.005
00-56	CB-48	CB-49	18	120	0.005
00-57	CB-49 CB-50	CB-36	24	78	0.006
			12	78	0.005
0-59	BLDG N			100	0.009
09-00	CB-51	CB-52	12	100	
00-61	CB-52	CB-53	12		0.011
0-62	CB-53	CB-48	12	78	0.010
0-63	CB-54	CB-36	12	28	0.005
00-64	CB-21	CB-9	12	28	0.011
CO-65	MH-2	CB-23	15	98	0.005
00-66	CB-23	CB-24	15	38	0.005
CO-67	CB-24	MH-7	15	153	0.008
CO-68	MH-6	CB-22	12	209	0.005
CO-69	OS-1	OF-5	24	80	0.030
CO-70	OS-2	OF-6	24	80	0.030
-	-				
OTES:					
All pipes	s to be AD	S N-12 H	OPE with smoo	oth interior walls.	
he cen	terlines of	all pipes	are to be const	ructed to the cent	er of structure

From	To	Length (ft)	Slope (ft/ft)	Dia. (in)
SMH-1	SMH-2	150	0.0173	8
SMH-2	SMH-3	158	0.0135	8
SMH-3	SMH-4	41	0.0040	8
SMH-4	SMH-5	101	0.0040	8
SMH-5	SMH-6	32	0.0040	8
SMH-6	SMH-7	123	0.0040	8
SMH-7	SMH-8	162	0.0040	8
SMH-8	SMH-9	38	0.0040	8
SMH-9	SMH-10	50	0.0460	8
SMH-10	PS-1	110	0.0040	8
SMH-11	SMH-12	137	0.0126	8
SMH-12	SMH-13	150	0.0206	8
SMH-13	SMH-14	50	0.0040	8
SMH-14	SMH-15	48	0.0040	8
SMH-15	SMH-16	150	0.0040	8
SMH-16	SMH-17	84	0.0040	8
SMH-17	SMH-18	116	0.0040	8
SMH-18	SMH-19	178	0.0040	8
SMH-19	SMH-20	56	0.0040	8
SMH-20	SMH-10	64	0.0040	Ř

Structure	Type	Rim El. (ft)	Invert in El. (ft)	Invert Out El. (f
SMH-1	4' Dia Manhole	25.35	N/A	18.89
SMH-2	4' Dia Manhole	23.94	16.25	16,19
SMH-3	4' Dia Manhole	22.29	14.05	13.95
SMH-4	4 Dia Manhole	21.86	13.79	13.68
SMH-5	4' Dia Manhole	20.80	13.28	13.18
SMH-6	4' Dia Manhole	20.46	13.05	12,95
SMH-7	4' Dia Manhole	19.23	12.46	12.36
SMH-8	4' Dia Manhole	19.57	11.71	11.61
SMH-9	4' Dia Manhole	19.23	11.46	11,36
SMH-10	4' Dia Manhote	18.73	9.06	8.96
SMH-11	4' Dia Manhole	21.11	N/A	18.87
SMH-12	4' Dia Manhole	18.64	17.15	15.94
SMH-13	4' Dia Manhole	18.41	12.85	12.75
SMH-14	4' Dia Manhole	18.79	12.55	12.45
SMH-15	4' Dia Manhole	20.29	12.26	12.16
SMH-16	4' Dia Manhole	21.12	11.56	11.46
SMH-17	4' Dia Manhole	20.73	11.12	11.02
SMH-18	4' Dia Manhole	18,94	10.56	10.46
SMH-19	4' Dia Manhole	18.42	9.74	9.64
SMH-20	& Dia Machole	18.73	9.42	9.32

tructure	Туре	Rim El. (ft)	Invert In El. (ft)	Pipe In ID	Sump El. (ft)	Invert Out El. (ft)	Pipe Out I
CB-1	4' Dia Catch Basin	24.50	21.60	CO-1	18.50	21.60	CO-2
CB-2	4' Dia Catch Basin	24.48	21.05	CO-2	18.15	21.05	CO-3
CB-3	4' Dia Catch Basin	24.13	20.90	CO-3	17.90	20.90	CO-4
CB-4	4' Dia Catch Basin	24.13	20.75	CO-4	17.75	20.75	CO-5
			. 18.45	CO-5			
CB-5	4' Dia Catch Basin	23.00	20.00	CO-14	15.45	18.45	CO-6
CB-6	4' Dia Catch Basin	23.00	18.15	CO-6	15.15	18.15	CO-7
CB-7	4' Dia Catch Basin	23.00	17.95	CO-7	14.95	17.95	CO-8
CB-8	4' Dia Catch Basin	23.00	17.65	CO-8	14.65	17.65	CO-9
1101-01-77	Single Malennial Metalical		16,70	CO-64			
CB-9	4' Dia Catch Basin	20.18	16.00	CO-10 CO-11	13.00	16.00	CO-11
CB-10	4' Dia Catch Basin	18.14	14.50	CO-24	11.50	14.50	CO-12
CB-11	Shallow Double Grate Catch Basin	18.12	14.20	CO-12	11.20	14.20	CO-13
CB-12	4' Dia Catch Basin	24.20	N/A	N/A	18.00	21.00	CO-14
CB-13	4' Dia Catch Basin	25.74	N/A	N/A	18.74	21.74	CO-15
CB-14	4' Dia Catch Basin	25.74	21.54	CO-15	18.44	21.44	CO-16
Same VA	T WOOD IN CONTROL OF		- Contract 5	CO-16	E	20070000	20000000
CB-15	4' Dia Catch Basin	23.93	19.83	CO-21	16.73	19.73	CO-17
00/00/2/	Participation of the second		19.65	CO-22		20000000	
CB-16	4' Dia Catch Basin	23.85	17.74	CO-17	14.61	17.61	CO-18
CB-17	4' Dia Catch Basin	22.16	16.52	CO-18	13.27	16.27	CO-19
CB-18	4' Dia Catch Basin	22.16	16.00	CO-19	13.00	16.00	CO-20
CB-19	4' Dia Catch Basin	23.93	N/A	N/A	16.93	19,93	CO-21
CB-20	4' Dia Catch Basin	23.85	N/A	N/A	16.85	19.85	CO-22
CB-21	4' Dia Catch Basin	20.18	N/A	N/A	14.00	17.00	CO-64
CB-22	4' Dia Catch Basin	18.75	14.30	CO-68	11.30	14.30	CO-25
CB-23	4' Dia Catch Basin	23.65	20.00	CO-65	17.00	20.00	CO-66
CB-24	4' Dia Catch Basin	23.65	19.80	CO-66	16.80	19.80	CO-67
2004-2010		SLYEN.	18.50	GO-67		The second	200000
CB-25*	4' Dia Catch Basin	24.20	20.45	CO-27	15.50	18.50	CO-28
CB-26	4' Dia Catch Basin	23.76	16.50	CO-28	13.50	16.50	CO-29
		III - WATER	15.70	CO-29		120000-00-00-00-00-00-00-00-00-00-00-00-0	
CB-27	Double Grate Catch Basin	21.30	17.30	CO-33	12.70	15.70	CO-30
CB-28	4' Dia Catch Basin	19.70	15,15	CO-30	12.15	15.15	CO-31
CB-29	4' Dia Catch Basin	19.70	15.00	CO-31	12.00	15.00	CO-32
CB-30	4' Dia Catch Basin	24.20	20.85	CO-26	17.85	20.85	CO-27
CB-31	4' Dia Catch Basin	21.45	N/A	N/A	15.50	18.50	CO-33
CB-32	4' Dia Catch Basin	20.35	18.00	CO-42	15.00	18.00	CO-34
CB-33	4' Dia Catch Basin	20.35	17.85	CO-34	14.85	17.85	CO-35
CB-34	4' Dia Catch Basin	19.75	16.60	CO-35 CO-44	13.25	16.25	CO-36
CB-35	Shallow Double Grate Catch Basin	18.58	15.55	CO-45 CO-36	12.55	15.55	CO-37
00.00	Grand Bound State Gater Gastr	13.55		CO-40 CO-63	-		
CB-36	Shallow Double Grate Catch Basin	18.00	14.20	CO-58	11.20	14.20	CO-41
CB-37	4' Dia Catch Basin	19.75	16.75	CO-43	13.75	16.75	CO-44
CB-38	4' Dia Catch Basin	18.58	N/A	N/A	13.10	16.10	CO-45
CB-39	4' Dia Catch Basin	19.00	14.45	CO-47	11.45	14.45	CO-4
CB-40	4' Dia Catch Basin	19.00	14.75	CO-46	11.75	14.75	CO-4
CB-41	4' Dia Catch Basin	22.70	N/A	N/A	16.50	19.50	CO-49
CB-42	4' Dia Catch Basin	22.70	19.30	CO-49	16.30	19.30	CO-56
CB-43	4' Dia Catch Basin	22.90	19.10	CO-50	16,10	19.10	CO-5
CB-44	4' Dia Catch Basin	22.90	18.80	CO-51	15.80	18.80	CO-5
CB-45	4' Dia Catch Basin	22.95	18,00	CO-52	15.00	18.00	CO-5
CB-46	4' Dia Catch Basin	21.95	17.50	CO-53	14.50	17.50	CO-5
CB-47	4' Dia Catch Basin	19.95	16.35	CO-54	13.35	16.35	CO-5
200			15.50	CO-55	40.50	45.50	CO-5
CB-48	Shallow Double Grate Catch Basin	18.50	15.50	CO-62 CO-56	12.50	15.50	CO-5
CB-49	4' Dia Catch Basin						
CB-50	4' Dia Catch Basin	18.67	14.60	CO-57	11.60	14.60	CO-5
CB-51	4' Dia Catch Basin	21.70	18.00	CO-59	15.00	18.00	
CB-52	4' Dia Catch Basin	20.70	17.00	CO-60	14.00	17.00	CO-6
CB-53	4' Dia Catch Basin	19.80	16.30	CO-61	13.30	16.30	CO-6
CB-54	4' Dia Catch Basin	18.00	N/A	N/A	11.35	14.35	CO-6
C8-55	4' Dia Catch Basin	18.50	N/A	N/A	12.30	15.30	CO-4
1277	0.41/2.2002.040mm.4400		17.35	CO-9	-		
MH-1	4' Dia Manhole	22.36	18.00	CO-23	17.35	17.35	CO-1
MH-2	4' Dia Manhole	24.30	N/A	N/A	20.50	20,50	CO-6
MH-3	4' Dia Manhole	19.34	15.00	CO-37	15.00	15.00	CO-3
MH-4	4' Dia Manhole	18.62	14.60	CO-38	14.60	14.60	CO-3
MH-5	4' Dia Manhole	18.15	14.30	CO-48 CO-39	14,30	14.30	CO-4
MH-6	4' Dia Manhole	22.00	15.30	CO-20 CO-67	15.30	15.30	CO-6
MH-7	4' Dia Manhole	24.20	18.50	CO-27	18.50	18.50	CO-2
BLDG G		26.00	N/A	N/A	22.00	22.00	CO-
BLDG H		26.00	N/A	N/A	21.00	21.00	CO-2
BLDG I	Roof Drain	23.00	N/A	N/A	18.50	18.50	CO-4
BLDG K		24.00	N/A	N/A	18.50	18.50	CO-2
BLDGI	Roof Drain	20.00	N/A	N/A	15.00	15.00	CO-2
BLDG N		24.00	N/A	N/A	18.50	18.50	CO-
	Roof Drain	21.00	N/A	N/A	14.50	17.50	CO-

Structure	Upstream Pond	Outlet	Invert El. (ft)
OS-1	Basin 1	6' x 6' Horizontal Box	15.40
09-2	Basin 2	6' x 6' Horizontal Box	15.70

NOTES:

- All pipes to be ADS N-12 HDPE with smooth interior walls.

- All catch basins to have high capacity frame and grates (bicycle safe).

- Rim levels are only approximate. The contractor shall finish manhole covers and surrounds to suit the slope and level of the finished surface as

That location unless otherwise directed by the superintendent.

- The centerlines of all pipes are to be constructed to the center of structure unless otherwise shown on plans.

- All catch basins to have a minimum sump of 3' unless otherwise noted.

#### UPLAND - SEWER STRUCTURE & PIPE DATA

From	То	Length (ft)	Slope (ft/ft)	Dia. (in)		
SMH-101	SMH-102	121	0.0420	8		
SMH-102	SMH-103	94	0.0100	- 8		
SMH-103	SMH-104	33	0.0050	8		
SMH-104	SMH-105	33	0.0050	8		
SMH-105	SMH-108	110	0.0050	8		
SMH-106	SMH-107	94	0.0050	8		
SMH-107	SMH-108	155	0.0040	8		
SMH-108	SMH-109	38	0.0040	8		
SMH-109	PS-2	40	0.0050	8		
SMH-110	EXIST	50	0.0010	8		

Structure	Type	Rim El. (ft)	Invert in El. (ft)	Invert Out El. (ft)	
SMH-101	4' Dia Maninote	28.80	N/A	24.50	
SMH-102	4' Dia Manhote	23.85	19.44	19.34	
SMH-103	4" Dia Manhole	22.60	18.36	18.26	
SMH-104	4' Dia Manhole	22.70	18.09	17.99	
SMH-105	4' Dia Manhole	23.21	17.82	17.72	
SMH-106	4' Dia Manhole	23.04	17.17	17.07	
SMH-107	4' Dia Manhole	22.77	15.58	15.48	
SMH-108	4' Dia Manhole	22.89	14.86	14.76	
SMH-109	4' Dia Manhole	22.50	14.60	14.50	
CANU 440	Frank State Clarkman Machale	20.00	6376	20.60	

			UPLAND		
Pipe I.D.	From	To	Dia. (in)	Length (ft)	Slope (ft/ft)
CO-101	OS-103	MH-101	15	156	0.013
CO-102	MH-101	OF-103	15	24	0.073
CO-103	CB-102	MH-102	12	36	0.033
CO-104	MH-102	CB-103	12	98	0.018
CO-105	CB-103	CB-104	15	48	0.018
CO-106	CB-104	CB-106	18	149	0.005
CO-107	CB-106	MH-103	24	116	0.005
CO-108	MH-103	CB-107	24	45	0.006
CO-109	CB-101	MH-102	12	122	0.011
CO-110	CB-105	CB-106	12	27	0.037
CO-111	CB-108	OF-105	12	39	0.013
CO-112	BLDG E	CB-107	12	55	0.027
CO-113*	OS-104	OF-107	18	36	0.042
CO-114	CB-109	OF-106	12	70	0.0065
CO-115	BLDG F	CB-108	12	55	0.027
CO-116	CB-107	OF-104	24	80	0.005

CONC. SIDEWALKS

6\*-3000 PSI CONCRETE W/ WIRE MESH

BANK RUN GRAVEL

4" LOAM & SEED

ROADWAY NOTES:

WATER MAINS SHALL BE RUN 4' FROM THE P FAVORING THE WEST AND NORTH SIDE OF E ROADWAYS.

- All pipes to be ADS N-12 HDPE with smooth interior walls. The centerlines of all pipes are to be constructed to the center of structure unless otherwise shown on plans. | Rim El. (ft) | Invert In El. (ft) | Pipe In ID | Sump El. (ft) | Invert Out El. (ft) | Pipe Out ID | 26.00 | N/A | N/A | 20.00 | 23.00 | CO-109 | 26.10 | N/A | N/A | 20.00 | 23.00 | CO-103

Structure	Outlet	Invert El. (ft)
OS-101	22' Grass Weir	22,40
OS-102	17' Grass Weir	21.20
OS-103	CO-101 (15-Inch Circular Pipe)	19.00
OS-104	CO-113 (3-12-in Circular Pipes)	18.00
OS-105	25-ft Grass Weir	20.00

/ PAVEMENT

PLAN VIEW N.T.S.

TYPICAL DRIVEWAY SECTION

1.5" BINDER COURSE BITUMINOUS PAVEMENT CLASS I, TYPE I-1

BITUMINOUS PAVEMENT 1.5" WEARING COURSE CLASS I, TYPE I-1

DRAINAGE STRUCTURE DATA UPLAND

Minimum 4	4" sump required	
tructure	Outlet	Invert El. (ft)
OS-101	22' Grass Weir	22.40
OS-102	17' Grass Weir	21.20
OS-103	CO-101 (15-inch Circular Pipe)	19.00
OS-104	CO-113 (3-12-in Circular Pipes)	18.00
OS-105	25-ft Grass Weir	20.00
		The second second

RADIUS AS NOTED ON PLAN

FILTER FABRIC SURROUND

PUBLIC WALKWAY DETAIL (N.T.S.)

VARIES SEE SITE PLAN

SIDEWALK DETAIL (N.T.S.)

BASE SURFACE 4" PROCESSED GRAVEL

-BASE COURSE 8" BANK RUN GRAVEL

CONC. SIDEWALKS

TYPICAL ROAD CROSS SECTON FOR PAVEMENT AND UTILTIES (N.T.S.)

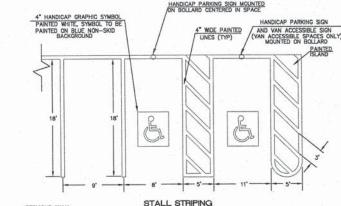
NOTES. - All pipes to be ADS N-12 HDPE with smooth interior walls.
- All catch basins to have high capacity frame and grates (bicycle safe).
- Rim levels are only approximate. The contractor shall finish manhole covers and surrounds to suit the slope and level of the finished

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NORTHEAST ENGINEERS

SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM





PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

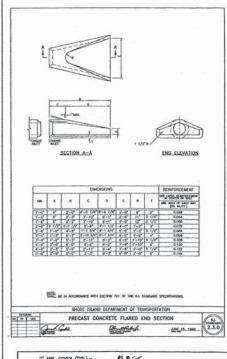
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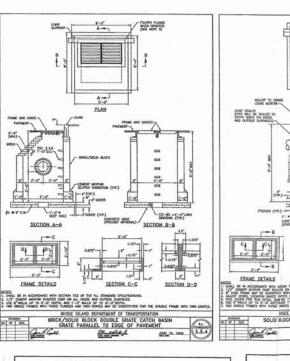
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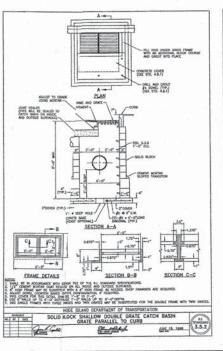


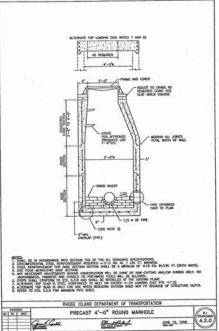
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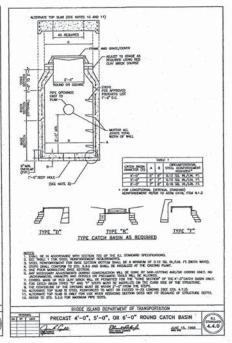
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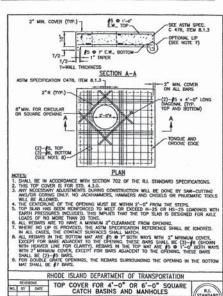






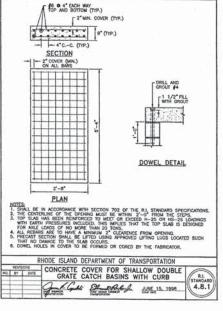


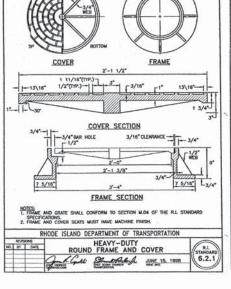
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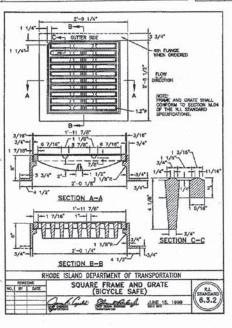


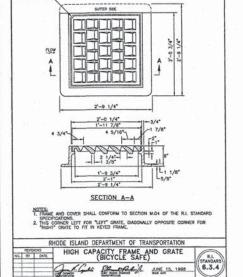
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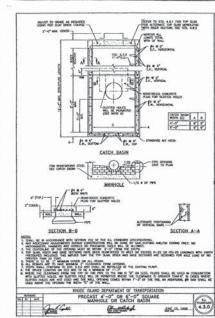
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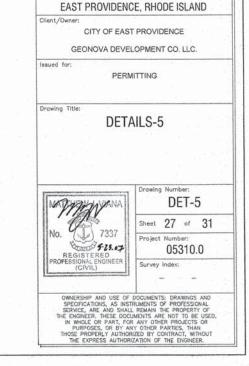












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A KNOWLEDGE CORPORATION

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2 REVISIONS PER AGENCY REVIEW

Designed By: NEC Drawn by: ACA Checked by:

AS SHOWN | Date:

EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4

PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8

ROGER WILLIAMS AVENUE

1 REVISIONS PER CRMC & DEM

Project Title

PHONE (401) 849-0810 FAX (401) 846-4169

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842

SITE/CIVIL

LAND PLANNING WATERFRONT

GEOTECHNICAL

ENVIRONMENTAL

TRANSPORTATION

MATERIALS TESTING

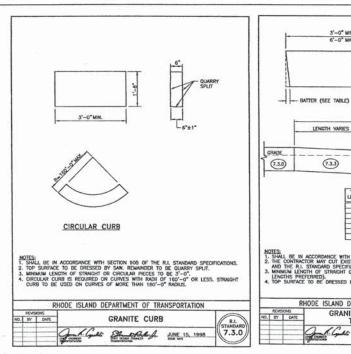
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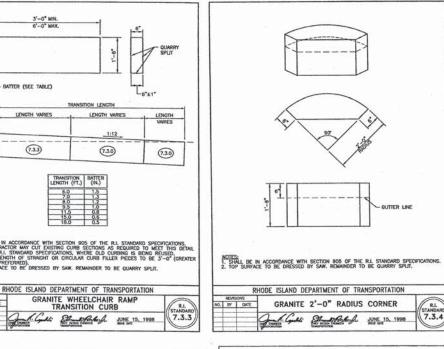
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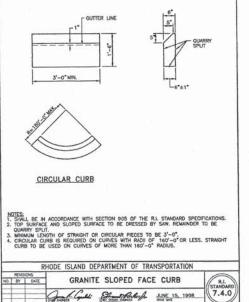
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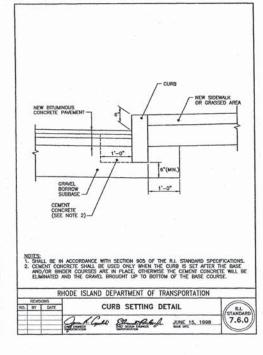
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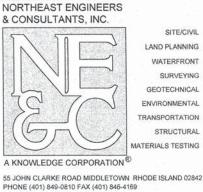
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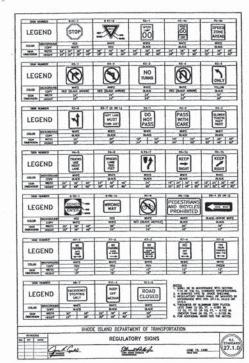


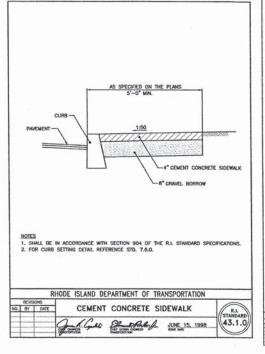


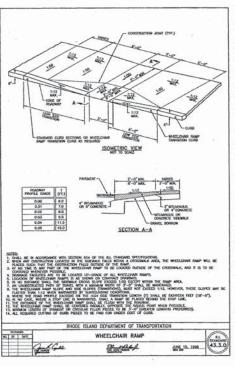


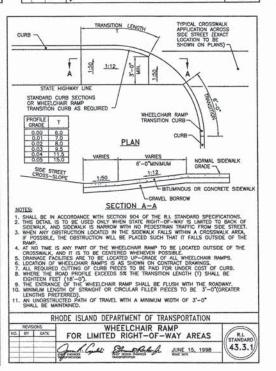


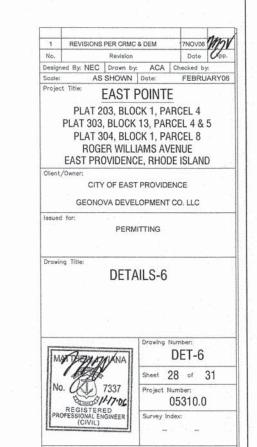
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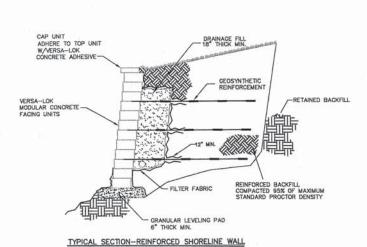






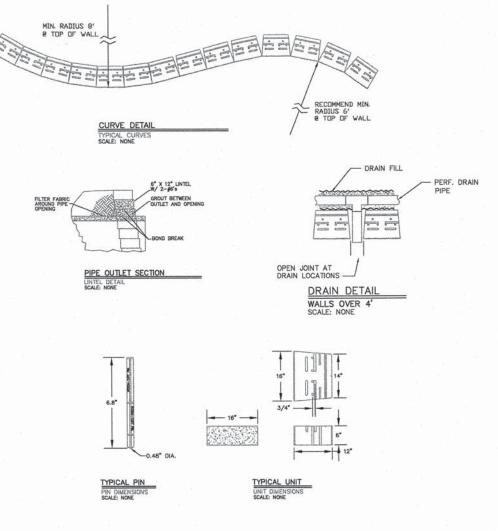


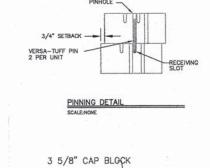
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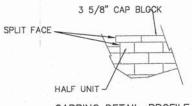


- 1. LINTEL BEAMS SHALL BE PRECAST WITH MIN. 7 DAYS CURE. HEIGHT OF BEAM SHALL CORRESPOND TO HEIGHT OF BLOCK USED.
- 2. PLACE LINTELS ON THE APPROPRIATE COURSE FOR PLACING DRAINAGE PIPES. INSTALL DRAINAGE PIPE PRIOR TO COMPLETING UPPER SECTION OF THE WALL.
- 3. PIPE TO EXTEND BEYOND WALL AS DIRECTED BY ENGINEER.
- 4. GEOTEXTILE FABRIC SHALL BE INSTALLED AROUND PIPE OPENING. BACKFILL WITH  $1/2^{\prime\prime}$  TO  $3/4^{\prime\prime}$  CLEAN GRAVEL.
- 5. LENGTH OF LINTELS TO EQUAL PIPE WIDTH PLUS MIN. OF 18" BEARING LENGTH EITHER SIDE OF GROUTED OPENING.
- 6. FINAL PIPE ALIGNMENT WILL CHANGE BEAM SIZE AND CONFIGURATION
- 7. CHANGES ARE TO BE VERIFIED WITH ENGINEER.

- 1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
- 3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
- 4. SITE SOIL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
- 5. BASE SHALL CONSIST OF COMPACTED COARSE SAND AND/OR GRAVEL, 6" THICK MIN.
- CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 1" TO 2" THICK MAXIMUM.
- 7, MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 12° FOR WALL HEIGHTS FROM 4 FT. AND UP, 6° BELOW 4 FT. UNLESS SHOWN DIFFERENTLY.
- 8. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
- 9. DRAINAGE FILL SHALL BE INSTALLED BEHIND THE WALL UP TO 18" OF THE TOP OF THE WALL. DRAINAGE FILL SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
- 10. WHERE DRAIN PIPE IS USED, PROVIDE OUTLETS @ MAX. 40 FT C-C.
- 11. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME BACKFILL BEHIND UNITS IS COMPACTED.
- 12. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
- 13. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
- 14. SEE ELEVATION FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION REQUIRED.
- 15. GEOSYNTHETIC SHALL BE THE TYPE AND LENGTH AS SHOWN. PULL GEOSYNTHETIC TIGHT PRIOR TO BACKFILLING.
- 16. GEOSYNTHETIC SHALL BE PLACED WITH STONGEST DIRECTION PERPENDICULAR TO WALL FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL
- 17. VERSA-LOK TO PROVIDE FINAL ENGINEERED SHOP DRAWINGS. DETAILS SHOWN HERE ARE FOR GENERAL ILLUSTRATIONS ONLY.







CAPPING DETAIL-PROFILE STEP AT TOP OF WALL SCALE: NONE

GENERAL NOTES FOR CAPPING:

1. CAPS SHALL BE ADHERED TO WALL USING VERSA—LOK CONCRETE ADHESIVE
2. CAPS MAY BE PLACED WITH A 1/2" TO 3/4" OVERHANG ON TOP OF WALL
3. WHEN CUTTING CAP UNIT FOR WALL END DO NOT USE A CAP SECTION LESS THAN 6" WIDE
4. DO NOT OVERHANG CAP AT END OF COURSE MORE THAN 1"

VERSA-LOK RETAINING WALL SYSTEMS P.O. BOX 9220 N. ST. PAUL, MN. 55109



NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL LAND PLANNING WATERFRONT TRANSPORTATION MATERIALS TESTING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

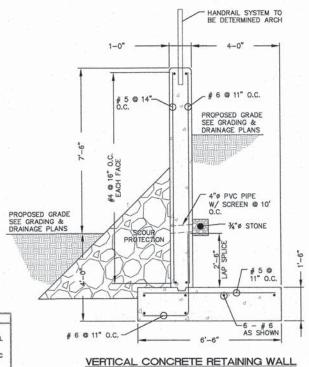
#### CONCRETE NOTES:

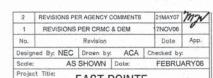
- 1. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI STANDARD 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ACI 301-02 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. ACI 301-02 SHALL GOVERN.
- 2. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH AT 28 DAYS OF AT LEAST 3000 PSI. PROVIDE 5% AIR ENTRAINED CONCRETE. SUBMIT CONCRETE DESIGN
- 3. ALL REINFORCING BARS SHALL CONFORM TO ASTM A 615 GRADE 60, AND SHALL BE DEFORMED. LAP ALL CONTINUOUS BARS 48 DIAMETERS. PROVIDE MATCHING CORNER AND INTERSECTION BARS.
- 4. MINIMUM PROTECTIVE COVER FOR REINFORCEMENTS UNLESS OTHERWISE PROVIDED FOR:

  - A. CONCRETE PLACED AGAINST EARTH, 3". B. FORMED CONCRETE EXPOSED TO EARTH, WEATHER, OR WATER, 2". C. FLOORS ON SAND, GRAVEL OR STONE FILL, 1-1/2".
- 5. WHERE OPENINGS OCCUR IN WALLS OR SLABS, PROVIDE TWO (2) #6 EACH FACE, EACH SIDE OF THE OPENINGS AND EXTEND 2'-6" BEYOND OPENING.
- 8. PROVIDE BAR SUPPORTS, SPACERS AND ACCESSORIES RECOMMENDED BY THE ACI DETAILING MANUAL. ALL DETAILING NOT COVERED BY THESE NOTES SHALL BE IN ACCORDANCE WITH THE SAME MANUAL.
- 9, PROVIDE VERTICAL JOINTS IN THE FOUNDATION WALLS AT 60  $\!\!^{\circ}$  O.C. PROVIDE HORIZONTAL JOINTS ONLY AS NOTED.
- 10. ADD EXTRA STEEL AT CONSTRUCTION JOINTS OF WALLS:  $\#4 \times 4'-0"$  LONG @ 12" O.C. EACH FACE PLUS 3"  $\times$  4" TREATED BEVELED KEYS.

#### FOUNDATION NOTES:

- 1. THE BOTTOM SURFACE OF ALL FOOTINGS SHALL REST UPON UNDISTURBED INORGANIC GRANULAR SOIL WITH AN ALLOWABLE BEARING PRESSURE OF 1.5 TONS PER SQUARE FOOT.
- 2. BOTTOM OF EACH EXTERIOR FOOTING SHALL BE A MINIMUM OF  $3^\prime\!-\!4^{\prime\prime}$  BELOW FINISH GRADE.
- 3. NO FOOTING SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
- 4. BACK FILL MATERIAL SHALL BE COMPACTED IN 12" LAYERS COMPACTED TO 95% OF ASTM D1557, METHOD D, PROCTOR TEST.
- 5. ALL FOUNDATION WORK SHALL BE INSPECTED AND APPROVED FOR REQUIRES SOIL BEARING CAPACITY BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.





### EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5 PLAT 304, BLOCK 1, PARCEL 8 ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC

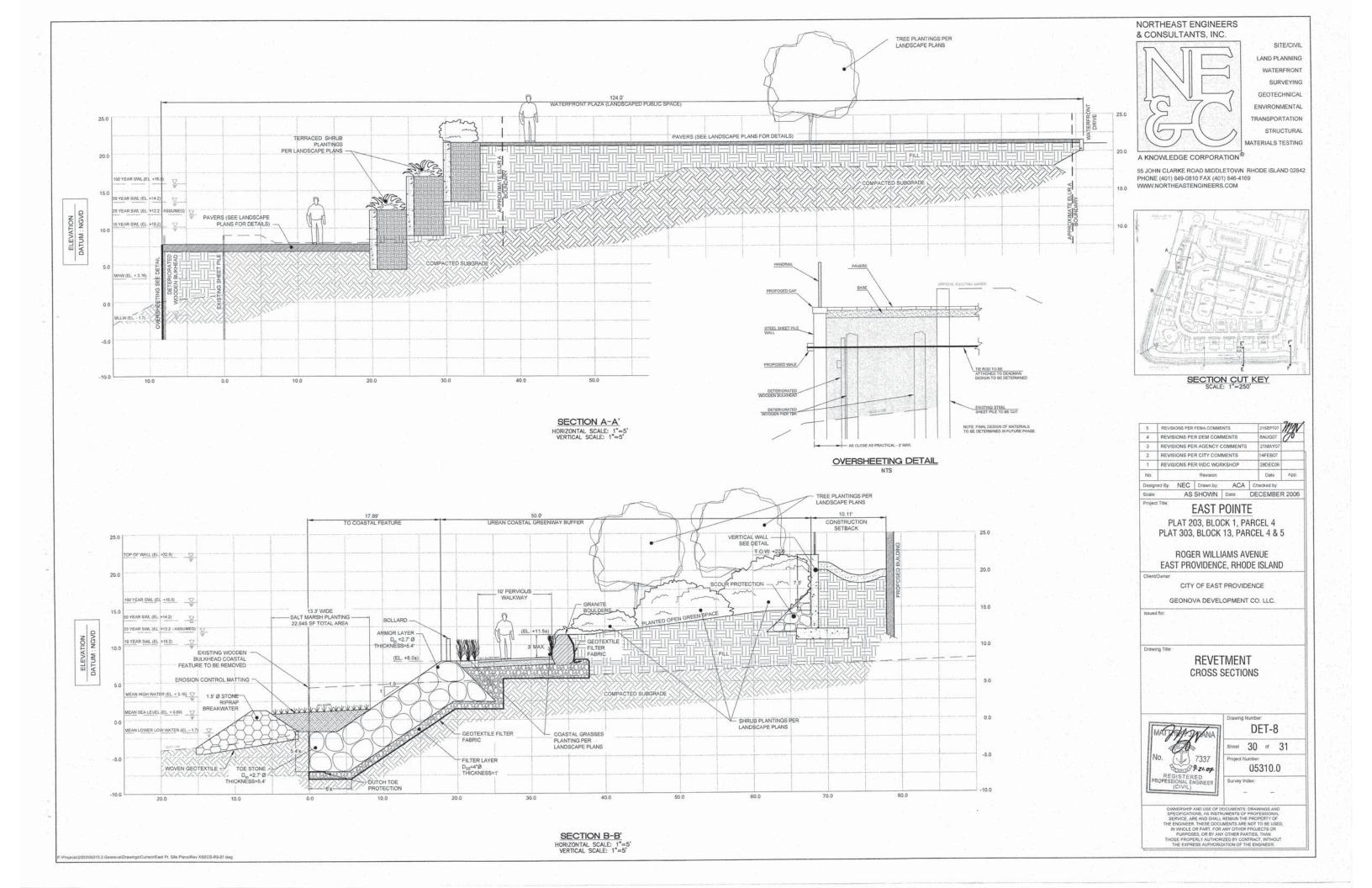
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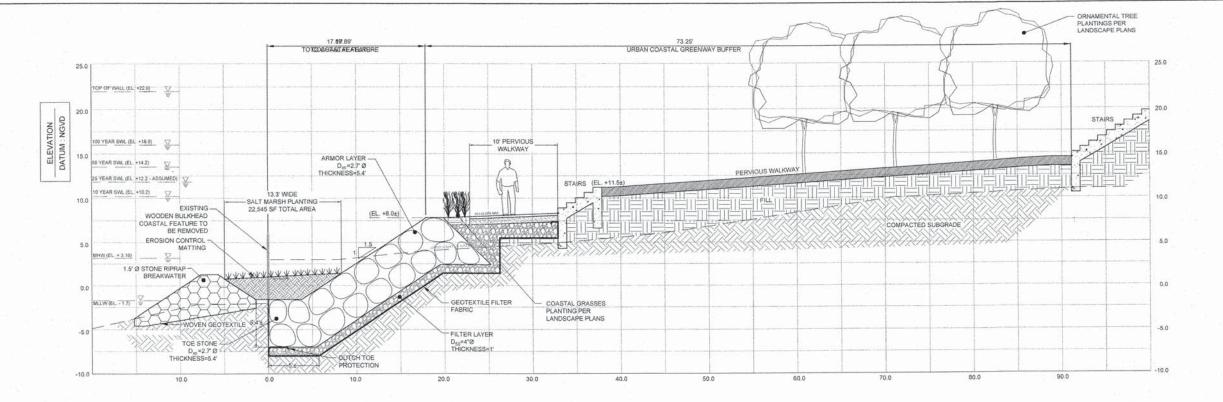
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**DETAILS-7** 

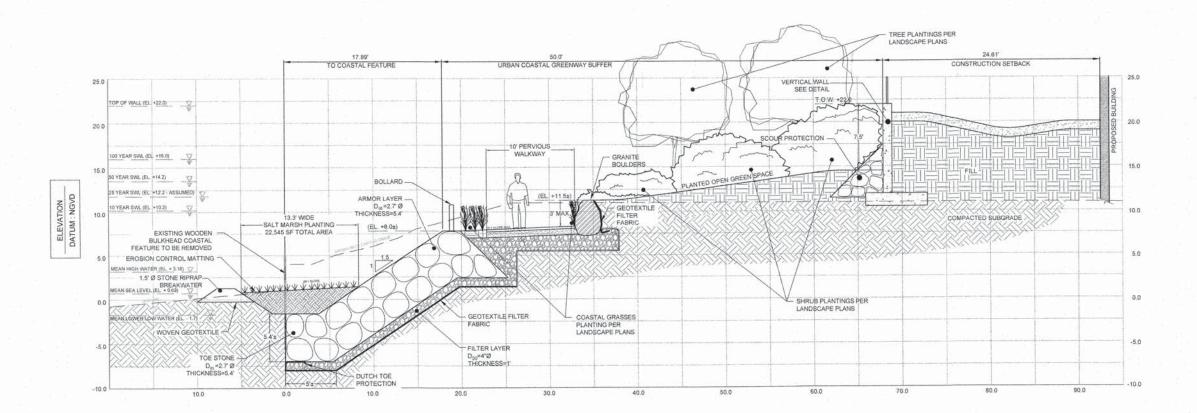


DET-7 Sheet 29 of 31 05310.0





SECTION C-C' HORIZONTAL SCALE: 1"=5" VERTICAL SCALE: 1"=5"



SECTION D-D' HORIZONTAL SCALE: 1"=5" VERTICAL SCALE: 1"=5" NORTHEAST ENGINEERS & CONSULTANTS, INC.



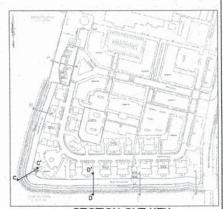
SURVEYING GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION STRUCTURAL MATERIALS TESTING

WATERFRONT

SITE/CIVIL LAND PLANNING

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM



SECTION CUT KEY

Design Scale	ed By:	NEC	Drawn by: SHOWN	ACA	1	ecked by:	11000
No.		7	Revision			Date	Арр.
1	REVISIONS PER WDC WORKSHOP			28DEC06			
2	REVISIONS PER CITY COMMENTS				14FEB07		
3	REVIS	REVISIONS PER AGENCY COMMENTS				21MAY07	00
4	REVISIONS PER FEMA COMMENTS					21SEPT07	11/4/

EAST POINTE PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5

ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC.

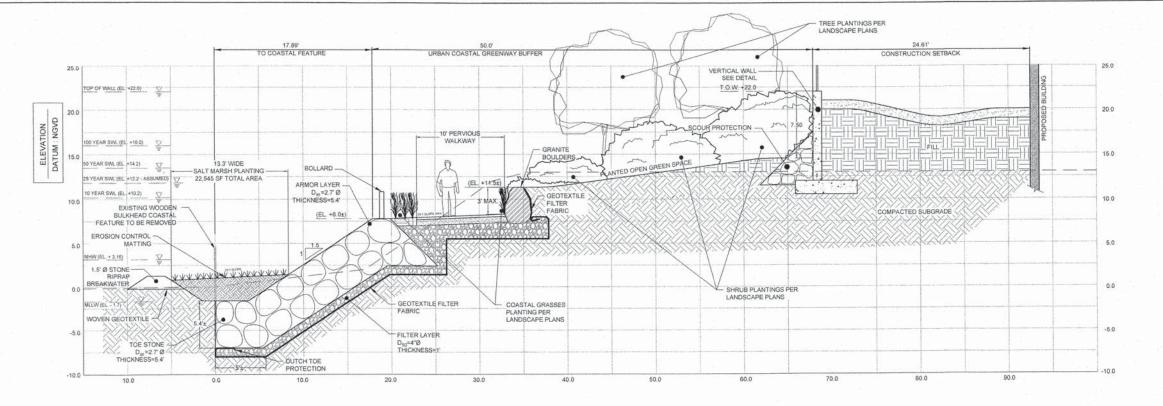
REVETMENT **CROSS SECTIONS** 



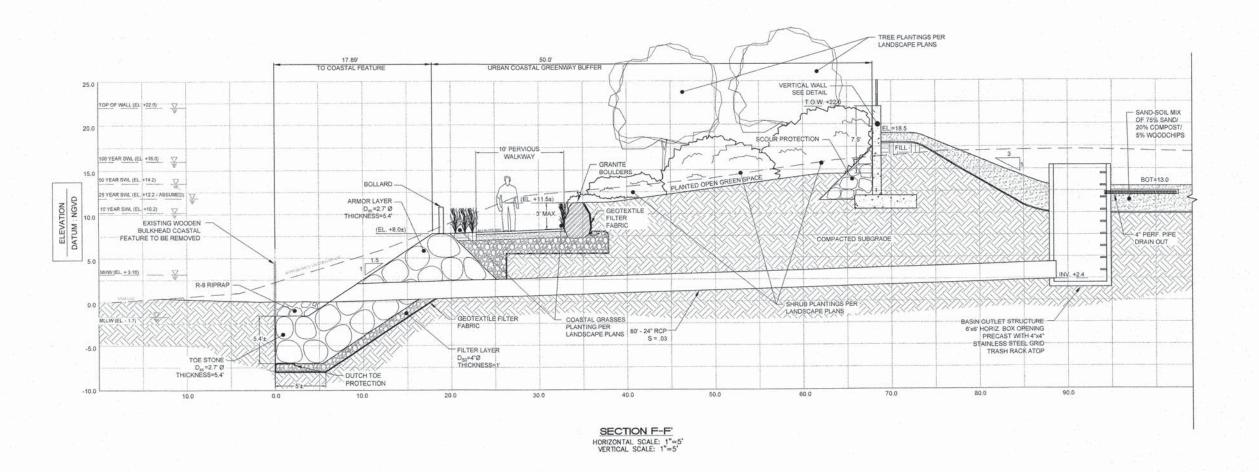
DET-9

Sheet 30A of 31 05310.0

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SECTION E-E'
HORIZONTAL SCALE: 1"=5'
VERTICAL SCALE: 1"=5'



# NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL

LAND PLANNING

WATERFRONT

SURVEYING

GEOTECHNICAL

ENVIRONMENTAL

TRANSPORTATION

STRUCTURAL

MATERIALS TESTING

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SECTION CUT KEY SCALE: 1"=250"

	4	REVISIONS PER	FEMA COMM	NTS	21SEPT07	mn
	3	REVISIONS PE	R AGENCY	COMMENTS	21MAY0	00
	2	REVISIONS PE	R CITY CON	MENTS	14FEB07	
1		REVISIONS PE	28DEC06	3		
F	No.		Revision		Date	App.
	Design	ned By: NEC	Drawn by:	ACA	Checked by:	
	Scale	AS	SHOWN	Date:	DECEMBE	R 2006

EAST POINTE

PLAT 203, BLOCK 1, PARCEL 4 PLAT 303, BLOCK 13, PARCEL 4 & 5

ROGER WILLIAMS AVENUE EAST PROVIDENCE, RHODE ISLAND

nt/Owner

CITY OF EAST PROVIDENCE

GEONOVA DEVELOPMENT CO. LLC.

Issued for:

Drawing Title:

REVETMENT CROSS SECTIONS



DET-10

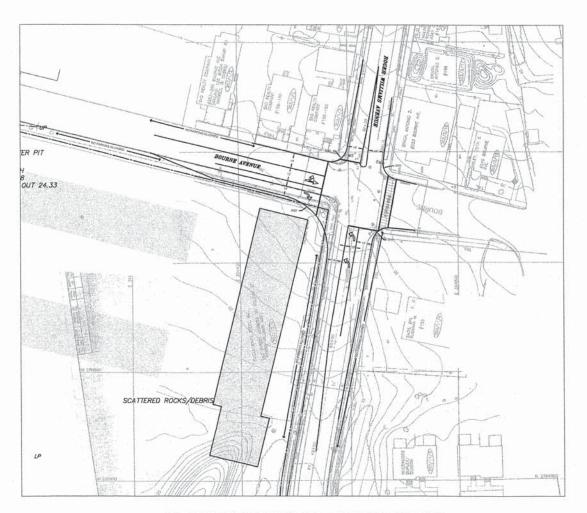
Sheet 30B of 31

Project Number: 05310.0

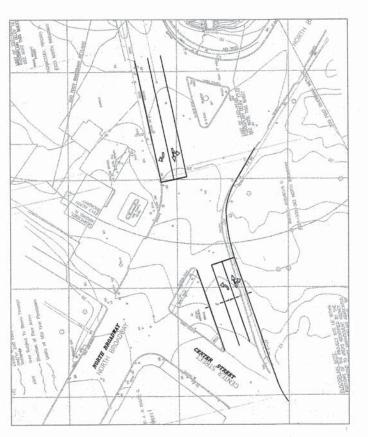
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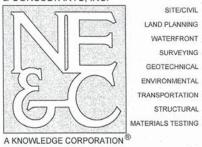




ROGER WILLIAMS AVENUE & BOURNE AVENUE

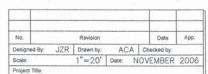


NORTH BROADWAY & CENTER STREET



SITE/CIVIL

55 JOHN CLARKE ROAD MIDDLETOWN RI 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM



EAST POINTE ROGER WILLIAMS AVENUE EAST PROVIDENCE, RI

CITY OF EAST PROVIDENCE GEONOVA DEVELOPMENT CO. LLC

CONCEPTUAL TRAFFIC **IMPROVEMENTS** 

> T-1 Sheet 31 of 31 05310

1 INCH = 40 FEET