

LEGEND

Table with columns EXIST and PROP. Lists various symbols and their corresponding descriptions for property lines, fences, walls, contours, and elevations.

Table with columns EXIST and PROP. Lists various symbols and their corresponding descriptions for drainage lines, sewer lines, overhead electric, water lines, and utility lines.

GENERAL CONSTRUCTION REQUIREMENTS

- 1. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.

GENERAL NOTES

1. EXISTING CONDITIONS INFORMATION

A. BASE PLAN: EXISTING CONDITIONS INFORMATION AND TOPOGRAPHY WAS COMPILED FROM A SURVEY PLAN PREPARED BY BRYANT ASSOCIATES, INC., ENTITLED "TOPOGRAPHIC SURVEY, BISON, ANTILOPE, POLAR BEAR & OTHER EXHIBIT AREAS, ROGER WILLIAMS PARK ZOO," DATED OCTOBER 6, 2004.

EROSION CONTROL NOTES

DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW. ALL WORK SHALL COMPLY WITH THE FOLLOWING CRITERIA TO PREVENT OR MINIMIZE SOIL EROSION. 1. THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR.

- 10. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED.

STORMWATER MAINTENANCE PROGRAM

- 1. REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES SHALL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.

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

CONSTRUCTION SEQUENCE

- 1. INSTALL PERIMETER SEDIMENT CONTROL BARRIERS AND PROPOSED CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS. EROSION CONTROL MEASURES WILL BE MAINTAINED OR REPLACED AS REQUIRED THROUGHOUT CONSTRUCTION PERIOD.

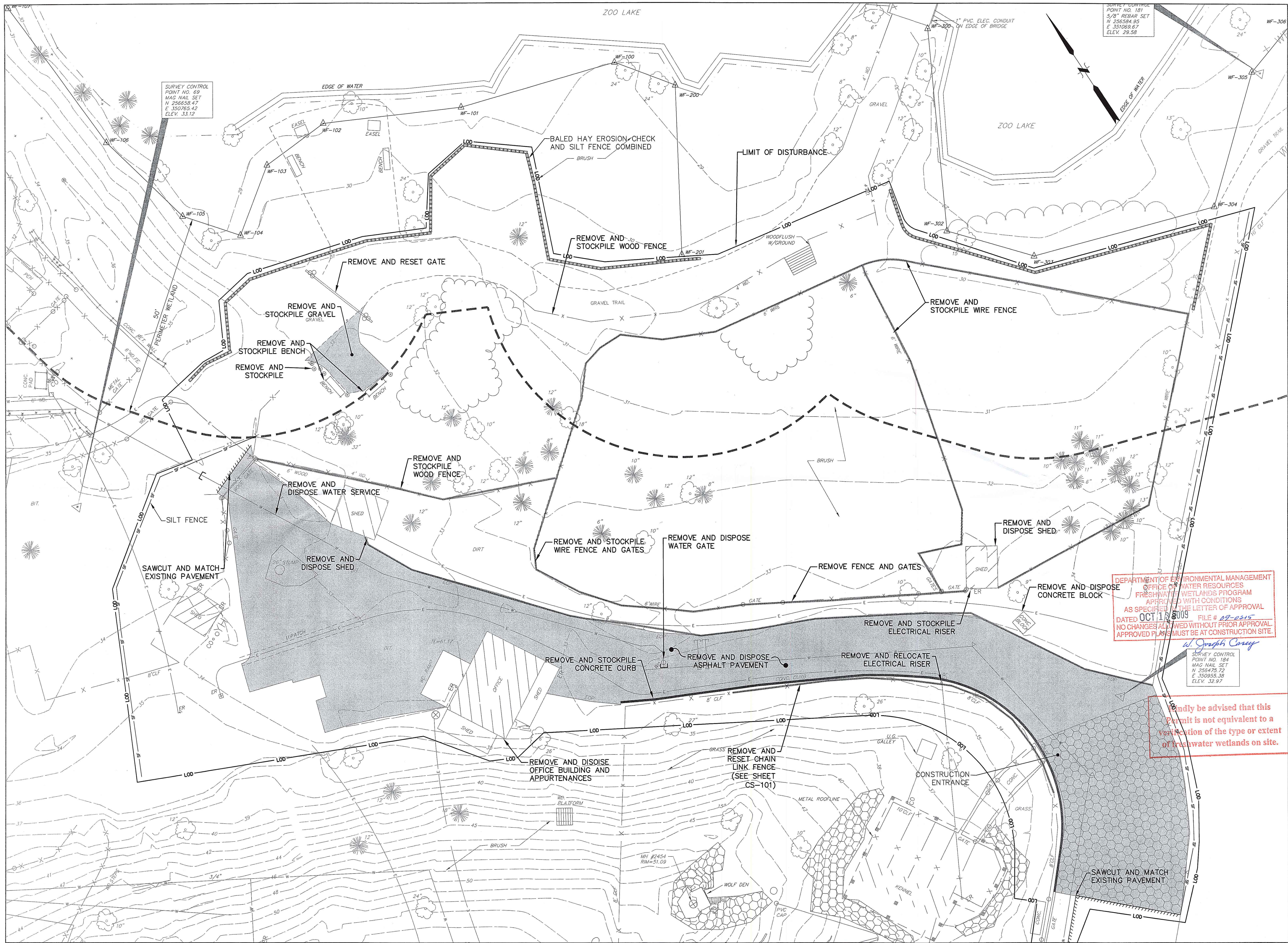
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED OCT 13 2009 FILE # 02-0215

SPILL PREVENTION AND RESPONSE PROCEDURE

- 1. SPILL PREVENTION AND RESPONSE PROCEDURE: ANY UNAUTHORIZED OR DELIBERATE DISCHARGE OF WASTE OIL OR ANY OTHER POLLUTANT TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION TO THE RIDEM OIL POLLUTION CONTROL PROGRAM AT 401-277-2284.

Vertical sidebar containing project information: VETERINARY HOSPITAL, ROGER WILLIAMS PARK ZOO, 1000 ELMWOOD AVENUE, PROVIDENCE, RI 02907. Includes a table for REVISIONS, a drawing title block, and a professional engineer seal for SHAWN M. MARTIN.

REVISED PER DEM: August 1, 2010



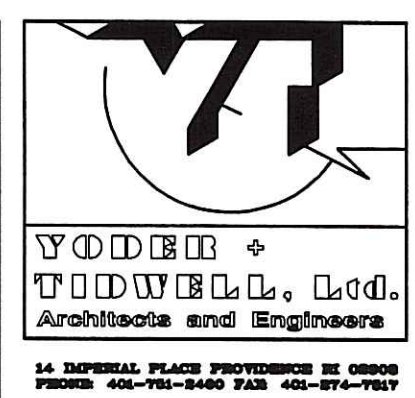
SURVEY CONTROL POINT NO. 69
MAG NAIL SET
N 256558.47
E 350765.42
ELEV. 33.12

SURVEY CONTROL POINT NO. 181
5/8" REBAR SET
N 256584.95
E 351089.67
ELEV. 29.58

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 13 2009 FILE # 09-0315
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

Shawn M. Martin
SURVEY CONTROL POINT NO. 184
MAG NAIL SET
N 256479.72
E 350955.38
ELEV. 32.97

Be advised that this Permit is not equivalent to a determination of the type or extent of freshwater wetlands on site.



REVISIONS

MARK	DATE

VETERINARY HOSPITAL
ROGER WILLIAMS PARK ZOO
1000 ELMWOOD AVENUE
PROVIDENCE, RI 02907

ISSUED FOR: SITE DESIGN DEVELOPMENT

DATE	BY
07/15/09	RFR
08/24/09	SMM

SITE DEMOLITION PLAN

NO.	DATE	BY
1	07/15/09	RFR
2	08/24/09	SMM
3		
4		

SCALE: 1"=10'

DRAWN BY: RFR CHECKED BY: SMM JOB # 20050 045-A30

SHAWN M. MARTIN
No. 7487
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SHEET NO. **CP 101**



YODOR & Associates, Inc.
 1000 Elmwood Avenue
 Providence, RI 02907
 Phone: 402-782-2400 Fax: 402-782-2401

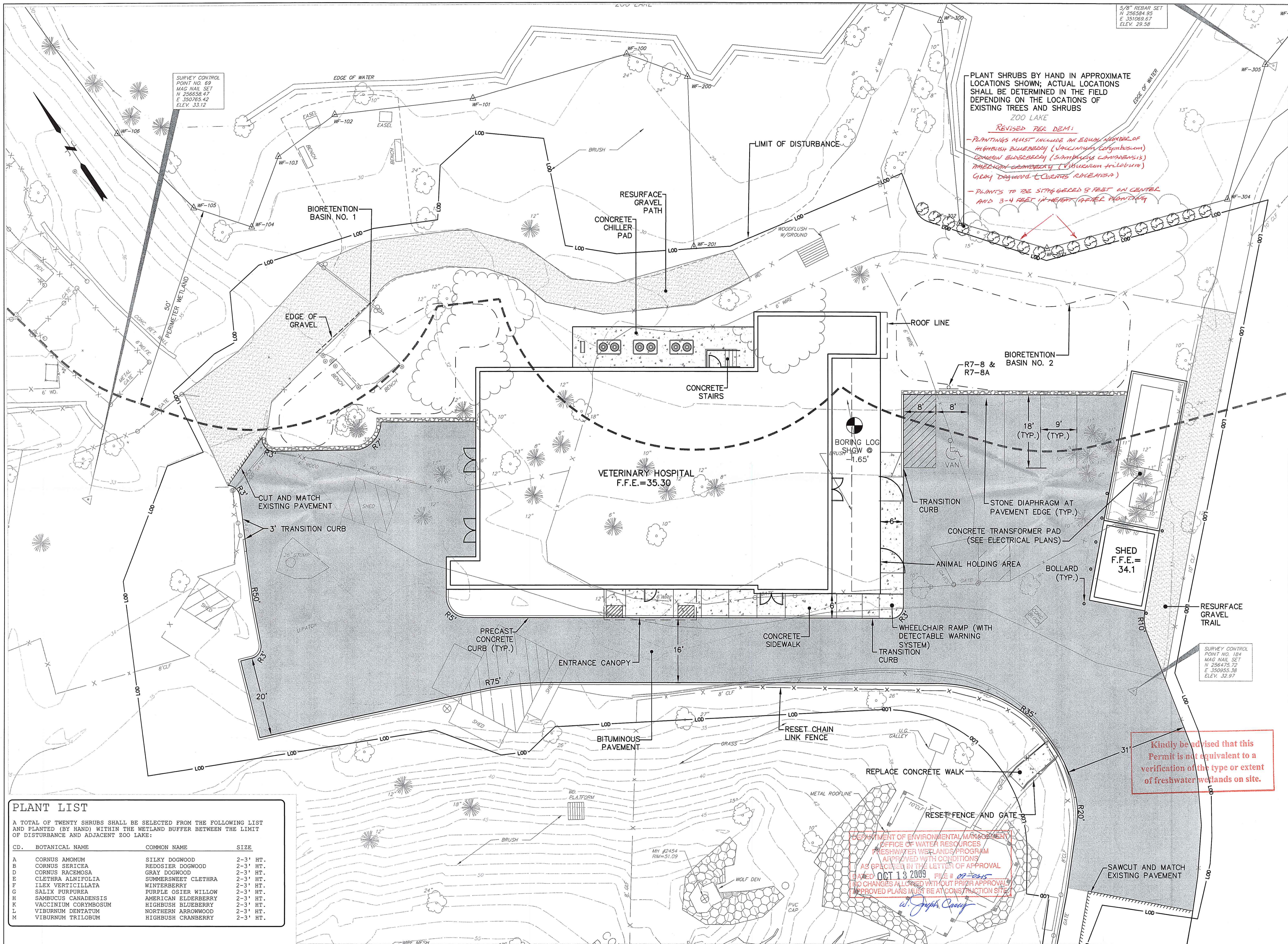
REVISIONS	
MARK	DATE
▲	MM/DD/YY
▲	
▲	
▲	
▲	

VETERINARY HOSPITAL
ROGER WILLIAMS PARK ZOO
 1000 ELMWOOD AVENUE
 PROVIDENCE, RI 02907

ISSUE NO.	DATE	ISSUED FOR
1	07/16/09	50% DESIGN DEVELOPMENT
2	08/24/09	PERMITS SUBMISSION
3		
4		

PROJECT: SITE PLAN
 SCALE: 1"=10'
 DRAWN BY: RFR CHECKED BY: LMB # 20050
 SMM # 645.A30
 NOT FOR CONSTRUCTION
 SHAWN M. MARTIN
 No. 7487
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

CS
101



PLANT SHRUBS BY HAND IN APPROXIMATE LOCATIONS SHOWN; ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD DEPENDING ON THE LOCATIONS OF EXISTING TREES AND SHRUBS
 ZOO LAKE
REVISED PER DEM:
 - PLANTINGS MUST INCLUDE AN EQUAL NUMBER OF HIGHBUSH BLUEBERRY (*Vaccinium corymbosum*) COMMON ELDERBERRY (*Sambucus canadensis*) TRIMLEAF CRANBERRY (*Viburnum trilobum*) GRAY DOGWOOD (*Cornus rugosa*)
 - PLANTS TO BE STAGGERED 8 FEET ON CENTER AND 3-4 FEET IN HEIGHT (AFTER PLANTING)

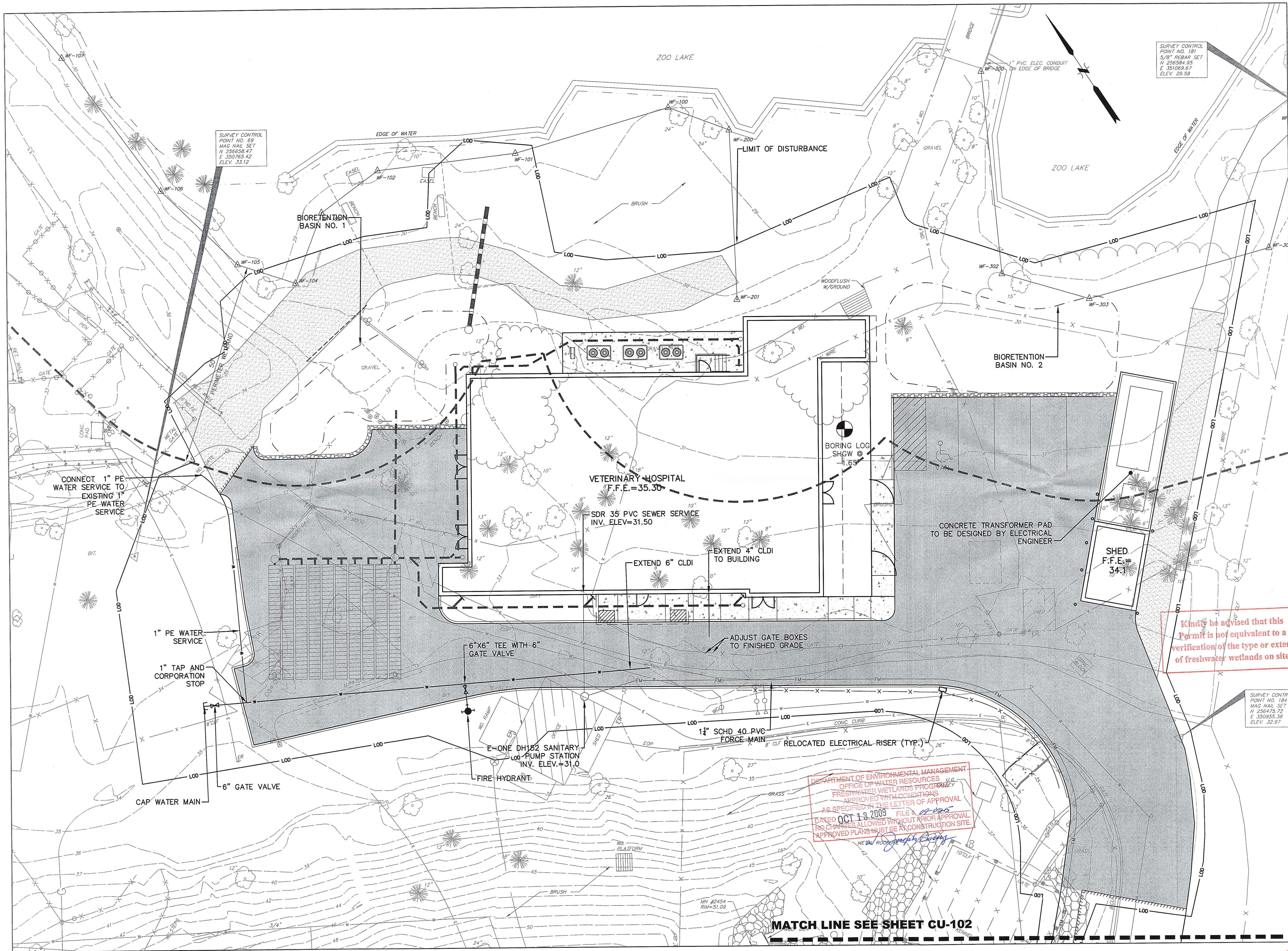
Kindly be advised that this permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 13 2009 FILE # 09-2005
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
W. Joseph Conroy

PLANT LIST

A TOTAL OF TWENTY SHRUBS SHALL BE SELECTED FROM THE FOLLOWING LIST AND PLANTED (BY HAND) WITHIN THE WETLAND BUFFER BETWEEN THE LIMIT OF DISTURBANCE AND ADJACENT ZOO LAKE:

CD.	BOTANICAL NAME	COMMON NAME	SIZE
A	CORNUS AMOMUM	SILKY DOGWOOD	2-3' HT.
B	CORNUS SERICEA	REDOSIER DOGWOOD	2-3' HT.
D	CORNUS RACEMOSA	GRAY DOGWOOD	2-3' HT.
E	CLETHRA ALNIFOLIA	SUMMERSWEET CLETHRA	2-3' HT.
F	ILEX VERTICILLATA	WINTERSBERRY	2-3' HT.
G	SALIX PURPUREA	PURPLE OSIER WILLOW	2-3' HT.
H	SAMBUCUS CANADENSIS	AMERICAN ELDERBERRY	2-3' HT.
K	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2-3' HT.
L	VIBURNUM DENTATUM	NORTHERN ARROWWOOD	2-3' HT.
M	VIBURNUM TRILOBUM	HIGHBUSH CRANBERRY	2-3' HT.



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

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES, LLC
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 13 2009 FILE # 09-035
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE.
Joseph Brown

SURVEY CONTROL
 POINT NO. 181
 5/8" REBAR SET
 N 256394.95
 E 351069.67
 ELEV. 29.53

SURVEY CONTROL
 POINT NO. 69
 MAG NAIL SET
 N 256658.47
 E 350765.42
 ELEV. 33.12

SURVEY CONTROL
 POINT NO. 184
 MAG NAIL SET
 N 256475.72
 E 350895.38
 ELEV. 32.97

TODD
 Architects and Engineers
 14 FEDERAL PLACE PROVIDENCE RI 02907
 PHONE 402-763-8800 FAX 402-874-7017

REVISIONS	
MARK	DATE

VETERINARY HOSPITAL
 ROGER WILLIAMS PARK ZOO
 1000 ELMWOOD AVENUE
 PROVIDENCE, RI 02907

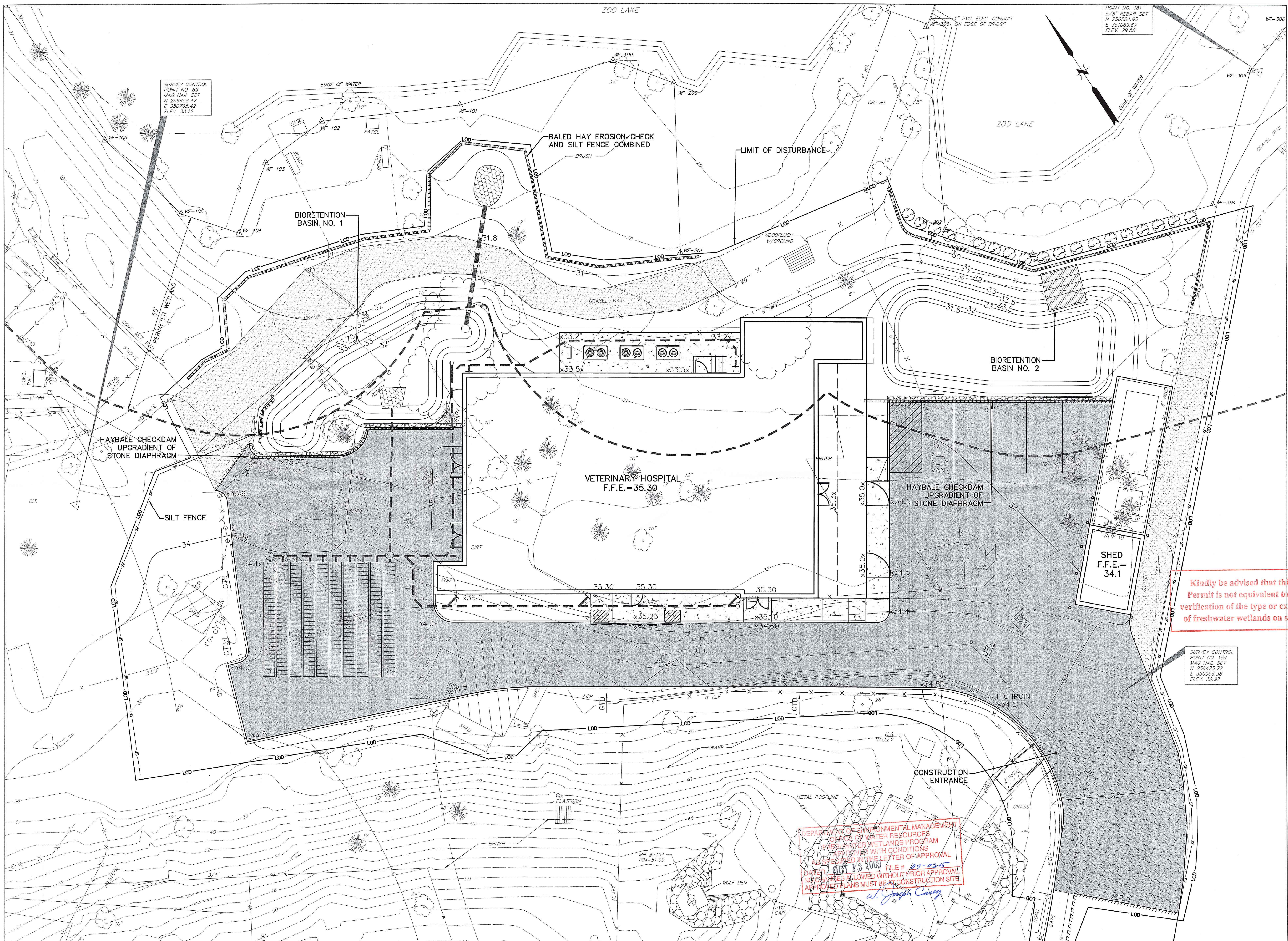
ISSUE	DATE	ISSUED FOR
1	07/16/09	50% DESIGN DEVELOPMENT
2	08/24/09	REBAR SUBMISSION
3		
4		

DRAWING TITLE: SITE UTILITY PLAN
 SCALE: 1"=10'
 DRAWN BY: SHM
 CHECKED BY: JOB # 20050
 645430

NOTED FOR CONSULTANT
SHAWN M. MARTIN
 No. 7487
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SHEET NO.:
CU 101

MATCH LINE SEE SHEET CU-102



YODD & TODD
Architects and Engineers

14 National Place Providence RI 02907
Phone: 401-848-7400 Fax: 401-848-7401

REVISIONS	
MARK	DATE

VETERINARY HOSPITAL

ROGER WILLIAMS PARK ZOO

1000 ELMWOOD AVENUE
PROVIDENCE, RI 02907

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

SURVEY CONTROL POINT NO. 184
MAG NAIL SET
N 256475.72
E 350955.18
ELEV. 32.97

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
DESIGNED WITH CONDITIONS
AS STATED IN THE LETTER OF APPROVAL
DATE: 06/13/09 FILE # 189-22-5
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

ed Joseph Conroy

DATE	ISSUED FOR
07/15/09	SIZE DESIGN DEVELOPMENT
08/26/09	PERM SUBMISSION

ISSUE	NO.
	1
	2
	3
	4

DRAWING TITLE: EROSION CONTROL PLAN

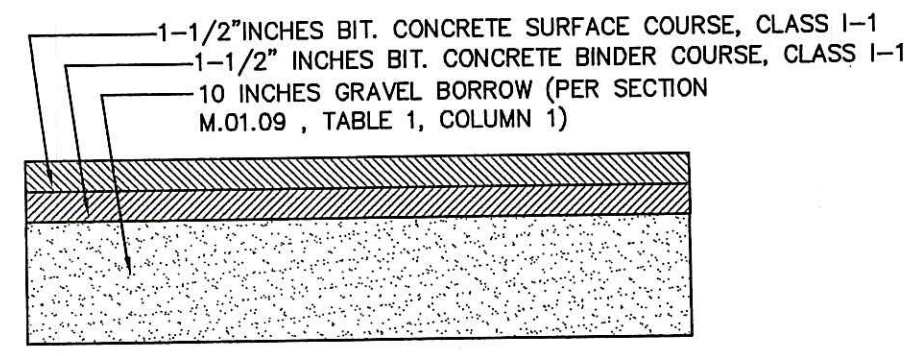
SCALE: AS NOTED

DRAWN BY: RFR CHECKED BY: JOB # 20050
SMM 645.A30

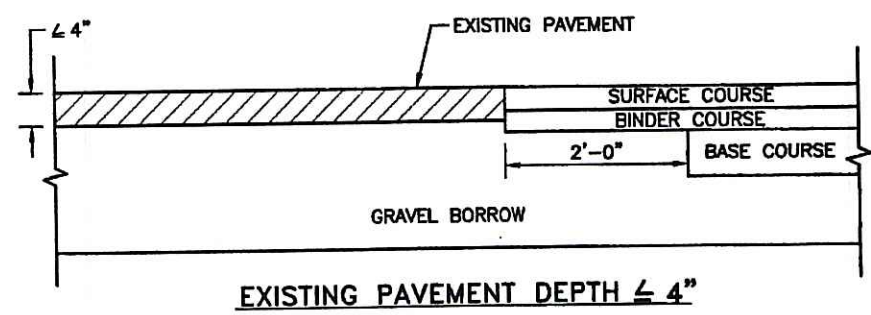
NOT FOR CONSTRUCTION
SHAWN M. MARTIN
No. 487
8/14/09
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SHEET NO.:

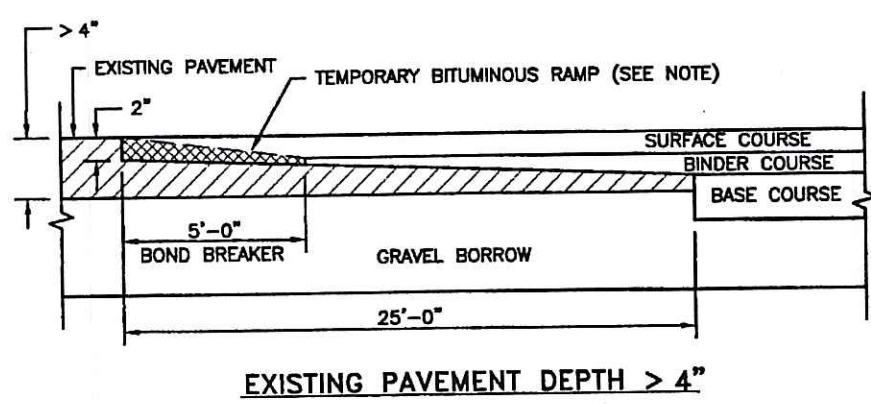
CE 101



PAVEMENT SECTION
NOT TO SCALE



EXISTING PAVEMENT DEPTH < 4"

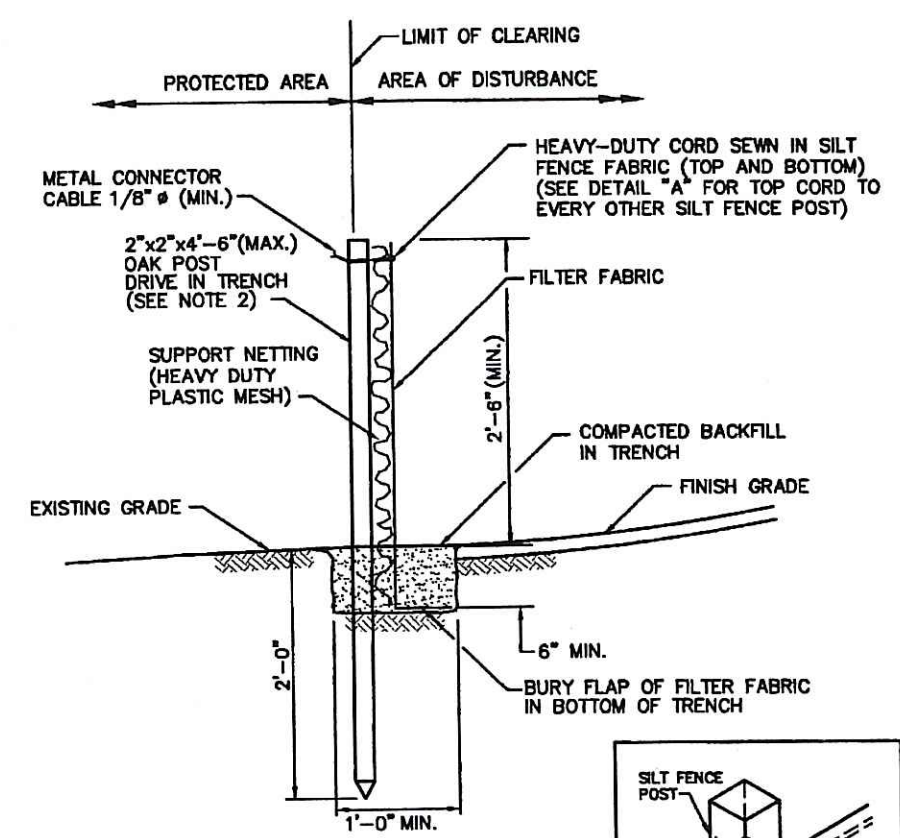


EXISTING PAVEMENT DEPTH > 4"

NOTE: BOND BREAKER (TAPERED OR EQUIVALENT) WILL BE PLACED 5'-0" FROM THE JOINT AND COVERED WITH THE BINDER COURSE AS THE TEMPORARY RAMP. PRIOR TO PLACING THE SURFACE COURSE, THE BINDER COURSE AND BOND BREAKER WILL BE REMOVED.

TRANSVERSE PAVEMENT CUT AND MATCH (R.I. STD. 47.1.1)

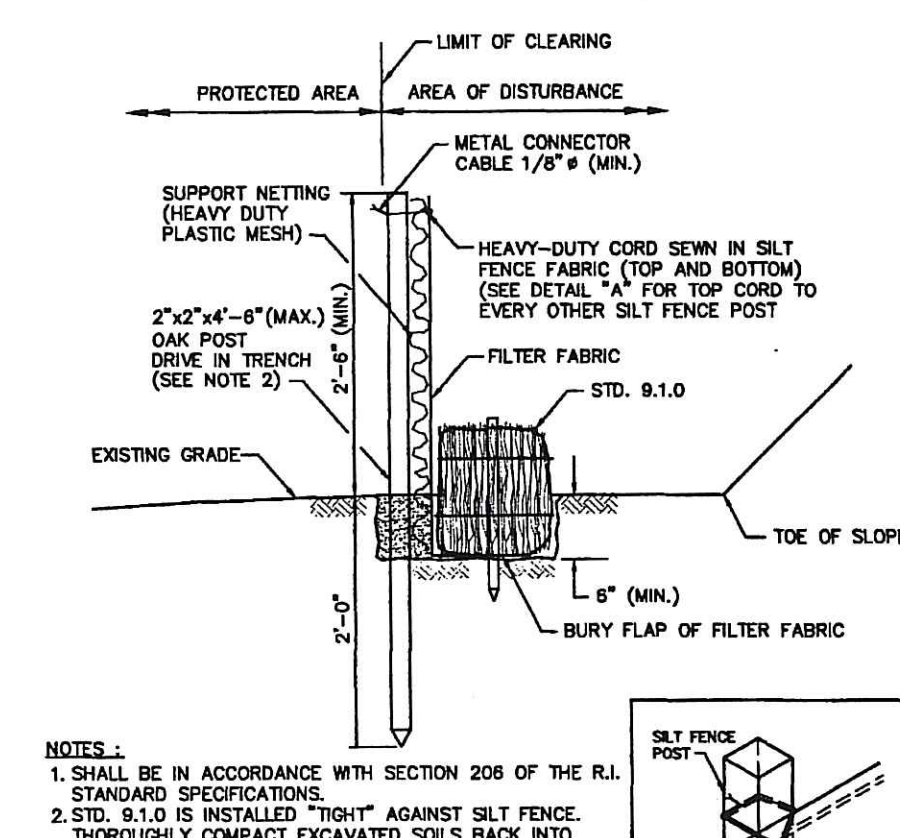
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1/4"-8" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

SILT FENCE
R.I. STD 9.2.0

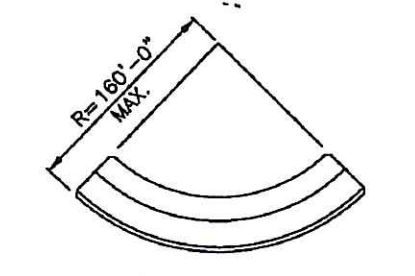
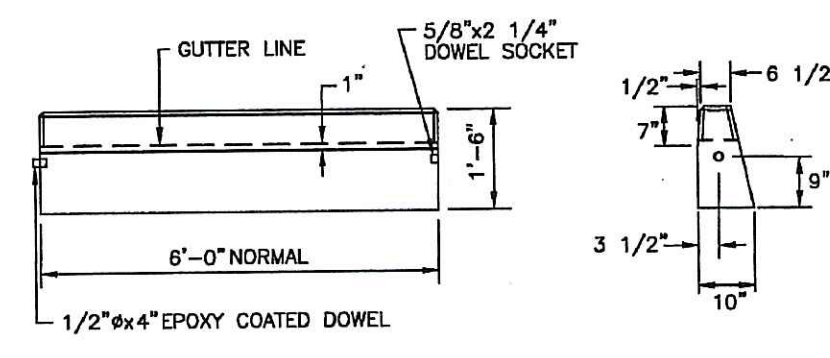
NOT TO SCALE



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

BALED HAY EROSION CHECK AND SILT FENCE COMBINED
(R.I. STD 9.4.0)

NOT TO SCALE

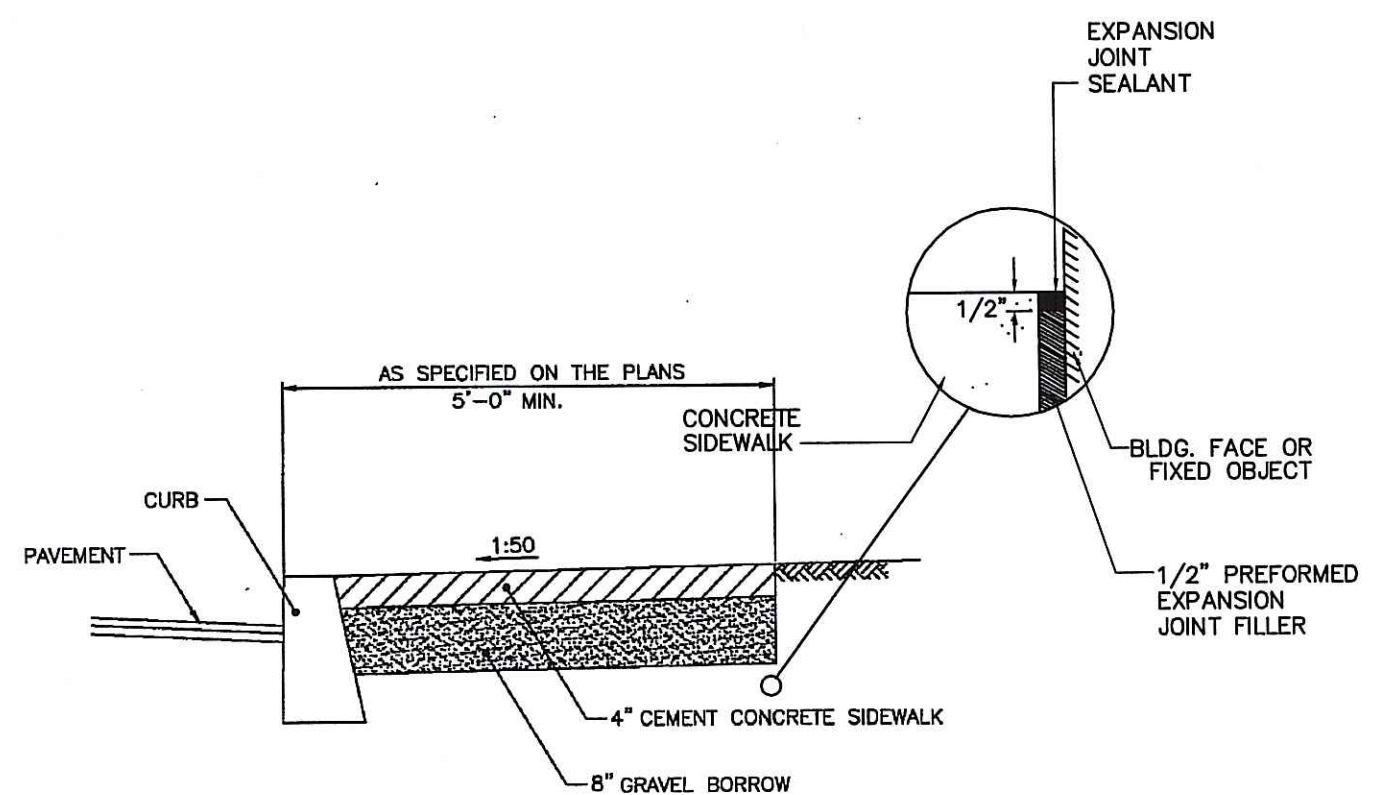


CIRCULAR CURB

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADIUS OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

PRECAST CONCRETE CURB
(R.I. STD 7.1.0)

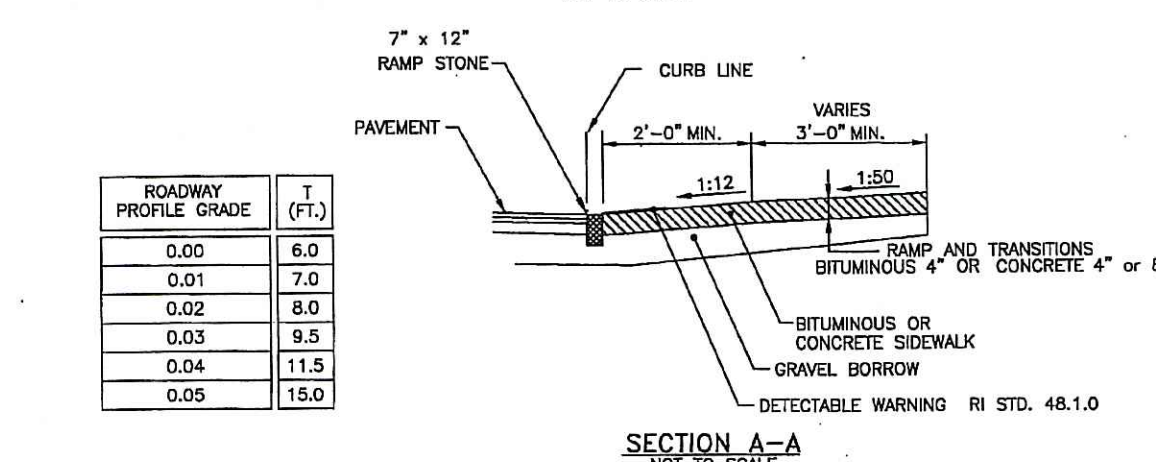
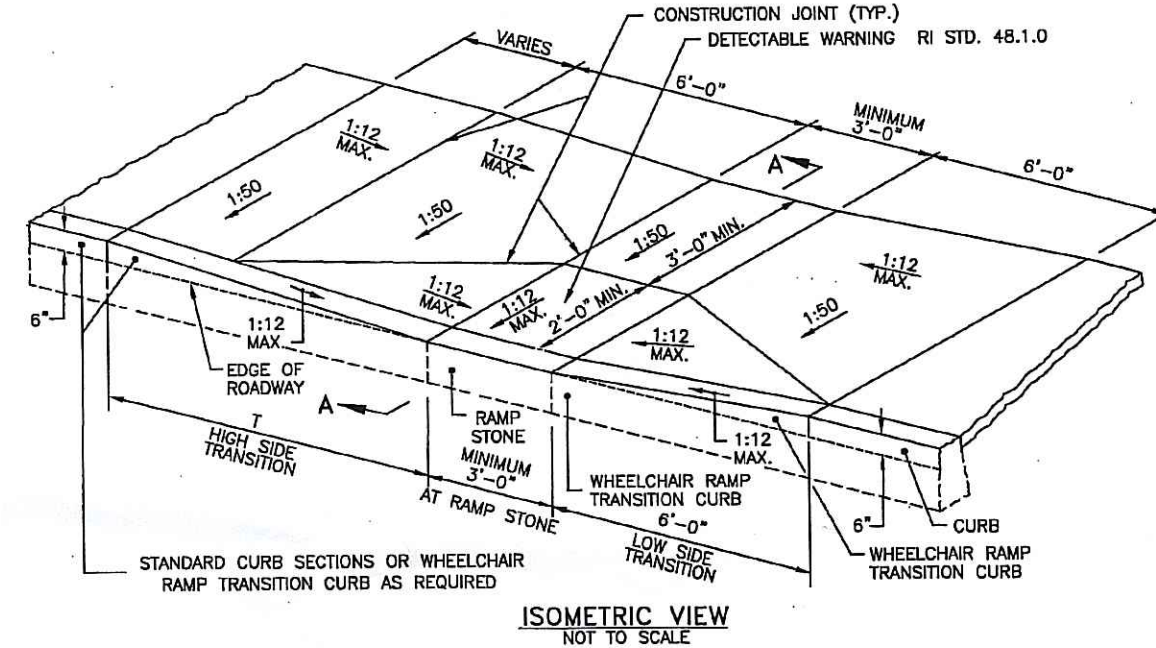
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

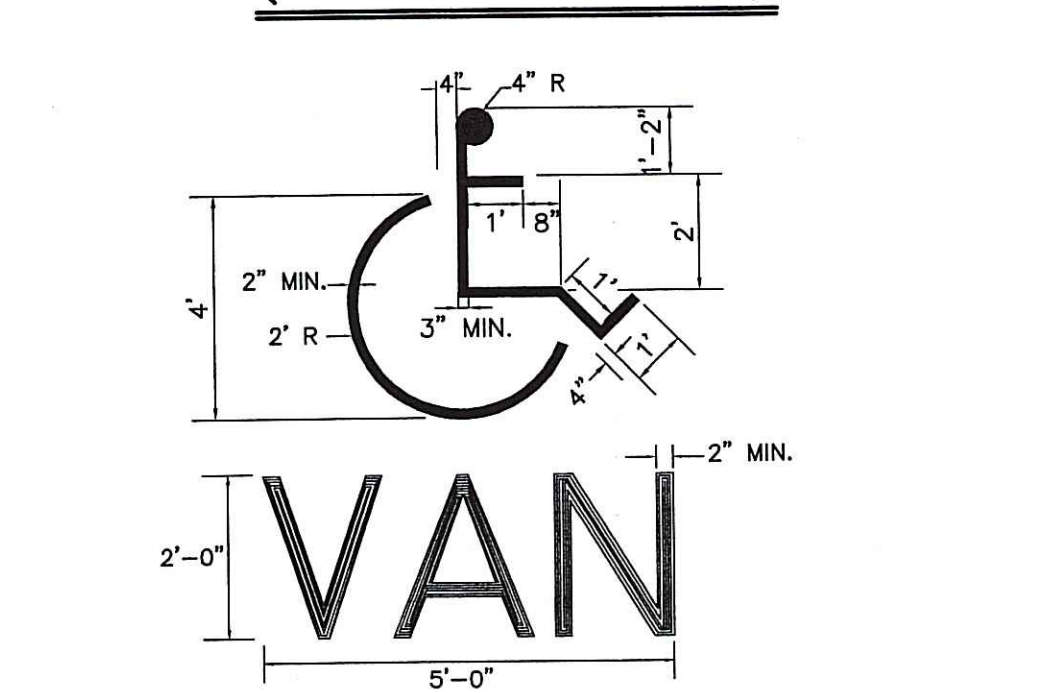
CEMENT CONCRETE SIDEWALK
(R.I. STD 43.1.0)

NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE CROSSWALK AREA.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
7. AN UNSTRUCTURED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
9. WHERE THE ROAD PROFILE EXCEEDS OR THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, A RAMP BE PLACED BEHIND THE STOP LINE.
11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
12. THE WHEELCHAIR RAMP SHALL BE CENTERED EXACTLY OPPOSITE THE RAMP POINT WHEN POSSIBLE.
13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
15. DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE R.I. STANDARD SPECIFICATIONS.
16. 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.

WHEELCHAIR RAMPS
(R.I. STD. 43.3.0)



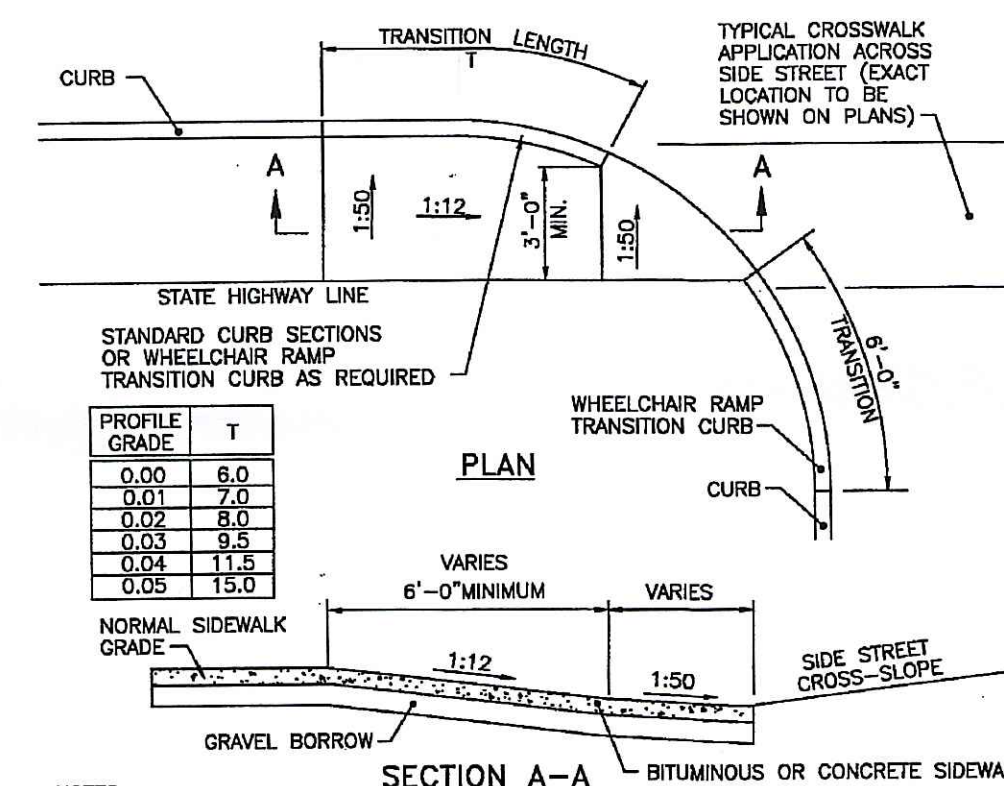
SYMBOL SHALL BE SOLID WHITE FAST-DRYING WATERBORNE PAINT AND BE CENTERED IN THE PARKING STALL. FOR VAN ACCESSIBLE SPACES, THE WORD "VAN" SHALL BE PAINTED ADJACENT TO HANDICAPPED SYMBOL (AS SHOWN ON DETAIL ABOVE).

HANDICAP PARKING STALL SYMBOL

NOT TO SCALE

PRECAST CONCRETE TRANSITION CURB
(R.I. STD 7.1.1)

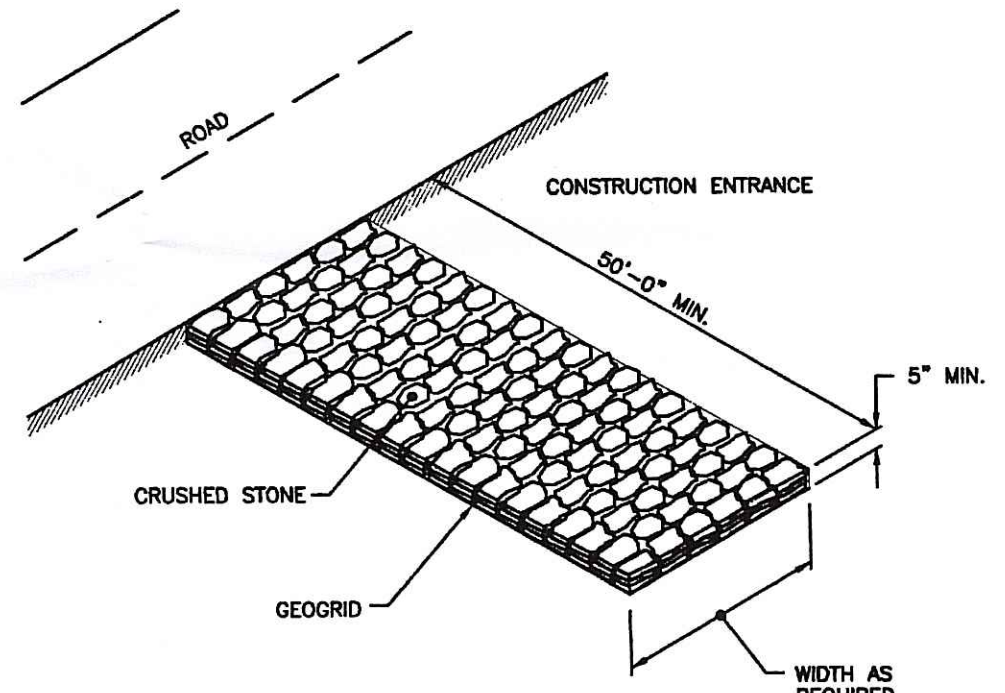
NOT TO SCALE



NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION WILL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS OR THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
11. AN UNSTRUCTURED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.

WHEELCHAIR RAMP
(R.I. STD. 43.3.1)

NOT TO SCALE



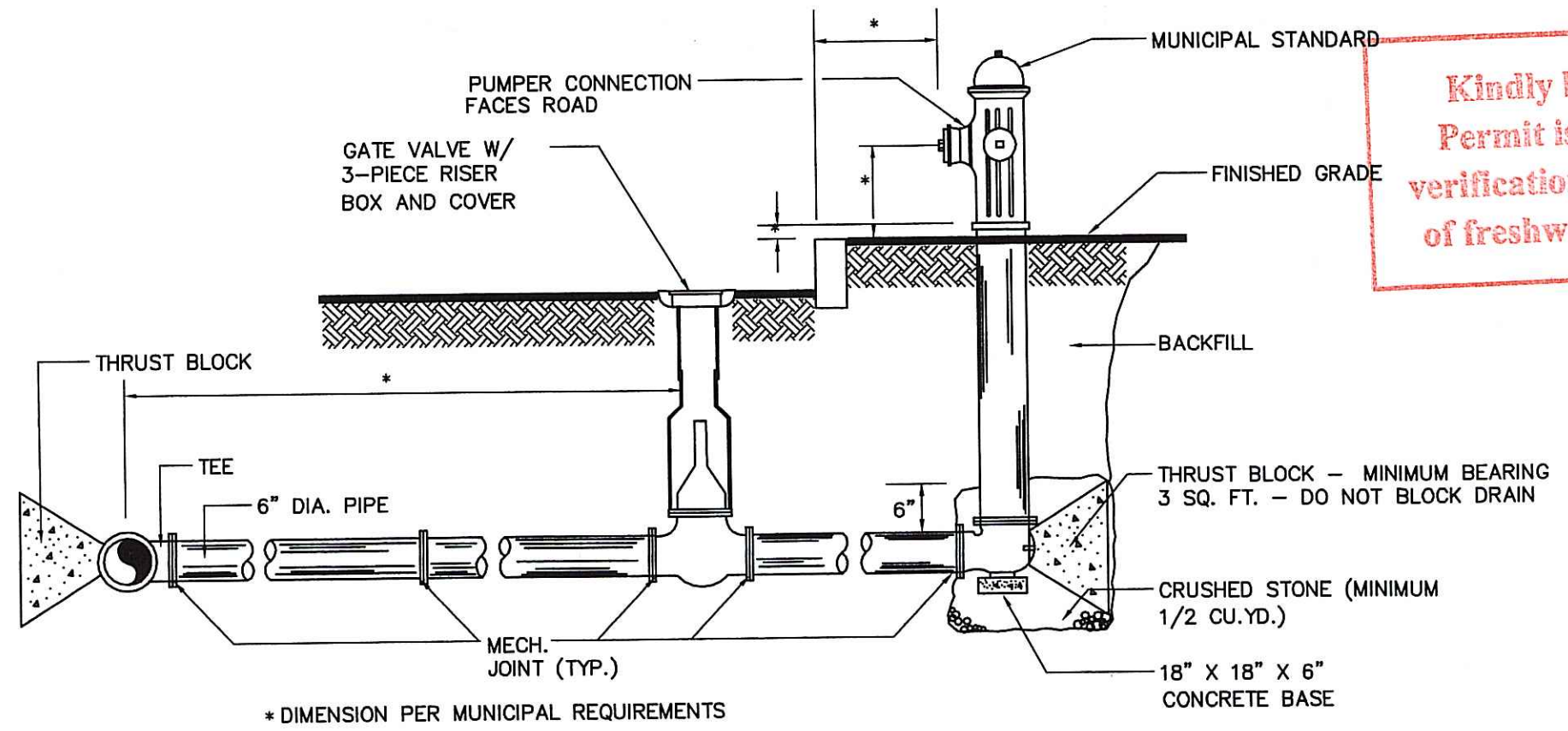
NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

CONSTRUCTION ENTRANCE
(R.I. STD. 9.9.0)

NOT TO SCALE

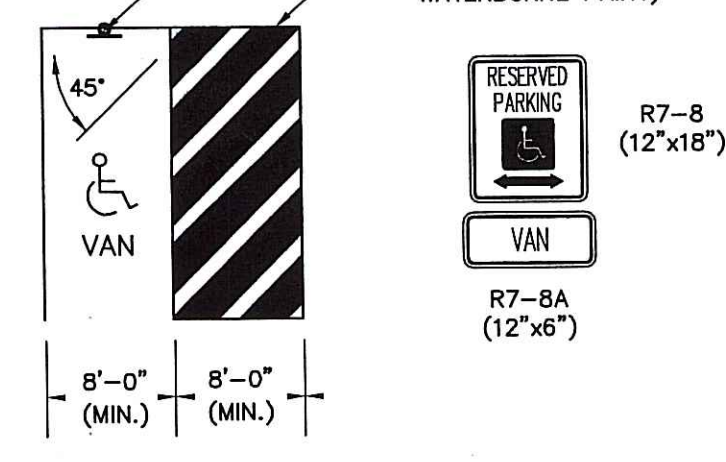
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 13 2009 FILE # 07-0215
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.
el Joseph Casey

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



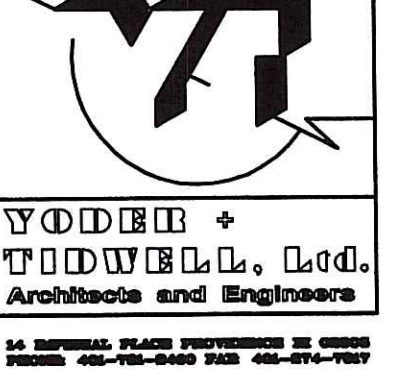
FIRE HYDRANT AND CONNECTION

NOT TO SCALE



HANDICAP PARKING STALL LAYOUT

NOT TO SCALE



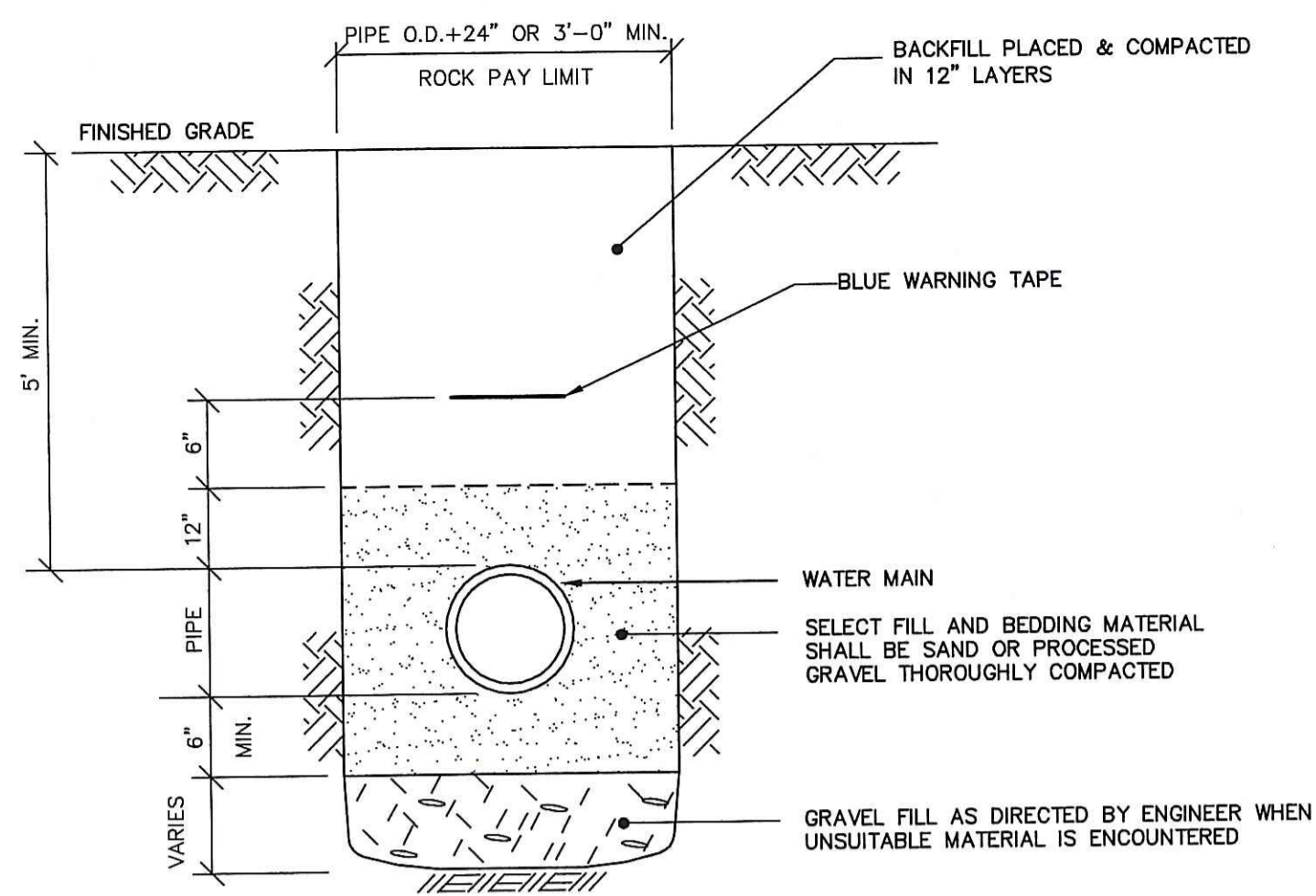
16 NATIONAL PLACE PROVIDENCE, RI 02908
PHONE: 402-333-8888 FAX: 402-333-7777

REVISIONS	
MARK	DATE

VETERINARY HOSPITAL
ROGER WILLIAMS PARK ZOO
1000 ELMWOOD AVENUE
PROVIDENCE, RI 02907

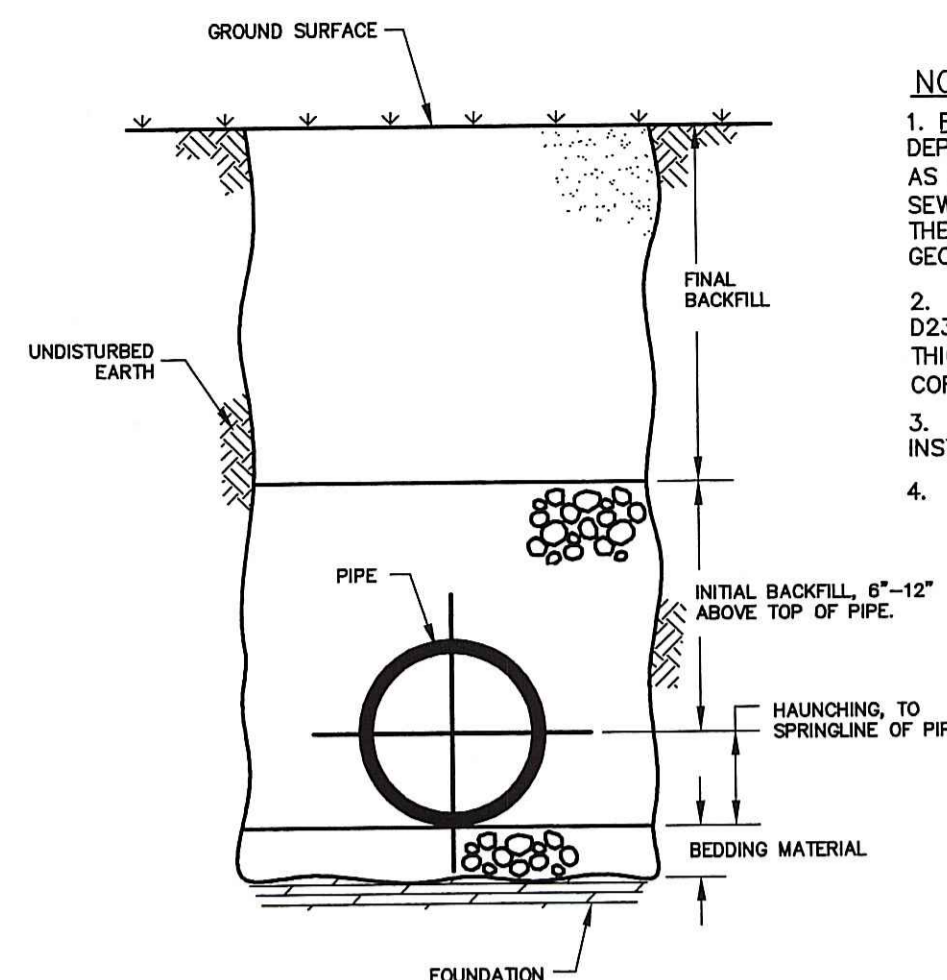
ISSUED FOR	DATE	BY
50% DESIGN DEVELOPMENT	07/19/09	RFR
RIEHL SUBMISSION	08/24/09	SM

SCALE	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09
PROJECT NO.:	645.A30
DRAWING TITLE:	DETAILS SHEET 1
SCALE:	NONE
DRAWN BY:	RFR
CHECKED BY:	SM
DATE:	10/20/09



WATER TRENCH

NOT TO SCALE



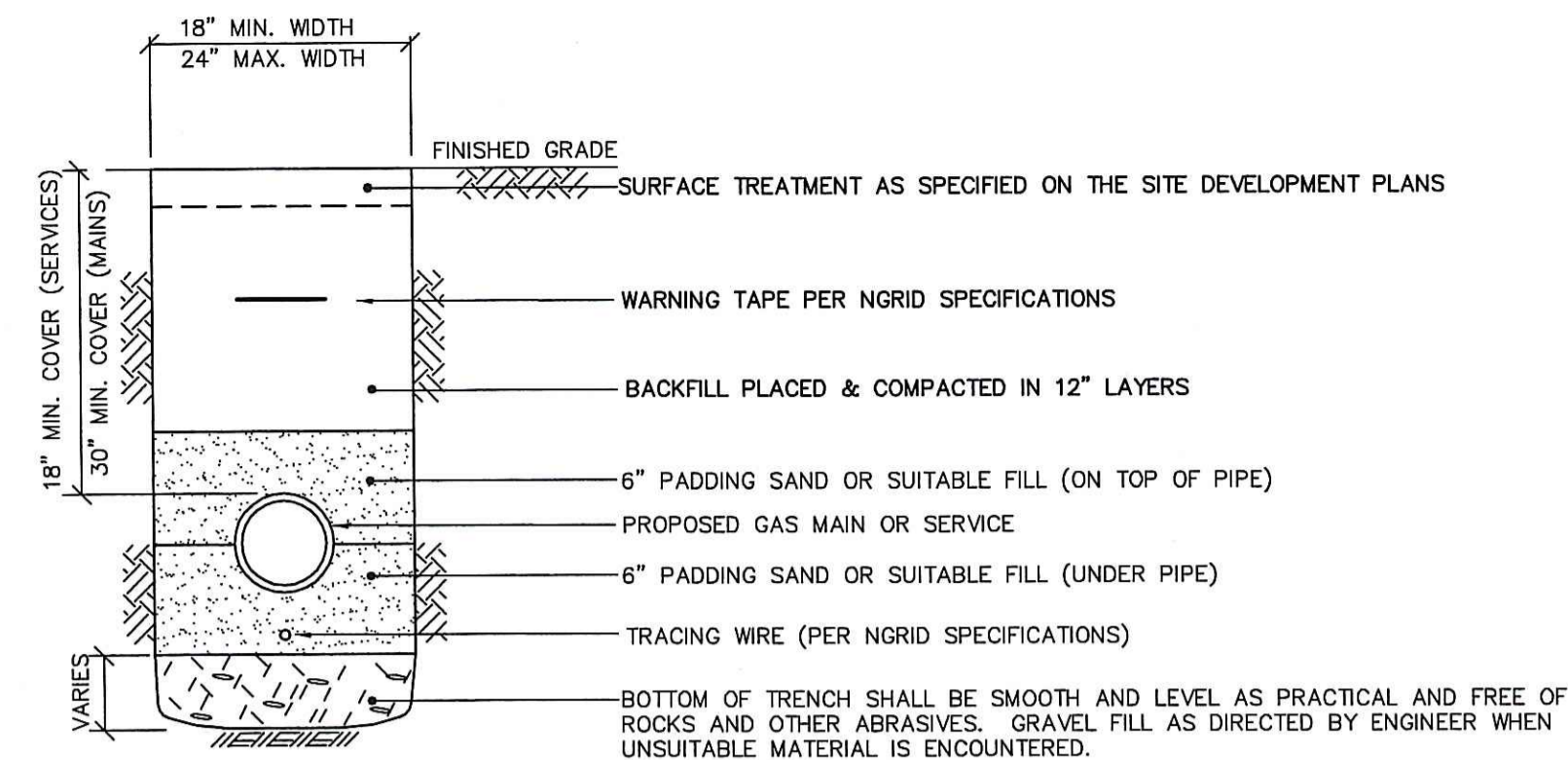
STORM DRAIN TRENCH

NOT TO SCALE

NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100-600mm) AND 42"-48" (1050-1200mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-36" (750-900mm) CPEP.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

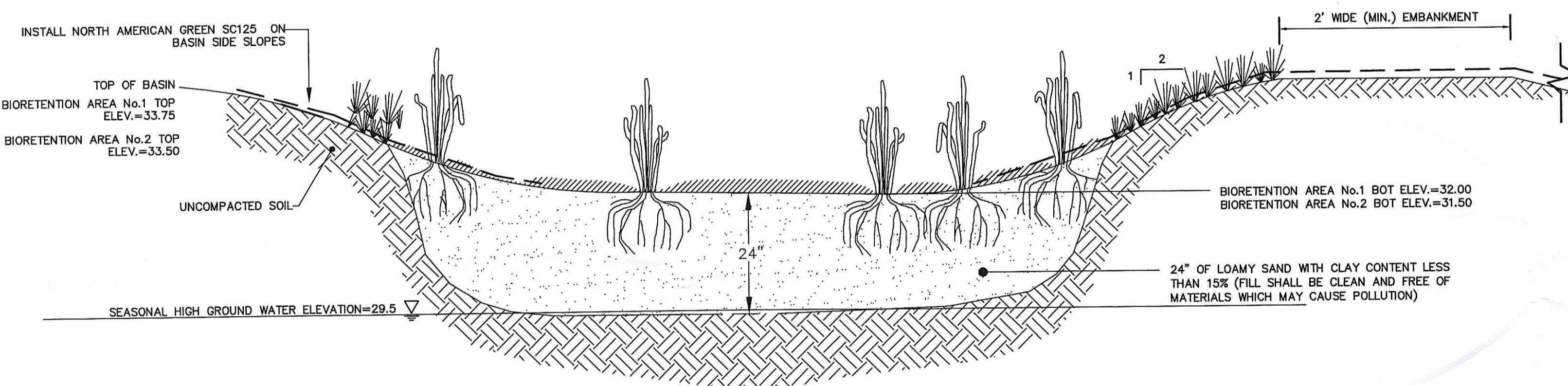
NOMINAL Ø	MIN. RECOMMENDED TRENCH WIDTH
in (mm)	in (mm)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	48 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (2260)
60 (1500)	102 (2590)



GAS UTILITY TRENCH

NOT TO SCALE

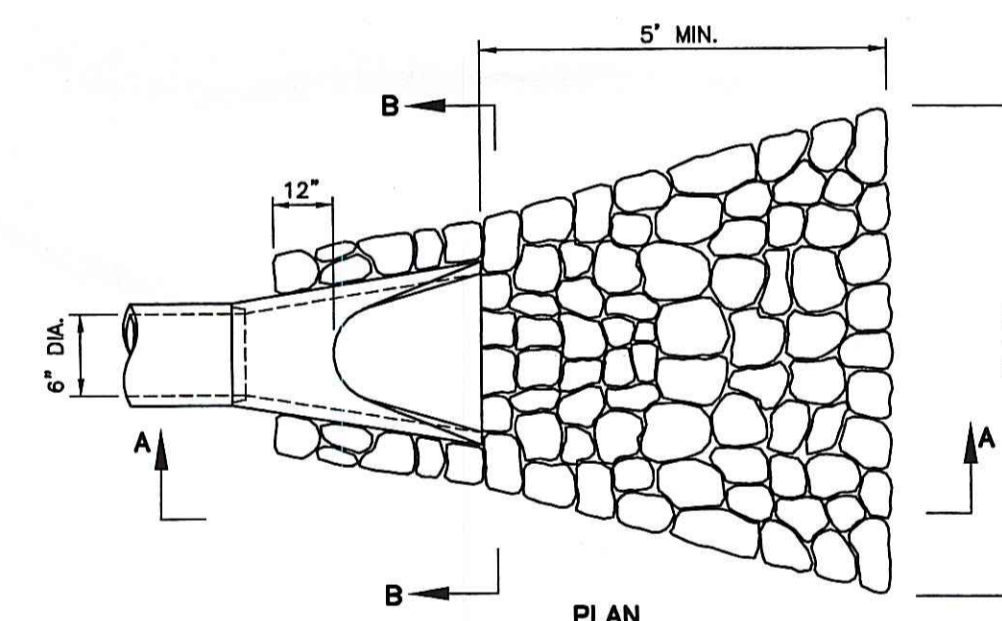
- NOTES:**
1. ALL BEDDING MATERIAL AND INITIAL BACKFILL SHALL BE CLEAN, FREE OF DEBRIS AND RUBBLE, AND FREE OF MATERIALS WHICH MAY CAUSE POLLUTION OF SURFACE WATERS AND GROUNDWATER.
 2. SOIL SHOULD BE SET BACK A MINIMUM OF 2 FEET IN ACCORDANCE WITH OSHA REGULATIONS.
 3. GAS SERVICE MUST HAVE A MINIMUM HORIZONTAL SEPARATION OF 3 FEET FROM PARALLEL UTILITIES. A ONE FOOT SEPARATION MUST BE MAINTAINED WHEN CROSSING OTHER UTILITIES.
 4. THE MAXIMUM TRENCH DEPTH FOR GAS MAINS IS 48-INCHES WHILE THE MAXIMUM TRENCH DEPTH FOR SERVICES IS 36-INCHES.



BIORETENTION BASIN TYPICAL CROSS-SECTION

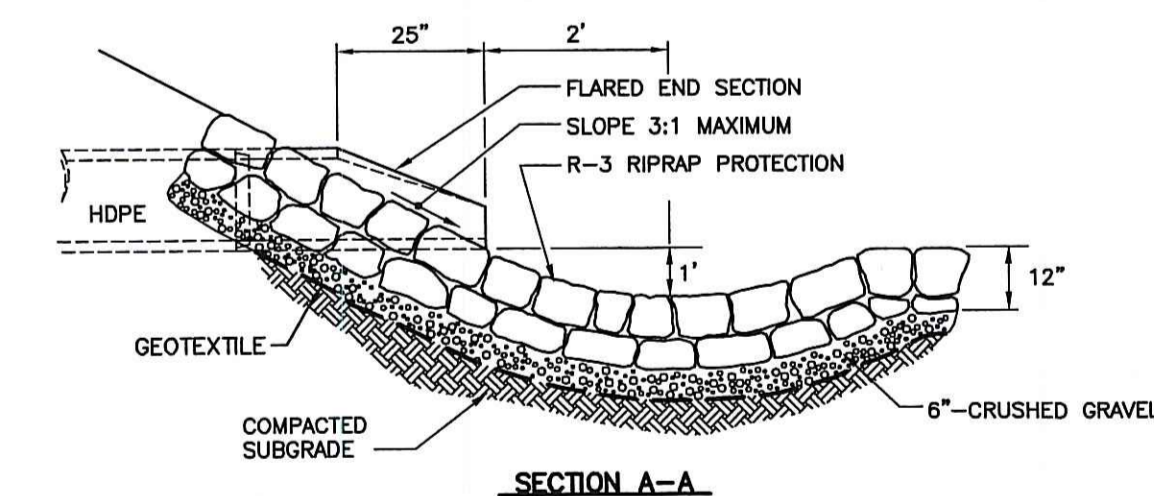
NOT TO SCALE

NOTE: BIORETENTION BASIN TO BE SEEDED WITH NEW ENGLAND WETLAND SEED MIX (WETLAND SEED MIX PER NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL)- APPLICATION RATE: 18 POUNDS PER ACRE

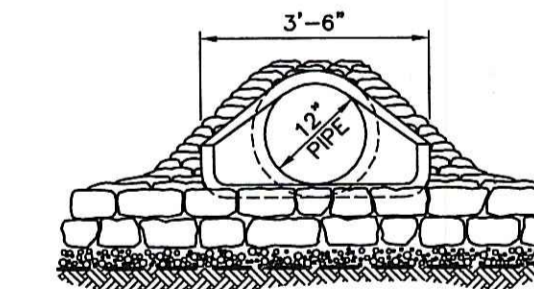


FLARED END W/RIPRAP SPLASH PAD

NOT TO SCALE



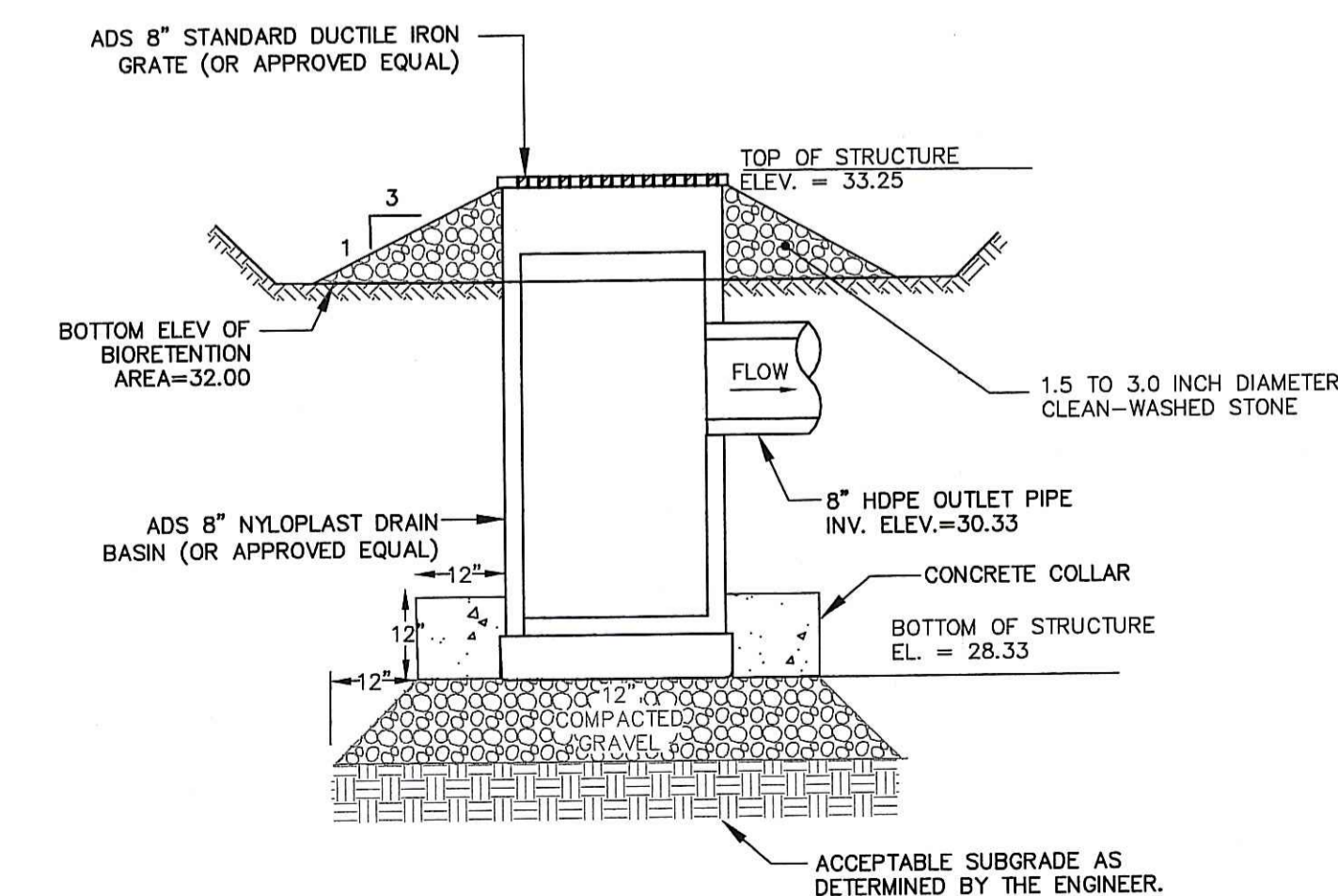
SECTION A-A



SECTION B-B

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

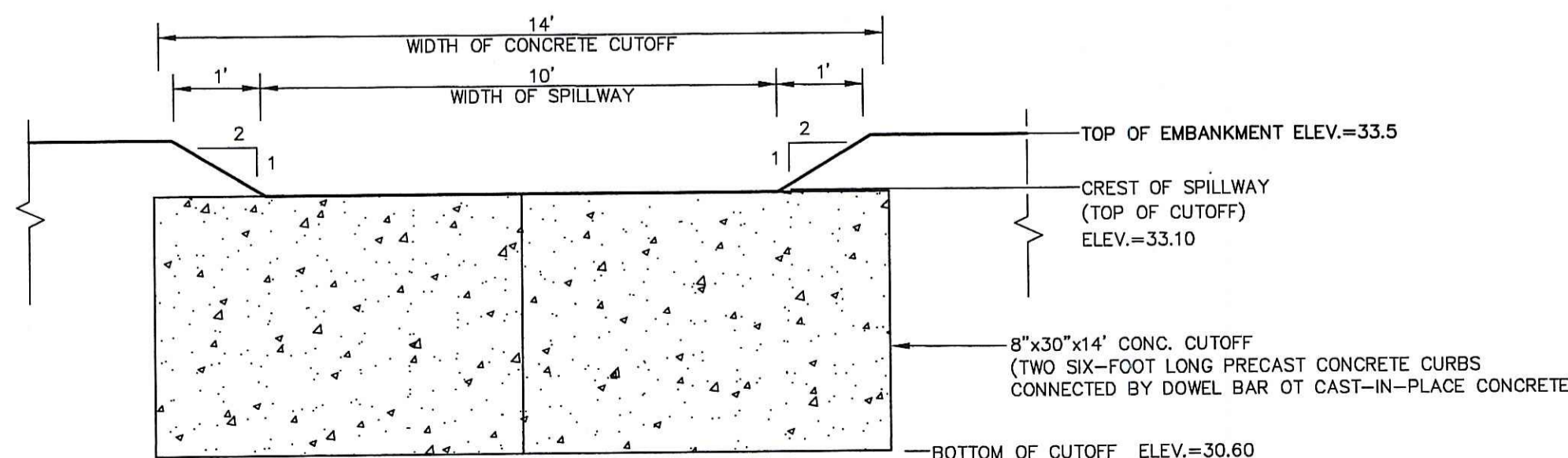
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 13 2009 FILE # 09-0215
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.



BIORETENTION BASIN NO. 1

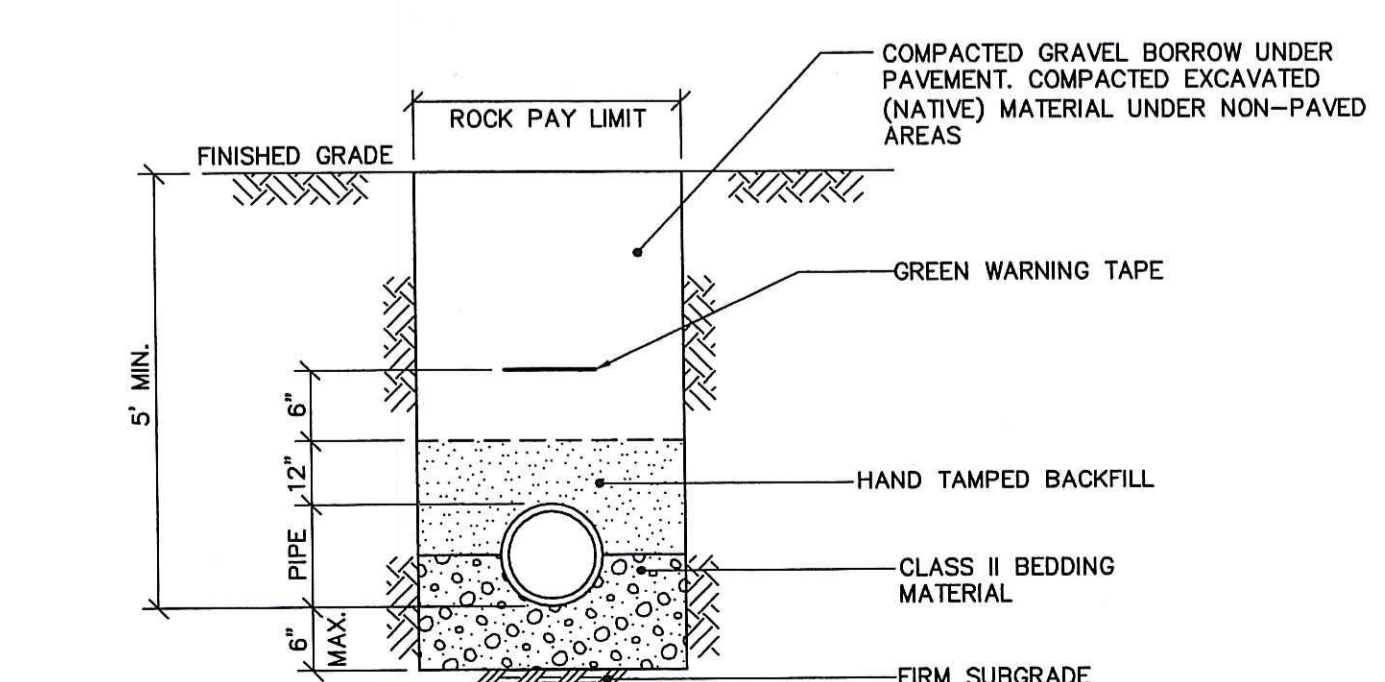
OUTLET STRUCTURE

NOT TO SCALE



SPILLWAY

NOT TO SCALE



SEWER TRENCH

NOT TO SCALE

Y O D B B +
T O D W B L L C O L L O
Architects and Engineers
14 NATIONAL PLAZA, SUITE 2000, PROVIDENCE, RI 02907
TEL: 401-762-0000 FAX: 401-762-0077

REVISIONS

MARK	DATE
▲	
▲	
▲	
▲	
▲	

VETERINARY HOSPITAL
ROGER WILLIAMS PARK ZOO
1000 ELMWOOD AVENUE
PROVIDENCE, RI 02907

PROJECT: _____

ISSUED FOR:	DATE:	BY:
SIDE DESIGN DEVELOPMENT	07/15/09	RFR
RIDEM SUBMISSION	08/24/09	RFR

DATE: 07/15/09
DATE: 08/24/09

DETAILS SHEET 2

NONE

DRAWN BY: RFR
CHECKED BY: SMM # 20050
(NATIVE) MATERIAL UNDER NON-PAVED AREAS

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
No. 7487
01/24/09

SHEET NO. _____

CD 502

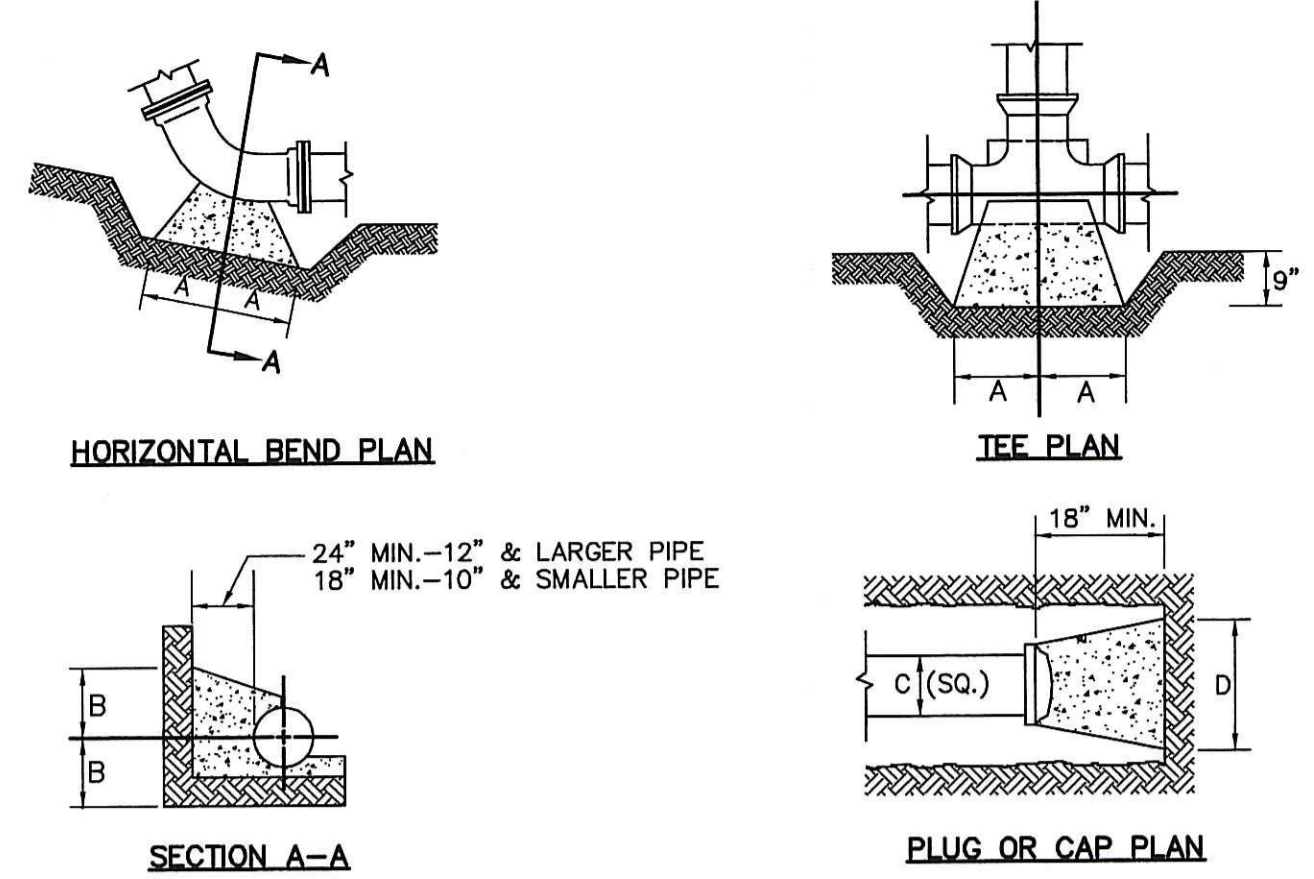
SHEET 9 OF 10



YODER + YODER & Co.,
Architects and Engineers
44 National Avenue, Providence, RI 02907
Phone: 401-863-1100
Fax: 401-863-1101

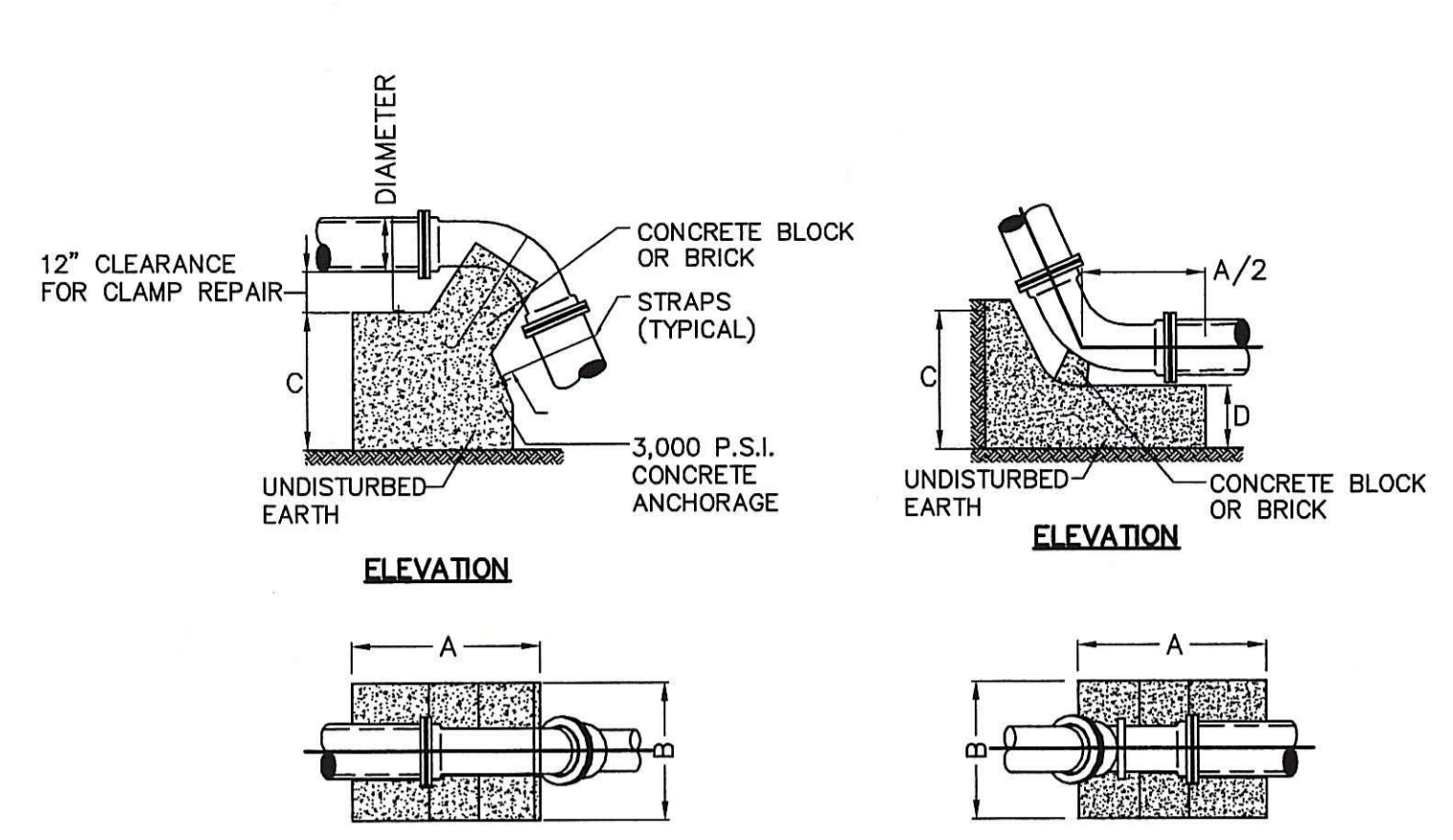
REVISIONS	
NO.	DATE

VETERINARY HOSPITAL
ROGER WILLIAMS PARK ZOO
1000 ELMWOOD AVENUE
PROVIDENCE, RI 02907



TYPE	SIZE	90° BENDS		45° BENDS		22-1/2' & 11-1/4' BENDS		TEES		PLUGS	
		A	B	A	B	A	B	A	B	C	D
2000 P.S.F SOIL	6"	18"	11"	10"	11"	6"	9"	11"	13"	10"	24"
	8"	25"	14"	14"	14"	9"	11"	15"	17"	12"	32"
	12"	33"	23"	18"	23"	12"	18"	21"	26"	16"	47"

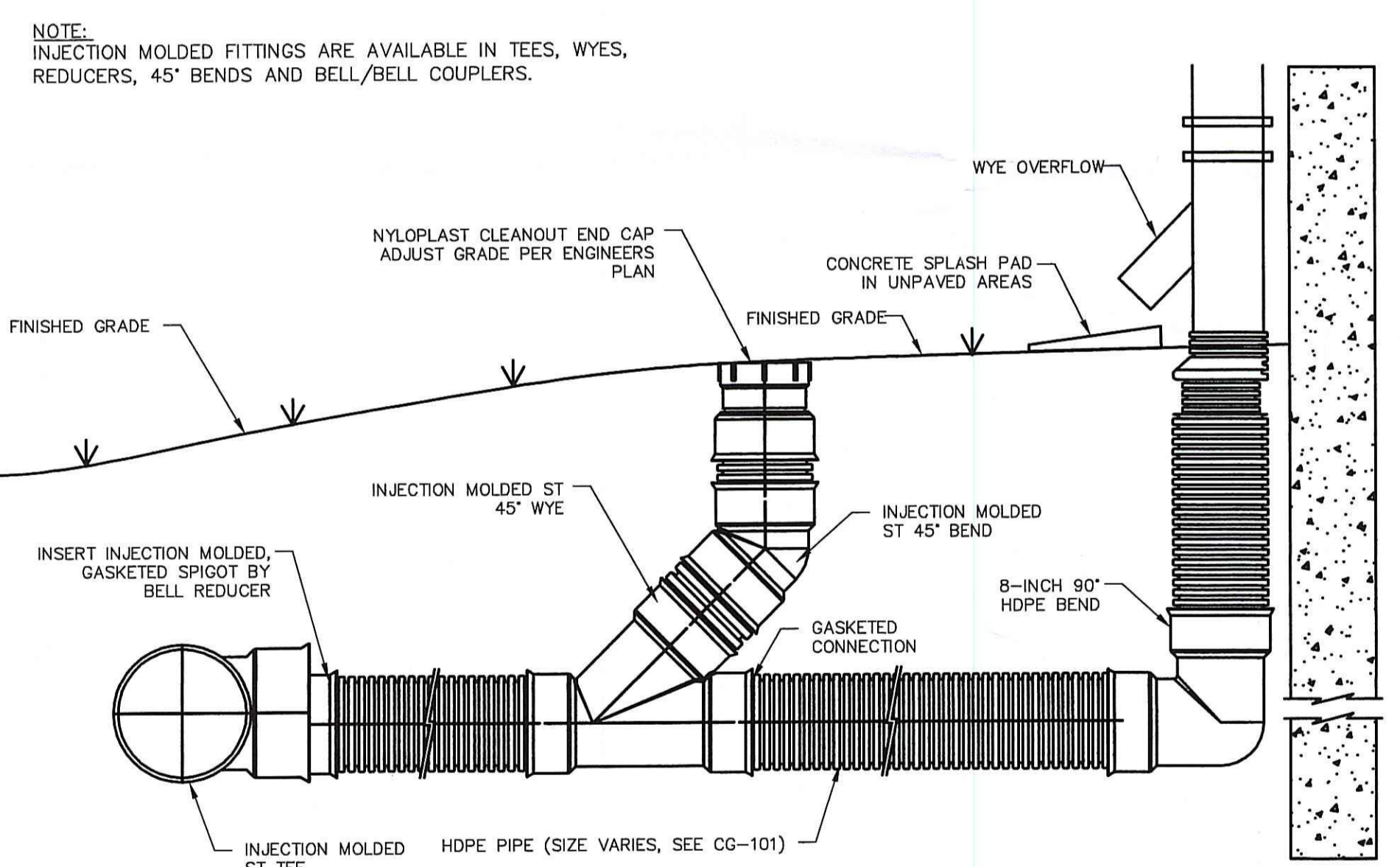
HORIZONTAL BENDS
NOTES:
1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AFTER 28 DAYS. THRUST BLOCKS SHALL BE CONSTRUCTED IN PLACE USING PORTLAND CEMENT CONCRETE (R.I.D.O.T. CLASS "B").
2. THRUST BLOCK DIMENSIONS SHOWN ARE MINIMUM.
3. BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND. ALL STRAPS, BOLTS AND ANCHORS SHALL BE MADE OF GALVANIZED STEEL AND SHALL CONFORM TO ASTM A123 AND A153.
VERTICAL FITTINGS SHALL BE ANCHORED TO THRUST BLOCKS USING AT LEAST TWO (2) #5 (8-INCH MINIMUM), GRADE 60, DEFORMED STEEL REBARS.



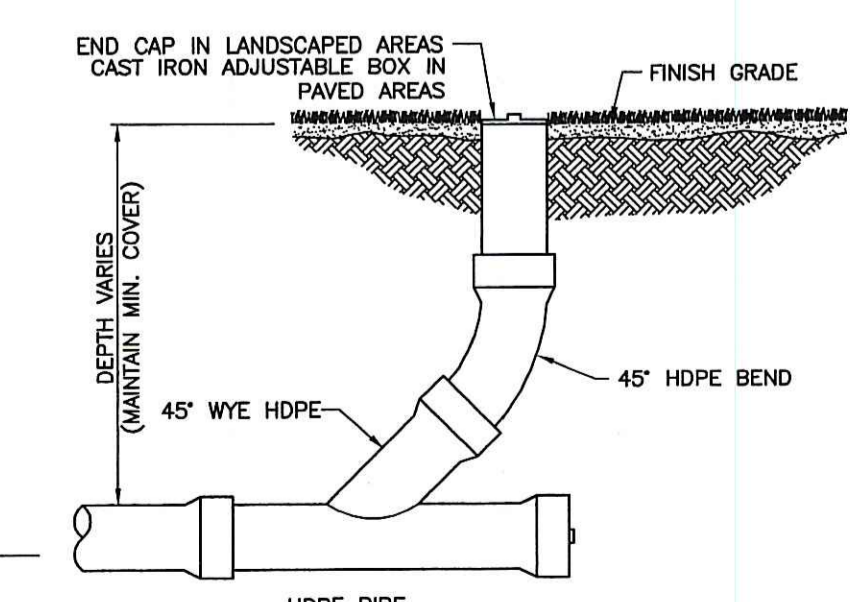
TYPE	SIZE	TYPE A				TYPE B				STRAPS	STRAPS	L ₁
		A	B	C	D	A	B	C	D			
2000 P.S.F SOIL	6"	36"	32"	27"	27"	27"	27"	16"	1/4" x 1-1/8"	5/8"	1'-0"	
	8"	44"	38"	27"	30"	30"	30"	18"	1/4" x 1-1/8"	5/8"	1'-0"	
	12"	57"	51"	40"	41"	41"	40"	21"	1/4" x 1-1/4" (2)	5/8"	1'-0"	

VERTICAL BENDS

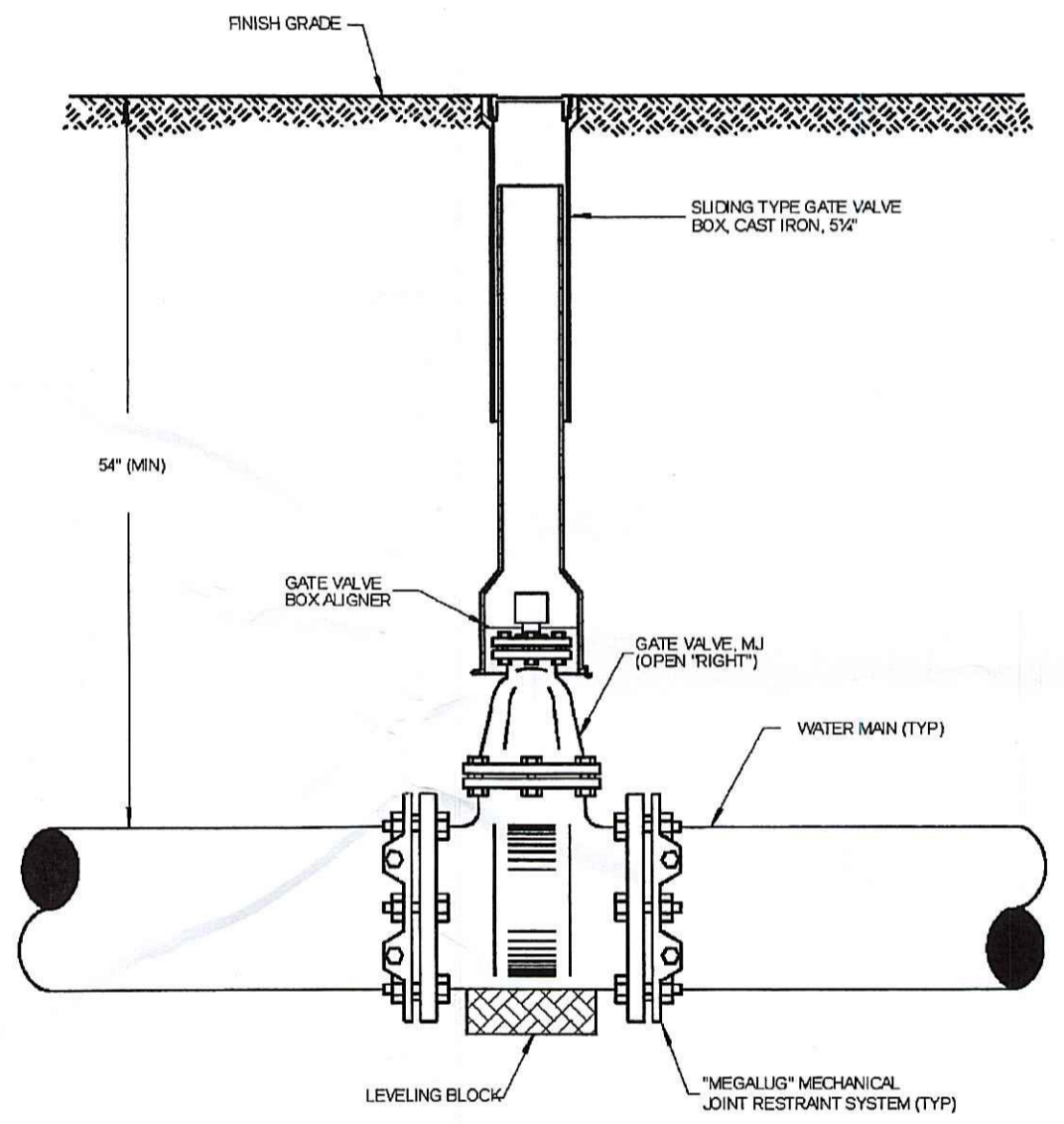
CONCRETE THRUST BLOCKS
NOT TO SCALE



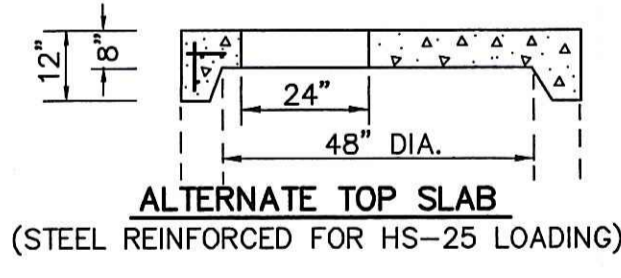
ROOF DRAIN CONNECTION
NOT TO SCALE



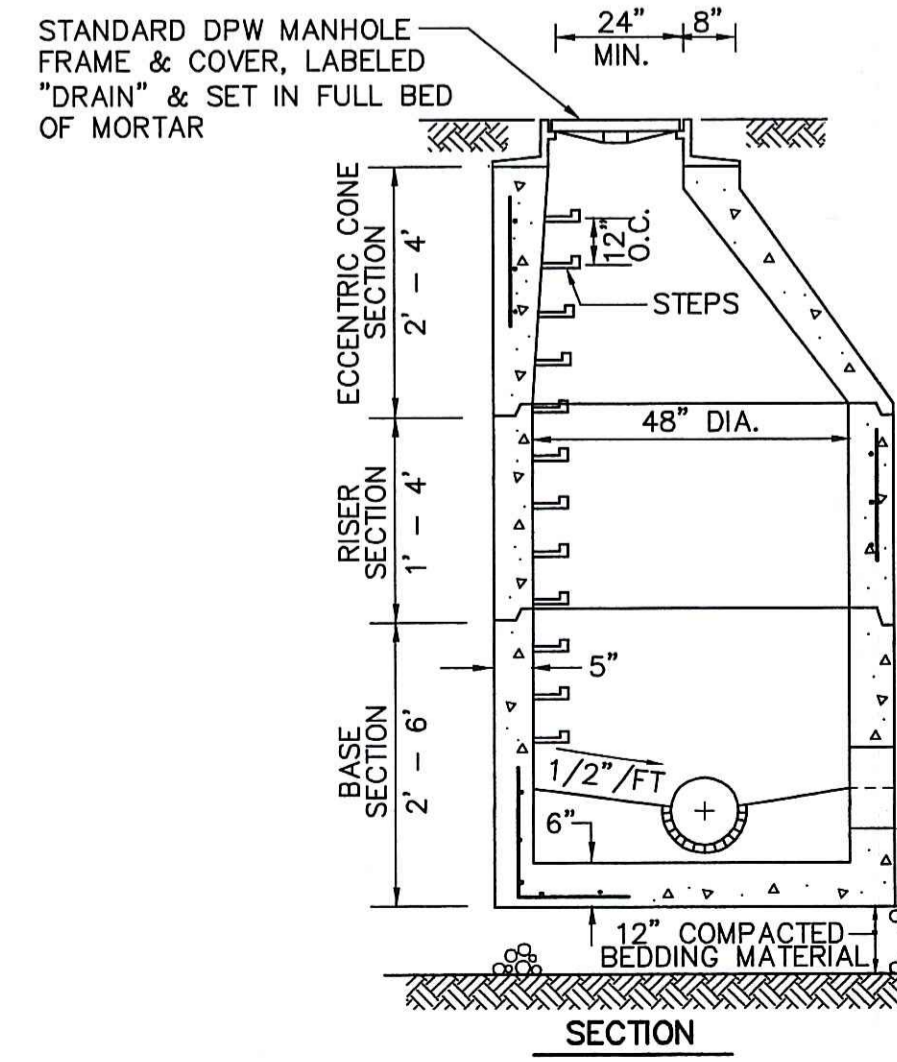
DRAIN CLEANOUT
NOT TO SCALE



GATE VALVE
NOT TO SCALE

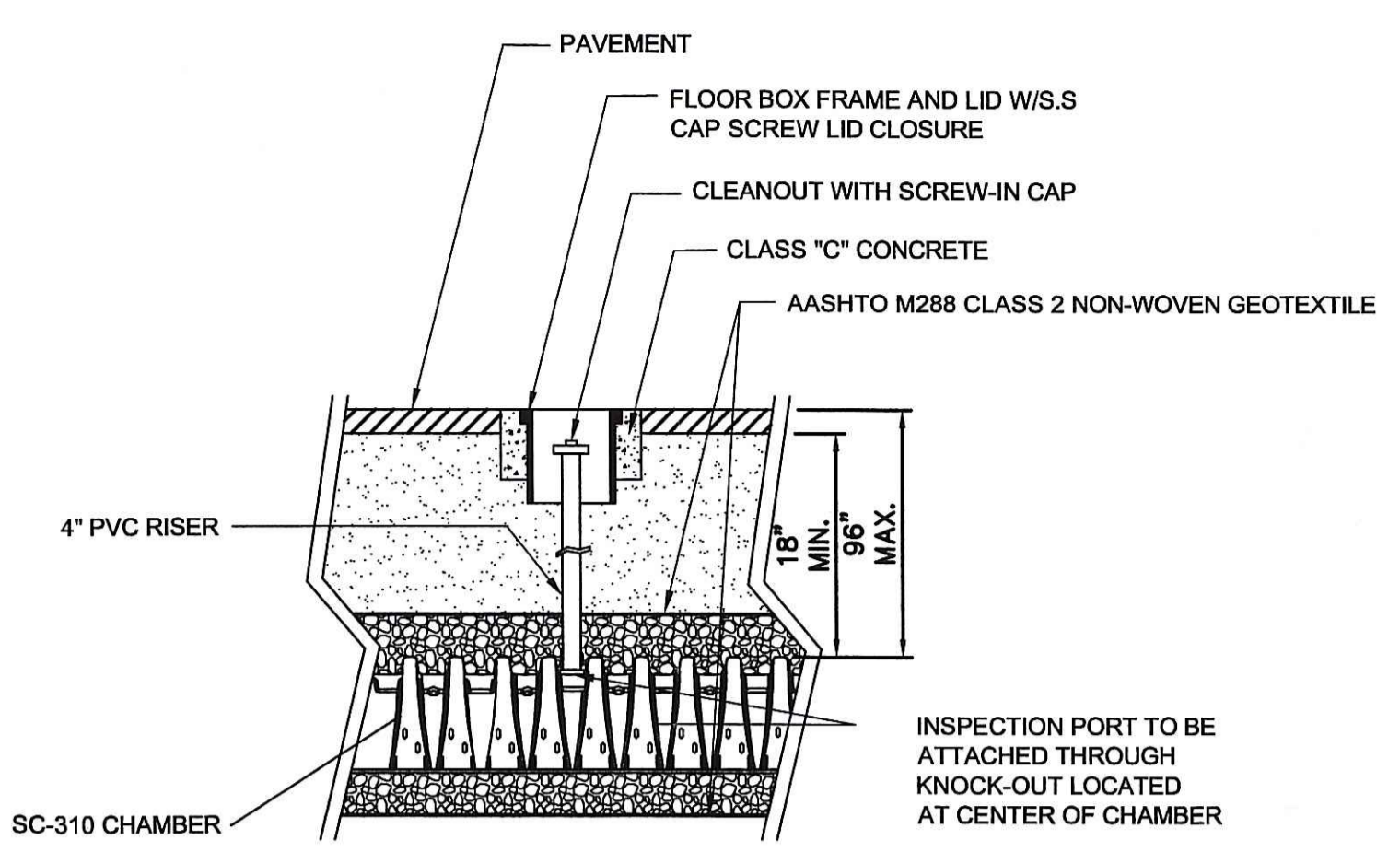


ALTERNATE TOP SLAB
(STEEL REINFORCED FOR HS-25 LOADING)

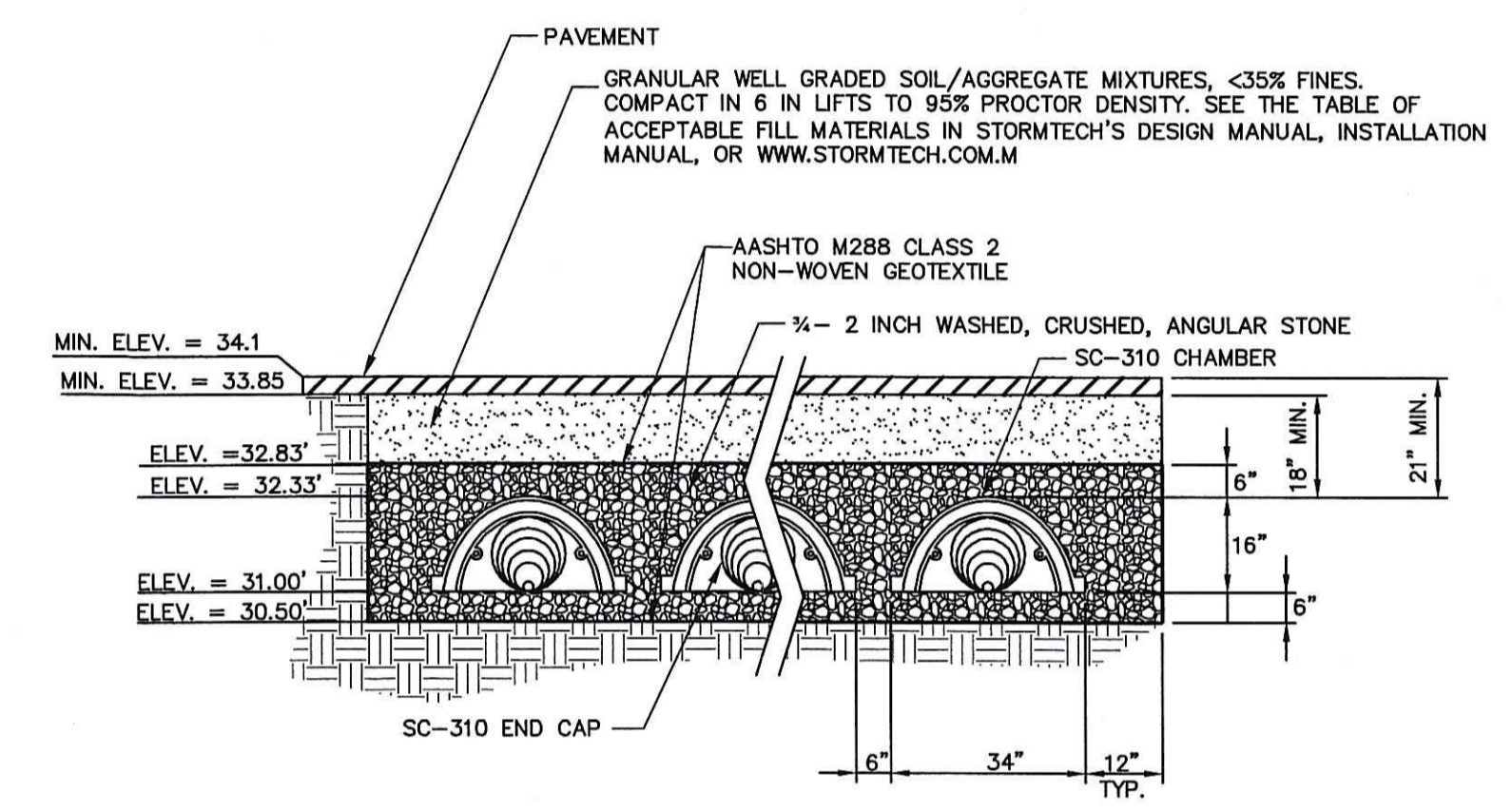


PRECAST 4' DIA. DRAIN MANHOLE
NOT TO SCALE

- NOTES:**
- FRAMES AND COVERS TO BE LeBARON LA244-000 AND L24C01-000, RESPECTIVELY OR APPROVED EQUAL.
 - FRAMES SHALL BE SET IN FULL BED OF MORTAR. ADJUST TO GRADE WITH RED CLAY BRICKS AND MORTAR.
 - BASE SECTION SHALL BE MONOLITHIC WITH A 48" DIAMETER.
 - REINFORCING STEEL SHALL CONFORM TO ASTM A-185:
 - 0.12 SQ. IN./VERT. FT.
 - 0.12 SQ. IN./FT. (BOTH WAYS)
 BASE BOTTOM
 - CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI TYPE II CEMENT.
 - MANHOLE DESIGN SHALL CONFORM TO ASTM C-478 FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
 - ALL PIPES TO BE CONNECTED TO MANHOLES WITH RESILIENT CONNECTIONS IN ACCORDANCE WITH ASTM C923.
 - JOINT SEALANT SHALL BE PERFORMED BUTYL RUBBER MASTIC TYPE SEAL THAT COMPLIES WITH AASHTO M198 OR SYNTHETIC RUBBER GASKET THAT COMPLIES WITH ASTM C-443 OR C-361.
 - MANHOLE STEPS SHALL BE STEEL-REINFORCED COPOLYMER POLYPROPYLENE PLASTIC PER ASTM C-478, PARA. 11.
 - INVERT CONSTRUCTED OF BRICK & MORTAR OR CEMENT CONCRETE PAVEMENT.

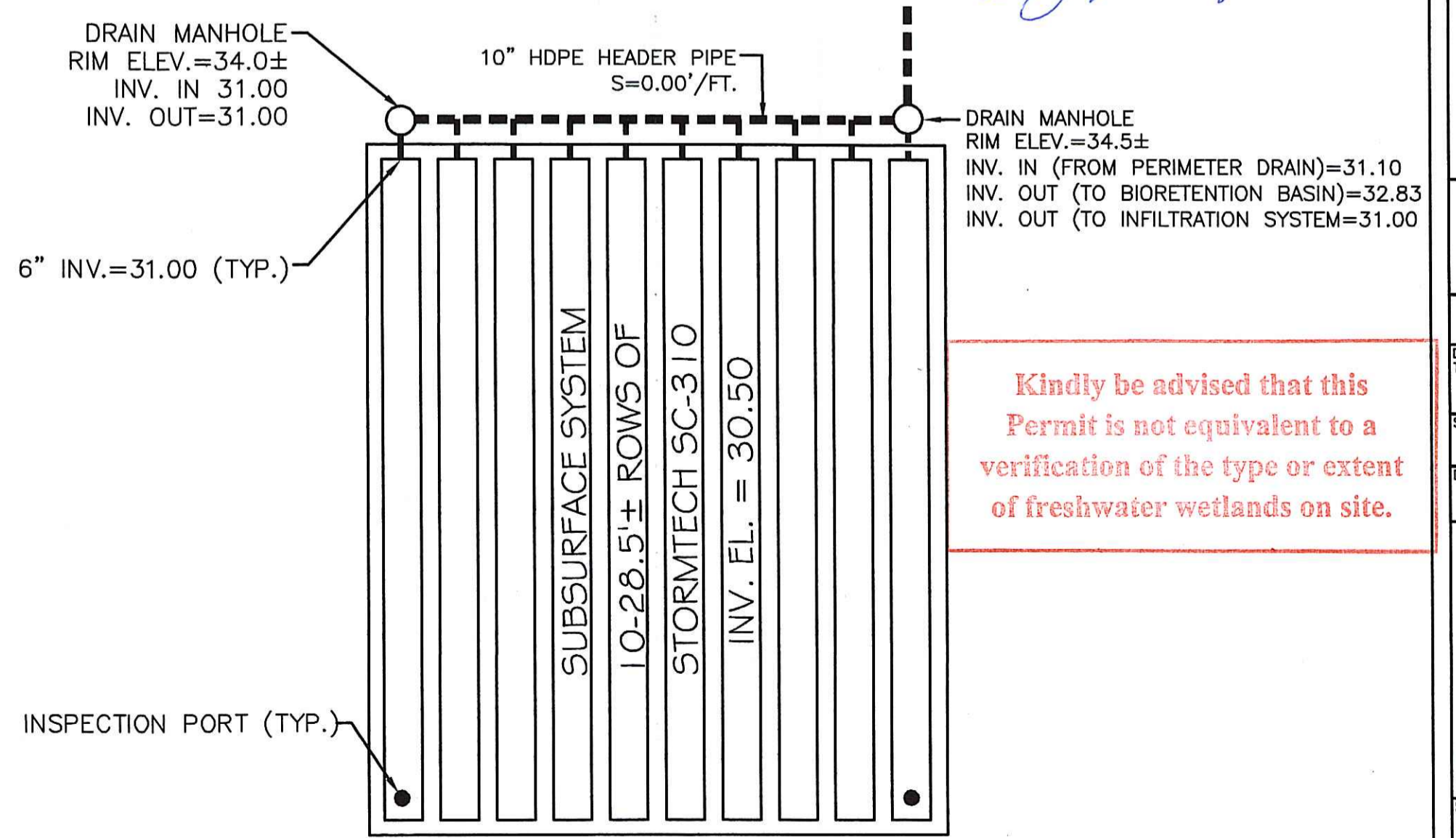


STORMTECH SC-310 CHAMBER SYSTEM INSPECTION PORT
NOT TO SCALE



SUBSURFACE INFILTRATION SYSTEM STORMTECH SC-310 CHAMBER SYSTEM CROSS SECTION
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 13 2009 FILE # 09-025
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.
W. Joseph Conroy



PROPOSED SUBSURFACE DETENTION SYSTEM SC-310 STORMTECH CHAMBER
NOT TO SCALE

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

ISSUED FOR:	DATE:	ISSUE NO.	DRAWING TITLE	SCALE:
SOIL DESIGN DEVELOPMENT	07/16/09	1	DETAILS SHEET 2	NONE
RIDM SUBMISSION	08/24/09	2		
		3		
		4		

DRAWN BY: RFR
CHECKED BY: LMB # 20050
SMM # 645.A30

NOT FOR CONSTRUCTION
SHAWN M. MARTIN
No. 7487
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

CD 503